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LAND USE COMMISSION

STATE OF HAWAI'I

HEARING

A07-774 NORTH KONA VILLAGE, LLC,)
now known as 'O'OMA BEACHSIDE VILLAGE,))
LLC, North Kona, Hawai'i.)
_____)

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for a Public Hearing
at Waikoloa Beach Marriott Resort, 69-275 Waikoloa
Beach Drive, Waikoloa, Hawai'i, commencing at 9:30
a.m. on Wednesday, March 4, 2010 pursuant to Notice.

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

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A P P E A R A N C E S

COMMISSIONERS:
KYLE CHOCK
THOMAS CONTRADES
LISA M. JUDGE
DUANE KANUHA
NORMAND LEZY
RANSOM PILTZ (Chairman)
NICHOLAS TEVES, JR.

EXECUTIVE OFFICER: ORLANDO DAVIDSON
ACTING CHIEF CLERK: RILEY HAKODA
STAFF PLANNER: SCOTT DERRICKSON
DEPUTY ATTORNEY GENERAL: DIANE ERICKSON, ESQ.

AUDIO TECHNICIAN: WALTER MENCHING

Docket No. A07-774 North Kona Village, LLC

For the Petitioner: STEVEN LIM, ESQ.
JENNIFER BENCK, ESQ.

For the County: BRANDON GONZALEZ, ESQ.
Deputy Corporation Counsel
BOBBY JEAN LEITHEAD-TODD, ESQ.
Director, County Planning Dept.

For the State: BRYAN YEE, ESQ.
Deputy Attorney General
ABBIE MAYER, Director
Office of Planning

For the Intervenor NPS: GREGORY LIND, ESQ.
Office of Solicitor General
Dept. of Interior
National Historical Parks
SALLIE BEAVERS,
Kaloko-Honokohau National Historical Park

I N D E X		
1	DOCKET WITNESSES	PAGE
2	THOMAS WITTEN	14
3	Direct Examination by Ms. Benck	41
4	Cross-Examination by Mr. Gonzalez	42
5	Cross-Examination by Mr. Yee	43, 63
6		
7	TOM NANCE	80
8	Cross-Examination by Mr. Yee	89
9	Cross-Examination by Mr. Lind	95
10	Examination by Ms. Benck	100
11	STEVEN DOLLAR	102
12	Cross-Examination by Mr. Yee	107
13	Cross-Examination by Mr. Lind	118
14	Examination by Ms. Benck	123
15	Re-cross Examination by Mr. Lind	124
16	MARTIN NAKASONE	128
17	Direct Examination by Ms. Benck	133
18	Cross-Examination by Mr. Yee	135
19	Cross-Examination by Mr. Lind	145
20	Redirect Examination by Ms. Benck	160
21	YOICHI EBISU	
22	Direct Examination by Ms. Benck	163
23	Cross-Examination by Mr. Yee	173
24		
25		

1 CHAIRMAN PILTZ: Good morning. This is a
2 continued hearing on Docket No. A07-774 North Kona
3 Village, LLC, 'O'oma 2nd Kaloka-North Kona, Hawai'i to
4 consider the reclassification of approximately 181.169
5 acres of land currently in the Conservation District
6 into the Urban District at 'O'oma 2nd, Kaloka, North
7 Kona, Hawaii, Tax Map Key No. (3)7-3-009:004, portion,
8 and 7-3-009, portion of the state right-of-way for the
9 beachside residential community with mixed-uses.

10 Let me describe the procedure for today.
11 First, we will have the parties identify themselves.
12 After that we will have staff provide a map
13 orientation.

14 And I will give the opportunity for the
15 parties to admit to the record their exhibits. After
16 the admission of exhibits to the record the Petitioner
17 will present its case.

18 Once the Petitioner is completed with its
19 presentation it will be followed in turn by Hawai'i
20 County, the State of Hawai'i Office of Planning and
21 the National Park Service.

22 Due to the fact that yesterday we had all
23 public testimony we will accept public testimony at
24 our next meeting here on the island.

25 The Chair would also note for the parties

1 that from time to time I will be calling for a short
2 break as necessary. Are there any questions on our
3 procedures for today? County?

4 MR. GONZALEZ: No.

5 MR. YEE: No questions.

6 MR. LIND: No questions.

7 CHAIRMAN PILTZ: Ms. Benck.

8 MS. BENCK: Jennifer Benck representing
9 Petitioner North Kona Village or 'O'oma Beachside
10 Village. To my right is Steven Lim also representing
11 Petitioner.

12 MR. GONZALEZ: Deputy Corporation Counsel
13 Brandon Gonzalez for County of Hawai'i Planning
14 Department.

15 To my right is the director of the Planning
16 Department County of Hawai'i Bobby Jean Leithead-Todd.
17 To her right is Norman Hayashi from the Planning
18 Department. Behind him is Phyllis Fujimoto from the
19 Planning Department.

20 CHAIRMAN PILTZ: State.

21 MR. YEE: Good morning. Deputy Attorney
22 General Bryan Yee on behalf of the Office of Planning.
23 With me is Abbey Mayer from the Office of Planning.

24 MR. LIND: Greg Lind from the Office of
25 Solicitor General, U.S. Department of Interior

1 representing the National Park Service. With me is
2 Sallie Beavers from Kaloko-Honokohau National Park.

3 CHAIRMAN PILTZ: Thank you. Yesterday we
4 spent all day on public testimony. Again, we will
5 accept public testimony at the next meeting.

6 Today we'll continue, we'll have our
7 Petitioner present its case. Would you go ahead,
8 proceed with the introduction of your exhibits.

9 MR. DAVIDSON: Maybe we'll have staff give
10 their report.

11 MR. DERRICKSON: Aloha kakou, Commissioners.
12 This is staff's map orientation. Please bear we me.
13 This is my first time. I may be a more detailed than
14 normal because I think there's a lot of stuff --
15 there's quite a bit going on here -- to help orient
16 you.

17 First of all, the Petition Area here is
18 approximately 181 acres currently in the Conservation
19 District. It lies makai of Queen Ka'ahumanu Highway
20 to the west.

21 This is the primary transit corridor through
22 the region. Urban District lands lie adjacent to the
23 south, to the east mauka and here to the north all the
24 way through the airport area.

25 There is a portion of this parcel that's not

1 included. It's along the coastal, northern west
2 portion, that's the proposed coastal preserve area.
3 So this map is a little bit off. There should be a
4 chunk here that's gonna remain in the Conservation
5 District.

6 Within the petition there's mention of both
7 the Petition Area proper and a Project Area which is a
8 larger Project. It includes this parcel 22 which is
9 above and adjacent to Queen Ka'ahumanu Highway.
10 There's several things going on.

11 There's, at the edge of the Petition Area
12 proper and included in the petition is the state
13 right-of-way.

14 A portion of the state right-of-way right in
15 this lower area is also coincident with the Mamalahoa
16 Trail. The Mamalahoa Trail then diverges almost
17 directly north through this parcel 22.

18 All of that's included within the Project
19 Area, not the Petition Area.

20 There's several other petitions that
21 occurred in the adjoining area: A85-592 DPD State
22 reclassified large area into the Urban District; two
23 former petitions covering roughly the same area as
24 this current petition, that was A86-602 and A91-666.
25 Information on those is included in the staff report;

1 Adjacent to the property to the north of
2 course is the large Keahole Airport area. Right
3 adjacent is Natural Energy Laboratory of Hawai'i
4 Authority NELHA. Below is Kohanaiki. And here's
5 Kaloko-Honokohau National Historic Park. It lies one
6 half mile to the south.

7 Kailua-Kona in this area is roughly
8 seven miles to the south. Honokohau Harbor right here
9 approximately four miles to the south. Again, the
10 airport here is about a mile north.

11 There's several roads and road intersections
12 discussed in the petition. The primary one is Queen
13 Ka'ahumanu Highway north intersection with Ka'iminani
14 Drive which is right here.

15 The OTEC, OTEC Drive here, Huli Koa Drive
16 which is right here and its intersection. That comes
17 out of the Kohanaiki Industrial Park which is south of
18 the Petition Area. And Hina Lani Street, this long
19 winding road here.

20 They also discussed a proposed 'O'oma access
21 road which would be roughly here in the center parcel
22 22 which is part of the Project Area, not part of the
23 Petition Area and a frontage -- future frontage road
24 that would parallel Queen Ka'ahumanu Highway and span
25 several parcels.

1 That's it. Any questions, Commissioners?

2 COMMISSIONER KANUHA: Scott, can you point
3 out the HELCO power plant, where the HELCO power plant
4 is?

5 MR. DERRICKSON: I believe it's right there,
6 the Keahole Power Plant is right here.

7 COMMISSIONER KANUHA: Then the red dot on
8 the map.

9 MR. DERRICKSON: The red dot is the existing
10 sewage treatment plant. I believe it's called
11 Kealakehe Wastewater Treatment Plant. This yellow tab
12 was to indicate Honokohau Harbor.

13 The blue here is actually the school complex
14 that would service future development. This is the
15 Kealakehe school complex, one high school, one middle
16 school and two existing elementary schools.

17 COMMISSIONER KANUHA: Thanks.

18 CHAIRMAN PILTZ: Commissioners, any other
19 questions? Ms. Benck, could you describe your
20 exhibits and admit to the record.

21 MS. BENCK: Thank you, Chairman. Would you
22 like me to read the name of each exhibit? We've got a
23 total of 93 exhibits. It might take a lot of time.
24 I'm happy to do it if that's what you'd like.

25 CHAIRMAN PILTZ: No. We have those in front

1 of us. So if you're admitting those right now I'll
2 accept that and I'll see if there's any objections to
3 those exhibits.

4 MS. BENCK: Thank you very much. I'd like
5 to admit the 93 exhibits that were listed on our
6 First Amended List of Exhibits that was filed on
7 Tuesday March 2.

8 CHAIRMAN PILTZ: Okay. Very good. County,
9 any objections?

10 MR. GONZALEZ: No objections.

11 CHAIRMAN PILTZ: OP?

12 MR. YEE: No objection.

13 CHAIRMAN PILTZ: Intervenor?

14 MR. LIND: No objections.

15 CHAIRMAN PILTZ: Commissioners, any
16 questions on the exhibits by the Petitioner? We'll
17 admit those to the record.

18 MS. BENCK: Thank you.

19 CHAIRMAN PILTZ: County, your exhibits?

20 MR. GONZALEZ: Thank you, Mr. Chair. The
21 County of Hawai'i has submitted one exhibit labeled
22 County of Hawai'i Planning Department Exhibit 1. I
23 believe it was filed on or about February 8, 2010.

24 CHAIRMAN PILTZ: Okay. Very good.
25 Petitioner, any questions on their exhibit?

1 MS. BENCK: No questions.

2 CHAIRMAN PILTZ: OP.

3 MR. YEE: No objection.

4 CHAIRMAN PILTZ: Intervenor?

5 MR. LIND: No objection.

6 CHAIRMAN PILTZ: Commissioners? We'll admit
7 that. OP, your exhibits please.

8 MR. YEE: Our exhibits, which comprise
9 primarily written testimony, maps and letters are
10 submitted as follows -- and I'm sorry, we'll have to
11 be a little more specific because our exhibits did not
12 follow the numbering we set out in the exhibit list.

13 We are submitting into evidence Exhibits 1,
14 2, 4, 5, 9, 10, 12, 13, 17 through 22, 24 through 26.

15 We are withdrawing Exhibits 6, 7, 11, 14 and
16 15. And we do have four exhibits which we have not
17 yet been able to procure from the various agencies.

18 So we would like to submit the exhibits we
19 have submitted so far as listed above.

20 CHAIRMAN PILTZ: Petitioner, any questions
21 or objections?

22 MS. BENCK: No questions, no objections.

23 MR. GONZALEZ: County no questions, no
24 objections.

25 CHAIRMAN PILTZ: Intervenor?

1 MR. LIND: No objections.

2 CHAIRMAN PILTZ: How about Commissioners,
3 any objections? We'll accept that for the record.

4 Intervenor, your exhibits, please.

5 MR. LIND: The National Park Service
6 submitted 16 exhibits. The list filed on February 6th
7 is the list you can refer to.

8 They consist of maps, management plans,
9 congressional advisory committee study reports and
10 information on resources.

11 So I move to have the Exhibits 1 through 16
12 admitted.

13 CHAIRMAN PILTZ: Petitioner, any objections?

14 MS. BENCK: No objections.

15 MR. GONZALEZ: County no objections.

16 MR. YEE: No objections.

17 CHAIRMAN PILTZ: Objections from the
18 Commissioners? Okay. We'll admit those to the
19 record.

20 CHAIRMAN PILTZ: Ms. Benck, I guess we're
21 ready for you.

22 MS. BENCK: Thank you very much. Before we
23 begin our presentation if I may perhaps to save some
24 time throughout the hearing, 'O'oma Beachside Village,
25 have asked the other parties to the proceedings to

1 stipulate to our experts' qualifications.

2 We're hoping that by doing that that we
3 wouldn't have to qualify each expert as they come up
4 to speak but that they would get an expert
5 qualification up front.

6 If I may --

7 CHAIRMAN PILTZ: Yes.

8 MS. BENCK: -- so we made that request and
9 all of the parties agreed. So I just put it before
10 the Commission now.

11 CHAIRMAN PILTZ: That's acceptable, yes.

12 MS. BENCK: Okay. Thank you very much. So
13 therefore when we bring up each witness I'll simply
14 ask them to state their name and I'll outline what it
15 is they'll be discussing.

16 CHAIRMAN PILTZ: That'll be good.

17 MS. BENCK: Thank you very much. So with
18 that our first witness is going to be Tom Witten from
19 PBR Hawai'i. He's the lead planner for the Project.

20 Tom is going to give an overview of the
21 Project, the planning process and hopefully clarify
22 some of the misconceptions that we heard the public
23 express yesterday throughout the public testimony.

24 Tom's PowerPoint presentation was admitted
25 as Exhibit... sorry, just one second, Exhibit 80. So

1 if you care to look at that in your exhibit binders.
2 But, of course, Tom will be doing it on the screen.
3 How do we dim the lights so that the screen is more
4 visible?

5 So as I said this is Tom Witten from PBR
6 Hawai'i. He's the principal and president of PBR
7 Hawai'i and he was the lead planner for this Project
8 'O'oma Beachside Village. Tom, please go ahead and
9 make your presentation:

10 TOM WITTEN,
11 being first duly sworn to tell the truth, was examined
12 and testified as follows:

13 THE WITNESS: Yes. I do.

14 CHAIRMAN PILTZ: Okay. Go ahead. Proceed.

15 THE WITNESS: Tom Witten, PBR Hawai'i.
16 Address 1001 Bishop Street Suite 650 Honolulu, Hawai'i
17 96813. Again, I apologize for the location of the
18 screen. But I have a presentation that may go 30+
19 minutes or so. So if you want to reorient yourself to
20 the screen.

21 CHAIRMAN PILTZ: Pardon me, Tom. Let me for
22 the record specify that we will accept you as an
23 expert witness.

24 THE WITNESS: Thank you. As I go through
25 the presentation I'll be using PowerPoint slides as an

1 outline and also be able to outline certain aspects of
2 the Project that I think will be informative to the
3 Commission in response to some of the testimony we
4 heard yesterday.

5 The overall presentation will focus on sort
6 of the regional context. The staff did a good job of
7 doing that. So some of that I may slip -- go over
8 quite quickly.

9 I'd like to kind of give you an overview of
10 the conceptual planning process and the background how
11 this process and Project has evolved, then get into
12 the more specifics of the planning, master planning,
13 the Project description and then, of course,
14 acknowledgment as far as those that have helped shape
15 and contribute to the Project as it's being proposed.

16 Regional location: Scott gave you a good
17 orientation of the surrounding land uses related to
18 the Project Area and the Petition Area. I think he
19 hit on all those locations that are in close proximity
20 to the Project Area.

21 Land ownership: This gives a general
22 graphic. The uncolored areas are state lands, to the
23 mauka side, so you can see there's quite an extensive
24 area of state lands. Just in relationship this is
25 Palamanui area that was the subject of an LUC action.

1 Further north is Kekaha Kai State Park. The
2 only outlying parcel is Makalawena owned by Kamehameha
3 Schools. Then further north you get into the
4 Maniniowali-Kukio-Hualalai Resort area. And to the
5 south is Kailua-Kona right here.

6 From just a locational standpoint 'O'oma is
7 pretty centrally located within the planned urban
8 areas of Kona. Approximately five miles to Kekaha Kai
9 State Park, five miles south to Kailua-Kona.

10 In general location it's about a mile north
11 of the Kaloko-Honokohau National Historic Park, HOST
12 Park and NELHA is immediately north. Then to the
13 Airport Access Road is approximately two miles.

14 And there's a Hawaiian -- the West Hawai'i
15 Civic Center which is under construction, soon to be
16 completed, is on the planned mid-level road in
17 Kealakehe area, which is just about three miles way.

18 Going through the regulatory framework for
19 the 'O'oma Project Area outlined here: As noted the
20 mauka area parcel 22 is already urbanized and zoned
21 for industrial use. And in the makai area is
22 currently in the Conservation District.

23 As noted the portion of the makai area is
24 being proposed to be retained in conservation. It has
25 been aligned with an archaeological preserve on the

1 north area of NELHA and comes across and generally
2 includes a majority what was proposed, a 75-acre
3 coastal preserve area.

4 We have pulled the proposed urban boundary
5 closer to the shoreline on the south side as where
6 we're anticipating to have more intensive community
7 park, beach park uses, the community pavilion and the
8 like, but still a majority of the coastal preserve
9 areas is being retained in conservation.

10 Going back and getting some context as far
11 as the County's policies, land use policies and plans.
12 This is the County General Plan back in 1990. The
13 parcel's highlighted included at that time for urban
14 expansion with a resort node.

15 The neighboring property to the south,
16 Kohanaiki, as you all saw was also was planned for
17 resort medium and low-density development at that
18 time.

19 In about the same time as the General Plan
20 was being finished in 1990 the County undertook the
21 Keahole-to-Kailua Development Plan, often referred to
22 as the K-to-K Plan.

23 And under that the results of that planning
24 effort laid out a network of secondary sort of
25 parallel roads North-South along Queen Ka'ahumanu

1 Highway including the mid-level road and for the
2 subject Project Area, including Kohanaiki, was
3 identified for resort and recreational uses here.

4 At that time NELHA and HOST Park were all,
5 were planned and shown here next to the airport.

6 The County General Plan update process
7 started in about 2000 and finished in 2005. The
8 resort component that was previously shown down here
9 was removed at that time and the coastal open space
10 was shown.

11 About two-thirds of the Project still remain
12 and is planned for urban expansion. The area above
13 the trail or above the State right-of-way was already
14 urbanized and zoned for industrial use.

15 County zoning is industrial, as I mentioned,
16 on the mauka piece and open on makai. The Kona CDP
17 which was completed, started, I think, in 2005, late
18 2005 and completed in 2008, that planning process
19 included an extensive community outreach process with
20 the steering committee and the like.

21 As noted yesterday in some of the testimony
22 the area, 'O'oma is located right here. And the
23 urban -- the designated urban area for Kona is the red
24 boundary which 'O'oma's clearly located within.

25 The secondary -- there's a yellow line going

1 North-South and this was a secondary transit route
2 that was planned on the makai side of Queen Ka'ahumanu
3 Highway.

4 That's also included, and would be part of
5 or the intent, was that that frontage road we'll be
6 discussing would be the functional transit corridor
7 through the Project.

8 Emphasis on the K-to-K Plan was the
9 mid-level road of which they're getting a portion of
10 that funded through the federal government and is
11 going to be built to Kealakehe Parkway.

12 But ultimately the orientation, their
13 primary transit corridor was along that alignment with
14 various Transit-Oriented Development nodes and
15 traditional neighborhood design nodes settlement.

16 Special Management Area under control of the
17 county, the entire Project is within the Special
18 Management Area and we would be seeking those permits
19 subsequent to any urbanization.

20 I'll give you a quick overview of the
21 property if you haven't been to the site. This is the
22 shoreline area viewed from the, close to the NELHA
23 boundary on the north looking south.

24 The shoreline road, the Jeep road that many
25 referenced traverses right along the shoreline. This

1 is a shot looking back north. You can see some of the
2 NELHA buildings on Keahole Point.

3 Within that lower area of the site there's
4 a -- that's where most of the archaeological features
5 are concentrated. This is just one, looks like a
6 habitation enclosure area to the left.

7 Mamalaho Trail is not within the Petition
8 Area but is included -- it cuts through the mauka
9 zoned area, but is a very prominent element and
10 significant archaeological site and resource for the
11 Project.

12 There's an existing Jeep road basically
13 connects up at Queen Ka'ahumanu Highway and goes,
14 follows generally along the southern boundary of the
15 property.

16 On the plan I'll show you where that
17 connects. But that's the current permitted access
18 point off of Queen Ka'ahumanu Highway, but it's at the
19 very southern edge of the property.

20 This is more the central area of the
21 property looking north. You can see the HOST Park
22 facilities.

23 And in the far background you could see the
24 HELCO power plant which is opposite the airport access
25 road.

1 The coastal area shown here from a portion
2 viewed from the, sort of central portion of the
3 coastal preserve area. Again, this is a view up on
4 the bluff area.

5 There's a gentle bluff area you'll see on
6 the topography I'll highlight later that generally
7 defines the open space and coastal preserve area.

8 We undertook this Project, as many
9 mentioned, in late 2004. The county approved -- there
10 was a request for rezoning for the mauka 83 acres by
11 Cliff Morris.

12 That was approved by the county council, the
13 mayor vetoed and it wasn't overridden in late 2004.
14 But they were proposing to redistrict the industrial
15 zoning to a project district for more of a mixed-use
16 type of project.

17 The outcry at that time primarily was
18 related to the Queen Ka'ahumanu Highway improvements
19 were not advancing as planned. And there's quite a
20 community outcry related to traffic.

21 In early 2006 Dennis Moresco, the managing
22 partner of North Kona, which has become 'O'oma
23 Beachside Village, LLC became the managing partner and
24 engaged PBR Hawai'i to relook at what the
25 opportunities were for this land in context with

1 regional planning policy.

2 And there's also an ongoing effort in a
3 community outreach that engaged on one-to-one contact
4 and discussion with the community on what exactly the
5 preferred use of 'O'oma would be.

6 Subsequent to that we had developed some
7 concept plans. And I had a meeting with the county
8 regarding the Kona CDP, which was getting underway,
9 with Roy Takemoto, who was with the county at that
10 time.

11 Earl Masukawa, who was the lead planner with
12 Wilson Okamoto, and Nancy Piscchio, who was the
13 liaison for the planning department on the Kona CDP,
14 to discuss specifically some early concepts of what
15 potentially were alternatives for 'O'oma. And I'll
16 get into the details of that a little bit later.

17 By mid 2006 we assisted on assembling a team
18 of consultants to look at what the opportunities and
19 constraints were on the site. You'll be hearing from
20 many of these witnesses today and in subsequent
21 hearings.

22 The community dialogue process that I
23 mentioned identified nine key issues that we felt were
24 important to be considered, and the plan should be
25 responsive to: The regional park issue, the concept

1 of airport-to-airport coastal park.

2 When they refer to "airport" they're talking
3 about the old airport in Kailua-Kona and the new
4 airport.

5 Trying to achieve a linkage along that
6 entire seven-mile shoreline; having a looped trail
7 system that would link other trails; contribution to
8 access in traffic; connector roads near the airport;
9 contribution to youth education; respect an
10 interpretation of cultural resources according to
11 local protocols; having respect for the landscape;
12 providing for on-site worker housing and
13 self-sufficient pedestrian-oriented village;
14 opportunities for local residents to own their own
15 businesses on the site that included live/work units
16 with the opportunity to have your business on the
17 ground floor and commercial uses -- or residential
18 uses above.

19 The community outreach continued with sort
20 of the key stakeholders meeting with NELHA, the
21 planning director Chris Yuen on the concept plan,
22 alternatives.

23 We made a presentation to the Hawai'i
24 Leeward Planning Conference in mid 2007; met with
25 Mayor Harry Kim and received his input. And also in

1 2007 -- well, subsequently Mayor Kim submitted, and
2 it's included in your exhibits, Exhibit 16, submitted
3 a letter of support identifying what he felt were key
4 attributes of the Project.

5 The Public Access and Open Space and Natural
6 Resources Commission, as was noted in some of the
7 testimony yesterday, identified 'O'oma as No. 5 on
8 their priority list in 2007.

9 After that they had a public meeting in Kona
10 that we attended. And we informed them of our overall
11 concept plan and our plans to basically preserve the
12 coastal resource area of approximately 75 acres.

13 And in subsequent reviews of the Commission
14 'O'oma has not been highlighted as a potential site.
15 And as noted their prioritization list does consider
16 prior nominated sites. But 'O'oma has not been
17 considered subsequently.

18 Community outreach has been ongoing. Peter
19 Young has joined the team in mid-2007 and as been
20 working closely with and assembled an advisory group,
21 many of whom you heard from yesterday.

22 Worked with the cultural lineal descendants:
23 Hui o Na Kupuna on the plan and their concerns and how
24 we can be responsive to their desires and needs.

25 He's had outreach to community business

1 associations and continues to work with the key
2 stakeholders.

3 The environmental impact statement and
4 public review and community process will be summarized
5 in more detail by Tom Schnell, but that was done in --
6 started the process in May 2007 and finished in
7 January 2009 at which time this Commission accepted
8 the approval of that document.

9 The conclusions from this planning process
10 or at the conceptual stage was that we definitely were
11 going to intend to comply with the General Plan, help
12 implement the airport-to-airport shoreline plan.

13 And conceptually I think the broadest and
14 most important concept is that this was going to be a
15 primary residential community on an ocean front
16 property with local services targeted to the local
17 market.

18 We really envision a live-work-play and
19 learning environment and community that would have
20 this tremendous asset of the coastal preserve and
21 connecting to the shoreline and coastal resources.

22 It complies, as noted, with and implements
23 the Kona CDP with all those elements of the plan
24 noted.

25 Plan for the airport noise impacts and not

1 to interfere with airport operations. Included in the
2 environmental impact statement we engaged Yoichi Ebisu
3 and Associates to prepare a noise impact study. It
4 was completed a little in advance of the airport's
5 master plan and their update.

6 And I'll show you their contours. But
7 generally the noise contours, the 60 DNL which is sort
8 of the land use compatibility line for residential.

9 Generally and somewhat coincidentally it
10 follows the topographic bluff area that we were
11 planning towards in preserving the coastal areas. The
12 other contour is the 55 DNL line here and 220/30.

13 I'll have that exhibit later showing that
14 state's DNL lines DNL in relation to the plan. And
15 Yoichi Ebisu will also be providing expert testimony.

16 Coastal resources as mentioned: the
17 Kohanaiki Shoreline Access Plan and the NELHA Access
18 Plan both north and south we intend to integrate with
19 those plans. We are providing public access to this
20 open space.

21 And the entire shoreline area will be
22 undertaking a resource management plan through the
23 zoning and SMA process to figure out the details of
24 how access will be provided and what the preferences
25 are for the community on how to utilize that 75 acres.

1 The coastal hazard areas tsunami inundation
2 zones, the flood insurance rate map has been updated
3 since the EIS. This is the current flood inundation
4 areas. It's really isolated generally below the Jeep
5 road except for a lower southern corner of the
6 property.

7 Overlaid on the master plan here is the
8 tsunami inundation zone in yellow and also
9 highlighting of the elevation contours of the site in
10 10-foot increments showing the lowest one being
11 20 feet where the residential areas are and the
12 mixed-use village being up at an elevation of 40 to
13 50 feet in this area.

14 Continuing on, the key planning
15 determinants. I mentioned there is some natural
16 topography that we're being responsive to to define
17 those bluff, rough edges. Archaeological and cultural
18 sites, the site has been surveyed many times and the
19 survey was updated.

20 There's one anchialine pond that would be in
21 the preserve area. And there's a plant population of
22 maiapilo which is a native plant with cultural uses
23 existing in the preserve area.

24 The concentration of archaeological sites
25 are primarily in the preserve area, but there are some

1 other sites within the Project that will also be
2 preserved.

3 There's a few burial sites that have been
4 located. And those have been situated so they'd end
5 up in open space and preserved area and the Mamalahoa
6 Trail, as I mentioned earlier, and its related
7 buffers.

8 Consistent with the condition of the SMA on
9 the adjoining Kohanaiki property on the south side
10 we're proposing a similar buffer that -- the trail
11 itself is about 10 feet wide.

12 And there is a recommendation, and we're
13 proposing a similar, a natural area 50 feet on each
14 side of that. So a total of 110 feet with an
15 additional building setback of 60 feet. The 110-foot
16 corridor in itself creates about a seven-acre open
17 space area through the Project.

18 And with the additional building setback
19 area the result of that corridor is almost 14 acres of
20 open space area through the portion of the Project
21 which I'll highlight when we get to the plan itself.

22 Airport noise. The contour maps, as I
23 mentioned, I'll show you a couple of the updated maps
24 from the state and also the Hawai'i General Plan and
25 Kona CDP compliance.

1 And here's the noise contour maps, the 2008
2 to 2013 overlaid on the master plan again showing the
3 60 DNL line here and the 55 currently or under their
4 2008. Those move a little more mauka in the projected
5 2013.

6 Again, the State's policy is not to permit
7 residential uses in zones greater than 60 DNL. And in
8 areas greater than 55 DNL they're asking for avigation
9 easements and/or noise mitigation.

10 Sustainable planning and design principles.
11 We provided in Exhibit 67 that in more detail goes
12 through the specifics of design and planning
13 principles for low carbon communities, Smart Growth
14 and LEED for Neighborhood Developments.

15 The foundation of this plan was a sort of
16 Smart Growth. And as the Kona CDP was being prepared
17 the desire for mixed-use, compact, walkable
18 communities was sort of the focal point. And, thus,
19 the plan has been conceived and designed to integrate
20 these at a very early stage.

21 So the roadway orientation's to maximize
22 building orientations for solar access, for solar
23 water heaters and potentially PV and the whole concept
24 of a path system to encourage walking and biking.

25 This site is relatively level so it will be

1 very conducive to walking and biking.

2 The conceptual master plan from that effort
3 we have three -- we have sort of three Project Areas:
4 The mauka village, which is entirely within the
5 existing urban and zoned area.

6 The urban boundary follows the State
7 right-of-way which cuts through here. You can see it
8 through the background of the plan.

9 Then the residential plan and then a makai
10 village. I'd like to quickly sort of recap the land
11 use allocations currently on those areas.

12 The Petition Area is the State right-of-way
13 and everything makai. And that includes -- that
14 includes the two residential villages with a total of
15 530 to 650 units.

16 The makai mixed-use village is envisioned to
17 be approximately 15 acres, include 35 to 60
18 multi-family units in a mixed-use -- likely a mixed-
19 use configuration with approximately 50,000 square
20 feet of commercial use.

21 That includes a beach club, canoe club
22 facility that would be likely a membership open to the
23 membership of this community and the broader
24 community, and potentially a restaurant site.

25 The residential village. The balance of

1 that Petition Area is primarily residential, about
2 148 acres with 520 to 620 units. And that would
3 include about 70 to 85 lots.

4 These lighter yellow lot areas, which are
5 generally 9 to 15,000 square foot mid-sized lots, most
6 of those have sort of, either have ocean view or
7 proximity to the adjacent golf course on Kohanaiki.

8 And then approximately 350 to 400 homes in
9 the central portion which is sort of the primary core
10 or the primary local housing. And those would be in
11 the range, average 5 to 6,000 square foot lots.

12 And there's some multi-family areas within
13 that area of approximately 100 to 135 of which about
14 25 to 30 are within the existing zoned area. So net
15 within the Petition Area is approximately 75 to 105.

16 And the intent is to included -- under the
17 current County affordable housing policy of
18 20 percent, the intent would be to include the
19 affordable housing both within the Petition Area and
20 within the mauka village as those units are developed.

21 The mauka village, which is the balance of
22 the Project, includes approximately 420 to 550
23 multi-family units and approximately 150,000 square
24 feet, much of which would be taken up in some of the
25 live/work units.

1 As noted, the coastal preserve is a
2 significant feature of the Project. Includes
3 75 acres, 18 of a shoreline park and 57 of the coastal
4 preserve.

5 This is an illustration showing the
6 Kohanaiki shoreline park to south, the archaeological
7 preserve that's been established on NELHA and their
8 shoreline park going to the north, and the setbacks
9 being approximately 1100 feet minimum and going as far
10 back as 1700+ feet which is over a quarter mile.

11 To give some context of the scale, because
12 it is difficult to grasp the scale of how far back
13 1100 feet is or beyond a quarter mile: From the
14 entrance of this hotel at the entry sign, going makai,
15 from that point makai to the shoreline to the beach is
16 about 1100 feet.

17 If you go a couple hundred more feet to sort
18 of our average of a quarter mile you're well into the
19 commercial center across the street.

20 Another reference point for those familiar
21 on the Big Island, at Puako when you come off of Queen
22 Ka'ahumanu Highway and drop down to Old Puako Road, at
23 the junction of Old Puako Road to the beach is about
24 1100 feet.

25 In Kailua-Kona, if you're familiar coming

1 down Palani Road, I think it's First Hawaiian Bank,
2 then just beyond that is Hilo Hattie, that is eleven
3 hundred feet back from the bay.

4 There's some reference yesterday to the
5 expansiveness of Ala Moana Park. Ala Moana Park in
6 the central portion is about 700 feet deep.

7 So if you double that to 1400 or a quarter
8 mile you're on the backside of Ala Moana Center as far
9 as the depth and the amount of land area we're talking
10 about. So it's a significant, significant setback
11 area that we're addressing in the shoreline setback
12 area.

13 This shows graphically the topographic
14 changes. Note that, I mean the distances are great
15 enough so these breaks in the plan mean that there's
16 additional setbacks. The image would actually be back
17 in here based on the distances.

18 To fit it on the page, this just indicates
19 that there's a lot more distance involved to where
20 you'd actually see these sections on the site. The
21 coastal -- the community pavilion down by the
22 shoreline is represented in this concept.

23 As a primary residential community with
24 access to the shoreline is sort of what we see as
25 sort of a key attribute of the community, and the

1 mixed-use villages both mauka and makai.

2 I'll quickly go through some illustrations
3 of the plan in a large version. This is the mauka
4 village area. Here's Queen Ka'ahumanu Highway coming
5 in off the access point.

6 Coming in, this would be the frontage road
7 or main street coming in through the mixed-use
8 village. You'd come into a gateway park here, cross
9 the Mamalahoa Trail.

10 I should note that on the plan currently
11 there's the southern Jeep road breaches the Mamalahoa
12 Trail or crosses the Mamalahoa Trail.

13 And in the plan to have adequate
14 connectivity we're proposing two additional crossings
15 at Mamalahoa Trail, one here and one further north to
16 provide that access to the residents. And those would
17 have to be proposed and reviewed and a site
18 preservation plan and approved by DLNR.

19 But here's that corridor of Mamalahoa Trail,
20 the 50 feet on each side and additional building
21 setback which we would include trails within that
22 section.

23 We had Philip White and Associates help with
24 the characterization of some of the architectural
25 concepts. These are just some of the elevations of

1 what the mauka village might look like, a two- to
2 three-story configuration with a variety of
3 architectural types trying to echo some of the
4 traditional country towns and translating that into a
5 little more of a modern interpretation.

6 The village core streets, the commercial
7 store, the streets are characterized here. Again the
8 live/work street.

9 These standards are being developed and
10 refined with the County through Placemakers.
11 Placemakers is the author of the Smart Code that was
12 included in the Kona CDP as the village design
13 guidelines.

14 They're in the process now of calibrating
15 that code to local standards, local Kona standards.
16 And they've been engaged to do the Honokohau Village
17 design plan just mauka of or near the West Hawai'i
18 Civic Center.

19 So that process is ongoing and our hope is
20 the adoption of the calibrated village design
21 guidelines for the Kona CDP would support, and we
22 would implement roadway standards that would be
23 pedestrian friendly and be conducive to our concept of
24 the mixed-use village.

25 These are just some architectural character

1 sketches of what that might look like: The live/work
2 streets. The makai village again oriented along that
3 topographic bluff edge at 40 to 50 feet up from the
4 shoreline area, and close to a quarter mile inland
5 from the shoreline.

6 But as I mentioned a potential for canoe
7 club or restaurant site, mixed-use commercial and
8 residential multi-family units.

9 Character sketch of that village and the
10 pedestrian mall as conceived in the concept plan.

11 The residential neighborhood and the smaller
12 lots with a network of trails that would link up and
13 carry and be able to get people down to the shoreline
14 with minimal crossings of roadways.

15 Again, just some quick character sketches of
16 the residential. Affordable housing, as I mentioned,
17 would be integrated both in the Petition Area and the
18 existing zoned area.

19 And there's also a school site that I forgot
20 to highlight, but I'll get back to the plan.

21 These are just a hierarchy of trail systems
22 and how we envision the pedestrian access to be
23 facilitated throughout the community.

24 The shoreline trail. This is just a
25 characterization of the existing Jeep road with a

1 pedestrian orientation. There was testimony yesterday
2 the desire to keep vehicular traffic, make that --
3 retain that for vehicular traffic. And the owner is
4 amenable to that.

5 We will really work with the community on
6 their preferences and desires. And we see that being
7 a process that we would engage in through the SMA
8 process in preparing that management plan for the
9 coastal area.

10 From a planner's standpoint I would prefer
11 to see it restored back to pedestrian use but we
12 understand there are varying concerns.

13 This is just an overall land use summary of
14 the Project Area with a total of 950 to 1200 units and
15 the various land use categories. This is from the
16 EIS.

17 Development timetable has become a sensitive
18 issue, I know with the Land Use Commission. And
19 basically we're -- within the Petition Area, and Ann
20 Bouslog will speak more specifically to the market
21 aspects of achieving these schedules.

22 Basically the first part of this is
23 completing the land use entitlement process through
24 the Land Use Commission, getting, obtaining county
25 zoning and final subdivision approval into 2012.

1 Constructing the backbone infrastructure and
2 internal roadways and starting to deliver, deliver and
3 sell Project units in early 2014.

4 So basically probably six, six and-a-half to
5 seven years before 2020 to complete the makai area of
6 660 units which actually with the Petition Area, as I
7 noted earlier, there's about 25 or 30 units outside of
8 that.

9 So it's actually -- when we had prepared
10 this we incorrectly assumed that was part of the
11 Petition Area. So there's actually fewer units to be
12 sold and developed. So we're confident that it could
13 be achieved.

14 The makai area, the Petition Area would be
15 developed within a 10-year horizon of State Land Use
16 approval.

17 Again, this recaps the Petition Area, makai
18 area being retained in conservation. This is
19 181 acres makai and including the State right-of-way
20 parcel and then the existing zoned area.

21 Acknowledgments. I think it's important to
22 note a client and owner that has the vision, Dennis
23 Moresco as the managing partner, as an architect/home
24 builder, he brought his expertise as the owner of the
25 property to the Project team and really was

1 instrumental in achieving the vision we've come up
2 with and the resultant plan.

3 Mayor Kim was consulted throughout the
4 process. His letter of support I think identifies in
5 Exhibit 16 the extent of what he desired and why he
6 was so supportive of the Project.

7 As noted in some of the testimony yesterday,
8 the American Planning Association Hawai'i Chapter
9 acknowledged the 'O'oma Beachside Village as the
10 Outstanding Planning Award in 2009.

11 And concurrently they also acknowledge, they
12 gave a similar award to the preparation of the Kona
13 CDP. We feel -- we're very honored by that and feel
14 that this Project could be -- will definitely help
15 implement the Kona CDP as one of the early projects to
16 be put forward as a mixed-use walkable community.

17 As far as the Kona CDP consistency, I
18 mentioned Placemakers. They're a consulting firm that
19 were the authors of the Smart Code that was adopted
20 into the Kona CDP and is now being calibrated into the
21 village design guidelines.

22 In Exhibit 55 there's a letter from
23 Placemakers, Howard Blaxton, principal and director of
24 planning that reflects on the consistency and
25 opportunity that 'O'oma has to help implement and be

1 a -- help implement and demonstrate the success of the
2 Kona CDP.

3 Other testimony which was provided yesterday
4 included the Sea Grant College program, their letter
5 of support, including signed and authored by both the
6 Department of Zoology, coastal resource extension
7 agent and the School of Architecture.

8 This testimony was presented yesterday from
9 the Royal Order of Kamehameha. And also thank Bobby
10 Jean Leithead-Todd, the Planning Director, for their
11 supportive testimony.

12 And we look forward to working with them in
13 crafting a zoning approval subsequent to receiving
14 affirmation from the Land Use Commission and moving
15 forward with zoning and SMA through the county
16 process.

17 I did want to highlight some of the other
18 elements of the plan. Here's the proposed 3-acre
19 school site. We have been in discussions with the
20 West Hawai'i Exploration Academy which has a site
21 within NELHA. This would potentially be an ancillary
22 school site for their facilities. The wastewater
23 treatment plant is located in this proximity.

24 And I think that covers it. As noted here's
25 the archaeological preserve on NELHA's portion of the

1 site.

2 And on the -- in the briefing in the State
3 Land Use map NELHA and HOST Park has recently
4 completed their master plan.

5 And their master plan includes a
6 provision -- there is a parcel here that's still in
7 the conversation district.

8 In their master plan they plan to ultimately
9 redistrict that to the urban for further expansion of
10 the Host Park. Thank you very much.

11 CHAIRMAN PILTZ: Ms. Benck, any questions or
12 additions?

13 MS. BENCK: Just a couple of quick
14 questions.

15 DIRECT EXAMINATION

16 BY MS. BENCK:

17 Q Thank you very much, Tom. I wanted to find
18 out from you is there any intention of shutting off
19 shoreline access in this plan?

20 A No. As I mentioned I think we will be
21 continuing to engage the community in discussions on
22 the best way to provide access to the shoreline area.
23 And the management plan for the coastal area would
24 address that.

25 Q Thank you very much. I have just another

1 couple quick questions and I'll reserve the rest for
2 rebuttal. Right now the way the plan is laid out are
3 any residential units planned within the 60 DNL line?

4 A No.

5 Q Thank you very much. And the last question
6 I wanted to ask you is the number of units that are
7 proposed for the Petition Area -- again there's been
8 some confusion on it -- so that 530 to 650 units
9 proposed within the Petition Area, do you anticipate
10 having those units complete and sold by the end of
11 2020?

12 A Yes, we do.

13 MS. BENCK: That's it. Thank you very much.

14 CHAIRMAN PILTZ: County, do you have
15 questions?

16 MR. GONZALEZ: Thank you, Mr. Chair. Yes,
17 the County does have some questions.

18 CROSS-EXAMINATION

19 BY MR. GONZALES:

20 Q Thank you, Mr. Witten, for being here today.
21 This is in regards to your testimony about the coastal
22 preserve park.

23 Do you have an understanding of what the
24 intent is of the Applicant to do with that park,
25 whether it is to dedicate it to the county or to

1 maintain it themselves?

2 A I think at this point both options would be
3 considered. I don't think there's any definitive
4 determination. Or I'm not aware of any specific
5 discussions with the county yet to determine if the
6 county would want to take it over or if they'd prefer
7 it being kept and maintained privately.

8 MR. GONZALEZ: Okay. Thank you. No further
9 questions.

10 CHAIRMAN PILTZ: OP, questions?

11 CROSS-EXAMINATION

12 BY MR. YEE:

13 Q Just to clarify when the public had talked
14 about 1200 units, that would work out to be -- the
15 entire Project Area would be 1200 units but the
16 Petition Area itself would have a maximum of 650, is
17 that right?

18 A That's correct.

19 Q And could you point out how beach access is
20 going to be provided, where it's going to be? Is
21 there going to be a parking lot? Is there going to be
22 a road? How is beach access going to be provided?

23 A Sure. Under this concept plan we were
24 envisioning -- and this would be still, I guess,
25 subject to affirmation from the county, and further

1 community input to determine the preferences. But as
2 envisioned and illustrated in this plan the primary
3 vehicular access was going to be included on the
4 current county -- current public access that comes
5 down along the southern boundary within Kohanaiki.

6 And we're showing a connection to that
7 public access to a parking area and community pavilion
8 on the southern portion of the coastal preserve area.

9 There's currently vehicular access that
10 comes along the shoreline on the Jeep road from NELHA
11 down to Pine Trees that connects up with the public
12 access that's included through the Kohanaiki Project.

13 Q So the Jeep trail is a rough trail. It's
14 not a paved road, correct?

15 A No, it's not a paved road.

16 Q So the only paved access would be through
17 Kohanaiki?

18 A As currently illustrated on the master plan,
19 yes.

20 Q Is that the current plan?

21 A Well, we have had discussions internally
22 that there would be opportunities to look at vehicular
23 access through the property. And topographically we
24 don't see any concerns.

25 I think we'd have to do further study based

1 on the cultural preserve area that we have set aside
2 to make sure there wasn't any potential impacts there.
3 But that is an alternative.

4 Q Is parking going to be provided?

5 A Yes. Parking was planned to be provided
6 down near the community pavilion.

7 Q Where would the community pavilion be
8 located?

9 A Within the shoreline park.

10 Q So although the paved access is currently
11 set forth through Kohanaiki, the parking stalls and a
12 comfort station would be provided on 'O'oma property.

13 A Yes, as illustrated on this plan. But,
14 again, there's been discussions about other
15 alternatives to providing parking both at the
16 shoreline or up near the mauka village and having
17 trails accessed through the open space area.

18 Q You're not proposing either any guard
19 stations or gated communities in this area, correct?

20 A No.

21 Q Have you reached agreement in concept with
22 the Department of Education?

23 A I haven't been involved in those
24 discussions. But my understanding is we have agreed
25 to, in concept to pay the impact fees.

1 MR. YEE: Is there going to be a witness who
2 will be testifying on this issue?

3 MS. BENCK: Yes.

4 MR. YEE: Who's that going to be?

5 MS. BENCK: Tom Schnell will be able to
6 respond to those questions.

7 MR. YEE: Thank you.

8 Q You referred to the State right-of-way that
9 exists in the Project Area. Is it the intention to
10 either purchase or provide a land exchange for that
11 portion of the State right-of-way which lies outside
12 of the Mamalahoa Highway Trail?

13 A Yes, that was the intention and pursue that
14 with the state.

15 Q You had talked in your presentation about
16 the mauka village being two to three stories high.
17 Will that have an impact on the view from the highway?

18 A No. The current site -- if you drive along
19 Mamalahoa Highway and actually there's a gentle rise.
20 From the highway itself there's actually a cut area,
21 the highway is depressed in the land.

22 So currently you, visually you really don't
23 have any ocean view along the frontage of 'O'oma as
24 you traverse on Queen Ka'ahumanu Highway either north
25 or south.

1 Q So you're saying there's no view currently
2 therefore there's not going to be an impact?

3 A Well, there's -- I mean ideally I guess we
4 also have the standard 150-foot buffer area along the
5 highway. So with that distance we're not anticipating
6 any visual significant intrusion from the highway.

7 Q You've heard public testimony from some
8 individuals who are arguing that the 'O'oma proposal
9 would be inconsistent with the Kona Community
10 Development Plan. Do you remember that?

11 A Correct.

12 Q Can you explain in perhaps some additional
13 analysis on maybe explaining what they said, to what
14 extent they were wrong, or to what extent you agree?

15 A Well, I obviously don't agree with their
16 understanding. And I think in the testimony of the
17 county they don't agree either. They feel it's
18 consistent with the Kona CDP. It's within the urban
19 area designated.

20 It's been long General Plan from a land use
21 policy standpoint from early 1990 for urban expansion
22 and resort. That was changed in 2005 to urban
23 expansion and open along the shoreline. Basically
24 we're complying with the General Plan.

25 And the Kona CDP is really a vehicle to

1 implement the General Plan. So consistent with that
2 we felt, feel very confident our interpretation of the
3 Kona CDP is accurate.

4 Q The Kona CDP was amended in 2008?

5 A It was created and adopted in 2008.

6 Q You've pointed out, I think, to a map within
7 the Kona CDP which indicated that the 'O'oma property
8 was within the urban area?

9 A Correct.

10 Q Several of the witnesses testified about
11 language or text within the Kona CDP which they argue
12 would make 'O'oma inconsistent with the Kona CDP.

13 Do you remember that?

14 A Yes.

15 Q And why would that, then, not -- can you
16 then either -- either were they incorrect in their
17 recital or incorrect in their analysis as to whether
18 or not 'O'oma should be included within the Kona CDP?

19 A No, I think they're correct in the language
20 that I think they're pointing to that says the
21 emphasis, and the desire and part of the, sort of the
22 priorities was the mid-level road in developing
23 concentrations of settlement along the mid-level road.

24 But that doesn't foreclose the opportunity
25 for other projects within the urban -- designated

1 urban area and consistent with the General Plan to
2 advance their plans.

3 I mean in this case we have access, we're
4 planning to participate in the frontage road, which is
5 consistent with the secondary transit route of the
6 Kona CDP.

7 So although there's some indication in the
8 language of preferences to advance the settlement and
9 development along the mid-level road, it doesn't
10 foreclose the opportunity for other lands within the
11 urban area to be developed.

12 Q I take it you would not be the witness to
13 testify regarding the sustainability plan.

14 A No, I wouldn't.

15 Q That would be Mr. Schnell?

16 A No. I would testify on related to the
17 sustainability plan.

18 Q Oh, you would be the person. Okay. You
19 recall that a sustainability plan was submitted as an
20 exhibit in this case.

21 A Yes.

22 Q And is there a commitment to substantially
23 comply with that sustainability plan?

24 A Yes, as provided in the exhibit.

25 Q And it sets forth general principles for

1 development, correct?

2 A Correct.

3 Q I did not see in it specific measures that
4 were being committed to or very few specific measures
5 being committed to. Is that a fair characterization?

6 A Yes. I think, as stated in the petition,
7 there's a statement related to sustainability. And
8 specifically it states:

9 "The Petitioner shall implement, to the
10 extent feasible and practicable, measures to promote
11 energy conservation, sustainable design, environmental
12 stewardship such as the use of solar energy and solar
13 heating consistent with the standards and guidelines
14 promulgated by the Building Industry Association of
15 Hawai'i, the US Green Building Council, the Hawai'i
16 Commercial Building, and Guidelines for Energy Star
17 and the Green Communities into the design and
18 construction of 'O'oma Beachside Village.

19 "Petitioner shall provide information to
20 home purchasers regarding energy conservation measures
21 that may be undertaken by individual homeowners."

22 And I think it's the Petitioner's position
23 that the sensitivity of the marketplace will
24 ultimately dictate what would be acceptable to the
25 marketplace from a cost and technology standpoint.

1 I think the trend is definitely moving in
2 the green direction. And they would embrace those
3 market trends.

4 But as our client as an architect and home
5 builder is very sensitive to obligating or committing
6 to specific implementing actions at this level of
7 planning when we still have zoning, zoning and Special
8 Management Area permitting to go through. But he's
9 supportive of, in concept, of advancing the green
10 initiatives.

11 Q So you've listed a variety of potential
12 options, but haven't committed to any particular one.

13 A Correct.

14 Q Let me go through some of them then. Energy
15 Star appliances. Will those be provided to the homes
16 in this?

17 A Yes. I think we indicated that in the EIS.

18 Q Will the homes -- will PV or photovoltaic be
19 offered as an option to homeowners who wish to
20 purchase?

21 A Definitely.

22 Q For those homeowners who do not wish to
23 purchase PV at this time will the homes be designed so
24 that they're PV ready?

25 A I think that could be, that's reasonable.

1 Q Solar water heating is currently a
2 requirement, isn't it?

3 A Correct.

4 Q So will solar water heating be provided for
5 those homes?

6 A Yes.

7 Q Will there be low-flow fixtures for these
8 homes?

9 A Yes.

10 Q Will there be enhanced insulation for these
11 homes?

12 A Yes. And I think that's currently a
13 requirement in the county codes.

14 Q Will there be an insulation level provided
15 above that required by the county code?

16 A I wouldn't be the one to speak to the
17 specifics of that.

18 Q Would enhanced insulation above county codes
19 assist in reducing noise within, noise levels within a
20 home?

21 A Possibly.

22 Q Would Low-E windows or double pane windows
23 be used for these homes?

24 A Likely.

25 Q Double pane windows also assist in reducing

1 the noise levels within a home, correct?

2 A Yes.

3 Q Will green infrastructures be used in the
4 development of this Petition Area?

5 A Yes, I think to the extent practicable.

6 Q Although you may or may not go through the
7 LEED-ND -- well, are you going to go through the
8 LEED-ND certification process?

9 A That has not been determined.

10 Q If you don't go through the LEED-ND
11 certification process in particular, will the Petition
12 Area, if you had gone through that process and did the
13 paperwork, qualify for LEED-ND certification?

14 A We haven't -- LEED, LEED-ND was being --
15 they had pilot projects going on at the same time we
16 were doing the planning. So we were using the
17 LEED-ND, some of the LEED-ND criteria and standards as
18 we were planning, preparing the concept plan.

19 But we have not specifically measured
20 ourselves against LEED-ND to see if it could be
21 certified even if we didn't go through the
22 certification process. But we have included that in
23 our sustainability plan.

24 Q So you are going to go through at least
25 LEED-ND analysis to incorporate those measures or to

1 see whether or not LEED-ND is a practical option for
2 this Petition Area.

3 A Yes, yes.

4 Q What's the current zoning for the Petition
5 Area?

6 A Petition Area is Open.

7 Q And the current zoning for parcel 22?

8 A Industrial.

9 Q Did you explore the feasibility of
10 developing the Petition Area for industrial use?

11 A No.

12 Q I noticed that there are a variety of
13 alternatives that were examined in the FEIS. Do you
14 remember that?

15 A Yes.

16 Q None of those provisions, or none of those
17 alternatives included commercial or industrial use, is
18 that right?

19 A Correct.

20 Q Why not?

21 A I think its location, the property's
22 location and sort of the expressed desire in the Kona
23 CDP to work towards a more mixed-use village design.
24 So we focused alteratives in that direction.

25 And also in sort of the conventional, some

1 of the conventional thinking of what had gone on on
2 ocean front parcels along the Kona coast.

3 Q The adjacent parcel at NELHA, do you know
4 what that's currently zoned?

5 A Immediately north the current conservation
6 portion is Open. And the balance of the property I
7 think is the same, industrial MG 3A or something.

8 Q From your perspective as a planner is this
9 location more appropriate for industrial or
10 residential uses?

11 A Well, we obviously think it's quite suitable
12 for residential use in its proximity based on the
13 plan. So, yeah, I'm very comfortable with the overall
14 concept of the residential mixed-use village.

15 Q It's obviously located next to or close to
16 an airport, correct?

17 A Correct.

18 Q An airport obviously has noise issues
19 associated with it, correct?

20 A Correct.

21 Q And industrial zoned areas are more
22 appropriate -- wouldn't an industrial zoned area be
23 more appropriate than a residential area near an
24 airport?

25 A Industrial use would have a higher land use

1 compatible with the higher noise contours. But I
2 think as you saw the noise contours as projected for
3 the airport would not significantly impact the site.
4 And we've planned accordingly.

5 Q Will not have any impact on the site?

6 A No. Would not significantly impact it. The
7 60 DNL line is still -- we're not proposing any
8 residential greater than the 60 DNL.

9 Q So although it may be more compatible with
10 industrial you're comfortable with residential as a
11 zoning.

12 A Correct.

13 Q If the County's unwilling to take over
14 management of the coastal and shoreline preserve, who
15 will manage the coastal preserve?

16 A I think there're probable several options
17 that could be set up as a community-based effort. Or
18 it could be retained as part of the Association of the
19 community.

20 Q "Association" referring to the homeowners
21 association.

22 A The homeowners, correct.

23 Q It will take some money and resources to
24 manage this preserve area?

25 A Yes.

1 Q So some level of funding would be required
2 by whomever is responsible for management, correct?

3 A Correct.

4 Q How would a community-based effort acquire
5 funding to do these actions?

6 A That would need to be determined.

7 Q Will a management plan be developed for the
8 preserve area?

9 A Yes. We anticipate getting that
10 accomplished prior to or concurrent with the Special
11 Management Area permit process.

12 Q It would be important to have a management
13 are -- a management plan to know how to continuously
14 maintain the preserve area after construction is done,
15 correct?

16 A Correct.

17 Q And will that management plan include an
18 educational component for the residents to reduce the
19 likelihood of interference with, let's say, the
20 archaeological sites or the anchialine ponds or dumping
21 oil down a storm drain, those kinds of things?

22 A Yes, definitely those are typically included
23 in management plans of that type.

24 Q Are you intending to include both the
25 archaeological preservation plans, the preservation of

1 anchialine ponds within this maintenance or management
2 plan?

3 A It would have to be coordinated with the
4 site preservation plans and management plans that
5 would be prepared related to the archaeological and
6 cultural features. But, yes, it definitely has to be
7 coordinated.

8 Q Do you have any plans to guarantee the
9 future existence of this coastal and shoreline
10 preserve area that remains as a coastal and shoreline
11 area?

12 A Do I have any?

13 Q Does the Petitioner have any.

14 A It'd be probably best to address that to the
15 Petitioner.

16 Q So there's no current proposal to include an
17 easement or some kind of guarantee to make sure
18 there's no future effort to urbanize this area?

19 A Not that I'm aware of.

20 Q Would questions on the mitigation measures
21 regarding the airport, to account for the airport, be
22 better addressed to you or to the noise expert?

23 A Probably best to address it to the noise
24 expert.

25 Q In the FEIS the original development

1 schedule was that the Petition Area would be developed
2 by 2030. Do you remember that?

3 A Correct.

4 Q And that was subsequently changed so that
5 the Petition Area would be developed within 10 years,
6 correct?

7 A I think the FEIS was talking about the
8 Project Area. And then the amended petition focused
9 on the Petition Area.

10 Q The FEIS said that the -- I'm sorry, the
11 amended FEIS said that the entire Project Area will be
12 developed at the same rate throughout the Project,
13 correct?

14 A Correct.

15 Q So that would mean the Petition Area would
16 not be developed, fully developed, until 2030 under
17 the FEIS, correct?

18 A Correct.

19 Q So why did you change the schedule to allow
20 for a 10-year development within the Petition Area?

21 A Well, subsequent to the FEIS being completed
22 we were made aware that there's -- the Planning
23 Commission's interpretation of "substantially
24 complete" became, was changed or was interpreted to
25 focus on substantially complete not just including

1 backbone infrastructure as sort of traditionally being
2 approved, but actually going vertical.

3 So we did have to refocus and replan and
4 recommit to a revised plan that did focus on and
5 conduct the necessary updates to the studies that
6 would demonstrate that the emphasis would be on
7 satisfying the State Land Use Commission's current
8 standard of completing the Project, substantial
9 completion of the Petition Area within the 10-year
10 horizon.

11 And that was illustrated in my testimony and
12 will also be addressed with Dr. Bouslog's testimony.

13 Q Other than the marketing study's indication
14 that the homes could be sold within 10 years, have you
15 done any other demonstration that construction -- that
16 all vertical construction could be completed within 10
17 years?

18 A I have not. But I think the Petitioner
19 could address that.

20 Q So the Petitioner will be addressing this
21 issue as well?

22 A I think the ability to -- I mean he's a home
23 builder so I think he's better prepared to address the
24 ability to achieve the representations that the
25 substantial completion would be done within 10 years.

1 Q Other than simply the change in the
2 schedule, were there any other changes in the plan
3 that were made in order to accommodate this 10-year
4 time period?

5 A I think there's -- it's a conceptual plan.
6 We anticipate, you know, the plan being refined and
7 through the zoning process and SMA process as far as,
8 you know, where the multi-family units how many, or
9 where and the type of multi-family units, the shifting
10 of some of the affordable.

11 Originally the affordable were envisioned to
12 be entirely within the mauka mixed-use village. We
13 are now representing that the affordable 20 percent
14 requirement would be implemented concurrently. So the
15 makai village would have 20 percent and the mauka
16 village would have 20 percent also.

17 So those changes will ultimately result in
18 an expression in the plan, modification of the plan to
19 reflect those types of densities and where they're
20 located.

21 Q In addition to changing the location of the
22 affordable units, were there any other amendments or
23 changes to the proposed plan?

24 A No.

25 Q What about the infrastructure? Are they all

1 remaining in the same location?

2 A The wastewater treatment plant, I think
3 we're still looking at that, keeping that in that
4 location. The specific location of the wells, the
5 feed source for the RO plants, if they're developed
6 onsite, were not specifically located on the plan, but
7 would be -- could be -- would be located as we get
8 into more detailed design.

9 Q What about a desalinization plant, if one is
10 built?

11 A Yes. That would likely go with the
12 feedwells or be located in proximity. But that
13 determination hasn't been settled upon.

14 Q Do you know whether the parcel 22 or some
15 aspect of parcel 22 would have to be developed -- let
16 me rephrase that. Actually I'll ask the question of
17 someone else.

18 I understand you're the individual
19 responsible for coordinating and completing the Final
20 EIS.

21 A Tom Schnell will speak to that.

22 Q Tom Schnell. Let me ask you this question.
23 If you want to defer to Mr. Schnell, that would be
24 fine. But they're a variety of mitigation measures
25 that were recommended in the EIS, correct?

1 A Correct.

2 CHAIRMAN PILTZ: Bryan, we need to take a
3 break.

4 MR. YEE: Sorry.

5 CHAIRMAN PILTZ: Ten-minute break.

6 (Recess was held.)

7 CHAIRMAN PILTZ: We're back on the record.
8 Before we start, let me apologize to the people that
9 came here to testify today. Apparently the word
10 didn't get out that we weren't going to hear public
11 testimony.

12 And I was reminded that these people were
13 giving up time off from work and getting here for this
14 testimony to give themselves time.

15 But also let me advise the public that we
16 too are giving up time to testify here and listen to
17 comments. We are volunteers. We would like to hear
18 what's going on. So those that have come to testify,
19 I apologize to you. We had a whole bunch yesterday.
20 Almost 60 people testified.

21 There will be another opportunity. If time
22 permits this afternoon I will attempt to give those
23 people that are still here a chance. OP, go ahead.

24 MR. YEE: Okay. Thank you.

25 FURTHER CROSS-EXAMINATION

1 BY MR. YEE:

2 Q Do you know if all the multi-family homes
3 will be considered affordable?

4 A No.

5 Q Of the market rate or market-priced family
6 homes, do you have an anticipated price?

7 A I would not be the one to testify to that.

8 Q Who would be?

9 A Dr. Bouslog, I think, has the projections in
10 her report as far as the price ranges based on current
11 market conditions.

12 Q Referring to the development timetable
13 that's included within Exhibit 80, I take it the
14 infrastructure that's to be developed would be sized
15 for the entire Project Area, not just the Petition
16 Area, correct?

17 A Correct.

18 Q When you listed the construction for the
19 sewer system, would that include construction of the
20 wastewater treatment plant?

21 A Correct.

22 Q And the water system, does that include the
23 possibility of the time it would take for either desal
24 or any other method of obtaining potable water?

25 A Correct.

1 Q And when you do internal roads I assume that
2 would also include the laying down of electrical cable
3 and phone lines?

4 A Yes. Everything's anticipated to be
5 underground utilities.

6 Q What infrastructure do you think would be
7 completed, or do you know how much infrastructure
8 would be completed by July 1st, 2013?

9 A Well, we don't have specific construction
10 plans or phasing yet. But I imagine the connector
11 road to the highway, and that would get access to the
12 Petition Area.

13 And I think there may be opportunities for
14 portions of the mauka village to be developed
15 concurrently with the Petition Area as infrastructure
16 will be developed, and some of those lands would be
17 served by this infrastructure.

18 Q So you're not sure -- would the same be true
19 that you're not sure how much of the residential units
20 would be completed by July 1st, 2013?

21 A Of the Petition Area or the Project Area?

22 Q Petition Area.

23 A No. I think the delivery of homes starting
24 in 2013 will be on a pace that's projected based on
25 Dr. Bouslog's analysis. So it would be best addressed

1 the specifics of the absorption rates, probably best
2 to address the absorption rates and projected buildout
3 to Dr. Bouslog.

4 Q So the development timetable's based upon
5 the market study, not upon a construction schedule or
6 a construction estimate.

7 A Well, the construction will have to keep
8 pace with, to serve the areas to be developed. So
9 it's a coincidence you have to develop the
10 infrastructure to get to develop the homes.

11 Q But you don't have a construction schedule.

12 A Well, this is a general construction
13 schedule when, when improvements would have to be in
14 place. But, no, we don't have a detailed construction
15 schedule of exactly which roads and which improvements
16 get put in.

17 But definitely the homes have to be swerved
18 by water, sewer, power, and communications.

19 Q I assume Ms. Bouslog would not be able to
20 tell me how long or what would be constructed with
21 respect to the infrastructure because that's not a
22 market question, correct?

23 A Correct.

24 Q So then just with respect to the
25 infrastructure, what's going to be completed by July 1

1 2013, if you know?

2 A Access and the requisite infrastructure to
3 support their residential units.

4 Q So can you occupy -- would the
5 infrastructure be available to occupy homes by 2013?

6 A That's my understanding, yes.

7 Q And that's based upon?

8 A Based upon the representations on this
9 exhibit.

10 Q Well, the exhibit tells me the
11 infrastructure will be completed by January 31, 2015.

12 A Right. But as -- that's the completion of
13 the infrastructure, but there should be delivery of
14 certain improvements and making accessible the
15 homesites that would be delivered within that
16 timeframe.

17 Q So the desal plant and the wastewater
18 treatment plant would be completed by July 1, 2013?

19 A If that's when we're representing the units
20 would be available, correct.

21 Q That's based upon Ms. Bouslog's study?

22 A It's based on this schedule, exhibit, I
23 forget the exhibit number, but the referenced exhibit.

24 Q Well, then how did you come up with -- I
25 mean if it's based on the exhibit, how did you come up

1 with the number in the exhibit?

2 A Based on consultation with the Project team,
3 the engineers and the market consultants.

4 Q Do you know when the first increment of
5 homes will be available and ready for occupancy?

6 A Within the Petition Area it appears that
7 it'd be 2014.

8 Q Do you know how many homes -- would all the
9 homes -- not all the homes -- how many homes would be
10 ready in that first increment in 2014?

11 A I do not know.

12 Q I'm sorry. One quick question about the
13 roadway system. You've got internal roadways. Would
14 that include the parallel road that's to be built
15 within parcel 22?

16 A The parallel road, also referred to as the
17 frontage road, is going to be dependent on the
18 surrounding landowners implementing that. So the
19 timing of that is to be determined.

20 Q And then you have -- as the last question I
21 asked before the break was: There are a variety of
22 mitigation measures recommended in the FEIS, correct?

23 A Correct.

24 Q Is it your understanding that the Petitioner
25 will be complying or following the recommended

1 mitigation measures in the EIS?

2 A Yes, it is. And I think Tom Schnell could
3 speak more specifically to those questions.

4 MR. YEE: Thank you. I have nothing
5 further.

6 CHAIRMAN PILTZ: Intervenor?

7 MR. LIND: No questions.

8 CHAIRMAN PILTZ: Commissioners, questions?

9 COMMISSIONER KANUHA: Thank you. Thank you,
10 Tom. You know, there's nowhere in your presentation
11 that -- usually there's a cost for the Project, what
12 the total cost for this would be. There's no number,
13 whatever that number is. Do you have a number? Does
14 somebody have a number?

15 THE WITNESS: Martin Nakasone on the
16 engineering side would be able to provide the total
17 estimated cost. And I think in Dr. Bouslog's
18 testimony she's relied on the engineering estimated
19 development costs. But they do have a number. I
20 haven't included it in my presentation.

21 COMMISSIONER KANUHA: Okay. Thank you.

22 CHAIRMAN PILTZ: Go ahead.

23 COMMISSIONER LEZY: Thank you, Chair. Thank
24 you for your testimony, Mr. Witten. Office of
25 Planning had asked a question that was of some

1 interest to me. And that concerned the question of
2 whether the Petitioner is willing to somehow encumber
3 the coastal preserve portion of the Project Area.

4 And I believe your testimony was that at
5 this juncture there have been no plans to do that
6 whether by easement or dedication or what have you.

7 I'm just wondering whether there were any
8 specific discussions along those lines between your
9 office and the Petitioner to specifically avoid that
10 issue. Meaning is there a particular desire for the
11 Petitioner to keep in play the option of looking to
12 urbanize that area sometime in the future?

13 THE WITNESS: No. I'm sorry if my testimony
14 may have come across that way. I think the Petitioner
15 has -- we have tried to consistently represent that
16 the coastal preserve area would in no way ever be
17 developed.

18 They would consider it, encumbering it as
19 necessary with easements or dedication in some form.
20 So that the coastal area that has been represented
21 would never be considered for urbanization or uses
22 other than what we have represented on the conceptual
23 plan.

24 COMMISSIONER LEZY: Thank you.

25 COMMISSIONER KANUHA: Yeah, I had another

1 question. Tom, the desal plant, if one is to be used,
2 is that going to -- did you have any testimony in
3 terms of where that would be situated, if it was to be
4 in fact onsite?

5 THE WITNESS: No, I didn't testify
6 specifically to it. Location-wise I think we have
7 some flexibility there. My understanding, depending
8 on where the feedwells are best located, that the
9 plant is relatively small facility.

10 And most likely be located in outside the
11 Petition Area. But there are alternatives, I think,
12 that could be considered within the Petition Area.

13 Both Tom Nance and Martin Nakasone, who will
14 be testifying from the engineering standpoint, could
15 probably speak specifically about the range of
16 alternatives, but it can be accommodated onsite. But
17 the specific location has not been determined.

18 COMMISSIONER KANUHA: If it's accommodated
19 offsite how would that work? Would that be on
20 property that...

21 THE WITNESS: It would have to be --
22 conceptually it would have to be -- what we have
23 looked at is the mauka property, state land. So it
24 requires securing state land or in cooperation with
25 the Department of Water Supply advancing efforts with

1 them to obtain state land or further north by the
2 power plant.

3 I guess there's a reservoir site up there.
4 So that has another potential offsite alternative.

5 COMMISSIONER KANUHA: So basically if it's
6 offsite it would have to be on property that's not
7 owned or controlled by the Petitioner, is that
8 correct?

9 THE WITNESS: Correct.

10 COMMISSIONER KANUHA: Thank you.

11 CHAIRMAN PILTZ: Commissioner Judge.

12 COMMISSIONER JUDGE: Good morning,
13 Mr. Witten.

14 THE WITNESS: Good morning.

15 COMMISSIONER JUDGE: I've got just a couple
16 questions about the noise issue. We heard a lot of
17 public testimony about the airport and how just
18 naturally they tend to get bigger.

19 They don't tend to get smaller. They tend
20 to have more flights come in. They talked about the
21 military touch-and-goes.

22 And looking through the FEIS, and in your
23 presentation this morning there's different noise
24 contour maps. And some were done by, I guess, your
25 consultant. Some were done by State of Hawai'i.

1 And there's reference in the EIS about
2 contours done by the DOT in conjunction with 14 CFR
3 Part 150. And those maps get certified by the FAA for
4 approval.

5 Have those maps been completed and approved?

6 THE WITNESS: I think their study, the FAR
7 study has been complete. I don't know if they're
8 certified. Our noise consultant Yoichi Ebisu, who
9 will be testifying, would know more particularly where
10 they are in that process.

11 Those studies were kind of going on
12 concurrently and subsequent to the completion of his
13 work. But he has reviewed and can respond more
14 technically to the issues related to those.

15 COMMISSIONER JUDGE: Okay. I guess my
16 concern is that these maps, they vary. We heard
17 testimony yesterday too. I'm just wondering -- we
18 heard testimony about the injection wells, I guess.
19 But if you ask 12 people you get 13 different answers.

20 I'm wondering if that's the same thing with
21 noise contour maps. They look relatively the same.
22 But I mean are you going to get different ones?

23 Would it be important to see those FAA
24 certified? Because would those be the ones that would
25 be, I guess, the most, I don't know, accurate?

1 THE WITNESS: Yeah, I think those become the
2 sort of ones to follow once they get certified by the
3 FAA. But you'll note in the testimony and in the
4 exhibits they are very close.

5 We compared them to what Ebisu's findings
6 were versus the airport consultant's findings. And
7 they're very close.

8 COMMISSIONER JUDGE: In the ones that they
9 were done both by you and the DOT, even in the one by
10 the DOT, by 2013 the school site falls into the
11 contour 55.

12 Is there any thought about getting that
13 school site out of the -- you know into an area that's
14 not in the 55 since those are unconditionally
15 acceptable if it's...

16 THE WITNESS: Right. We haven't
17 specifically modified the plan to address that but it
18 would be a possibility.

19 COMMISSIONER JUDGE: Okay. Thank you.

20 CHAIRMAN PILTZ: Commissioner Chock.

21 COMMISSIONER CHOCK: In your testimony you
22 referenced the low carbon community. What is a low
23 carbon community?

24 THE WITNESS: It basically focuses on
25 transportation and tryin' to minimize the number of

1 trips. So it's almost parallel to Smart Growth
2 providing connectivity, providing the services within
3 a community to minimize people's need to travel.

4 So it's very -- it's almost parallel or
5 duplicative of some of the same principles of Smart
6 Growth and New Urbanism provide for.

7 COMMISSIONER CHOCK: So is that a
8 designation the Project would receive? Or how do you
9 quantify low carbon community?

10 THE WITNESS: There's a process. There's
11 methodologies where you can analyze projects and try
12 to measure their carbon footprint. We haven't done it
13 for this Project specifically.

14 But we are basically looking at those
15 principles and trying to plan the Project according to
16 those principles to try to reduce the carbon footprint
17 as much as possible.

18 COMMISSIONER CHOCK: Yeah. I know, I would
19 be very interested in kind of hearing more about that.
20 I think this is the first petition that we're hearing
21 about, at least as long as I've been on the
22 Commission, where a Petitioner is representing low
23 carbon community. I'd be real interested in terms of
24 how you folks go about measuring, quantify that down
25 the road.

1 My next question is: We heard a lot of
2 testimony yesterday that this is a great Project in
3 the wrong place. What is your perspective on that?

4 A I think it's a great Project in the right
5 place. And location-wise from the opportunities to
6 have this settlement area to serve sort of the
7 northern communities of Kona, it gets a concentration
8 of, you know, primary residential uses north of Kona
9 that have easy access to the high-end Kona resorts of
10 Kukio, Maniniowali, Hualalai and going northward.

11 I think there's a lot of business
12 opportunities that would ideally locate here because
13 it's, one, proximate to the airport. You don't have
14 to get into Kailua-Kona. So from a use and location
15 standpoint it's ideal. You still have the issues with
16 the airport noise.

17 But I think if you go in it with planning
18 for it, and as we were discussing with DOT, provide
19 for the necessary avigation easements and noise
20 easements, that should protect and not encumber in any
21 case the future operations of the airport, which is
22 the intention of the Petitioner.

23 COMMISSIONER CHOCK: Thank you.

24 CHAIRMAN PILTZ: Any other questions,
25 Commissioners? Go ahead, Tom.

1 COMMISSIONER CONTRADES: Did you folks talk
2 to or investigate any other areas where they have
3 subdivisions like this or developments like this near
4 other airports?

5 THE WITNESS: Not specifically near other
6 airports. But we have looked at and have used
7 somewhat of as a model some of the early traditional
8 neighborhood designed communities using these
9 principles: the New Urbanism principles, walkable,
10 compact, mixed-use.

11 But specifically related to proximity of the
12 airport, no, we didn't look at any specific projects.

13 COMMISSIONER CONTRADES: Okay. Thank you.

14 CHAIRMAN PILTZ: Commissioner Judge.

15 COMMISSIONER JUDGE: Along those lines
16 what's your understanding that, you know, if you were
17 to build this Project -- and right now it's in the
18 contours that are acceptable. But, say, 50 years from
19 now you've got these houses here and the
20 airport's gotta -- you've got to build it. There was
21 representations oh, oh, now we have to buy these
22 people's homes and it's our tax dollars because we
23 built it in the wrong place.

24 What's your experience in that? Do you have
25 an answer to that?

1 THE WITNESS: I don't have any experience in
2 those kind of cases. But I think here in our, my
3 understanding from the noise -- projected noise
4 impacts of the existing operations and expanding
5 operations of the airport, and with their recent
6 completion of their master plan that the noise
7 contours would be consistent and compatible.

8 So more specifically I think, you know,
9 Mr. Ebisu may be able to address more particularly
10 what the obligations are and from the legal standpoint
11 of the aviation easements and noise easements what
12 protections that gives along with disclosures to the
13 community that they're buying in an area that has
14 impacts from noise.

15 But I can't speak to specifically what the
16 legal obligations are.

17 COMMISSIONER JUDGE: Okay. Switching over
18 to the beach access issue. How would somebody living
19 in the makai portion over by the wastewater facility,
20 how do they get to the community pavilion? Do they
21 have to go out to the highway and come through that
22 access?

23 THE WITNESS: No. We have -- the concept is
24 to have an integrated system of trails so they can
25 either ride a bike or walk down through the preserve

1 area on specified trails and paths that would be
2 located within the preserve area to get them down to
3 the shoreline.

4 I think that's sort of the primary asset of
5 this community is having that ability from any
6 residence to get on a trail with minimal conflicts
7 with the roadways and get down to the shoreline, get
8 to the community pavilion.

9 From a vehicular standpoint to get to the
10 pavilion and park as conceived, as illustrated on the
11 exhibits provided, you would have to get out on the
12 highway and back down if you wanted to drive down
13 there.

14 We have had discussions internally that
15 there's an opportunity that if we don't conflict with
16 some of the cultural and archaeological preserves that
17 vehicular access could also be provided onsite from
18 the Project Area. So you wouldn't have to go out if
19 that's the desire.

20 Again, I think the dialogue and discussion
21 is focused on coming up with a management plan that
22 meets the community's desires to maintain that as a
23 usable open space and recreation area.

24 The recreation area is really primary right
25 on the shoreline. The balance of the property where

1 some of the archaeological sites are isn't used
2 frequently at all.

3 COMMISSIONER JUDGE: Okay. Yeah, I admire
4 the Smart Growth principles, but I think people are
5 gonna want to take their coolers and are going to need
6 to get down there.

7 THE WITNESS: That's a good point. For the
8 community members themselves to get, if they wanted to
9 get vehicular connectivity then we should look at
10 that.

11 COMMISSIONER JUDGE: Okay. Thank you.

12 CHAIRMAN PILTZ: Redirect?

13 MS. BENCK: No, no questions.

14 CHAIRMAN PILTZ: Okay. Thank you, Tom.
15 Your next witness.

16 MS. BENCK: Thank you. The next witness
17 we'd like to call is Mr. Tom Nance from Tom Nance
18 Water Resources Engineering. He's an expert in
19 hydrology, water resource engineering. He prepared a
20 groundwater assessment for the Project.

21 He was also instrumental in helping us to
22 understand the technical aspects of the agreement that
23 the Petitioner has entered into with the National Park
24 Service.

25 TOM NANCE

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

3 THE WITNESS: I do.

4 CHAIRMAN PILTZ: State your name and
5 address.

6 THE WITNESS: My name is Tom Nance, business
7 address 680 Ala Moana Boulevard, Honolulu, Hawai'i.

8 CHAIRMAN PILTZ: And we will accept your
9 submittal as being an expert witness. Go ahead.

10 THE WITNESS: Thank you. My assignment on
11 this Project was to provide a hydrologic assessment of
12 the development plan that Tom Witten has been
13 describing this morning and the infrastructure for
14 water, sewer and drainage that will be described by a
15 witness to follow me.

16 As presently -- as the ground exists today
17 and even after it's developed there will be no surface
18 water entering the site or leaving the site.

19 So the hydrologic assessment focuses
20 exclusively on impacts to groundwater because there
21 really isn't surface water to consider.

22 The groundwater in this area is unique
23 enough to spend just a few moments to describe some of
24 its attributes. Wells which are located above
25 Mamalahoa Highway, elevations of 16, 1700 feet, tap

1 into what we refer to as high-level groundwater.

2 Subsurface features impede the movement of
3 groundwater toward the shoreline, also impede the
4 intrusion of seawater inland.

5 Water levels build up behind them, in the
6 case of the wells above Mamalahoa Highway inland of
7 the Project to water levels a hundred or several
8 hundred feet above sea level.

9 The salinity of that water is pretty much
10 the salinity of rainwater.

11 On the makai side of the Mamalahoa Highway
12 the wells that have been drilled illustrate a thin
13 basal lens within the Project Site.

14 The part that's definable lens is really
15 only about 10 feet thick. That's very thin. It's
16 also quite salty.

17 So even at the inland end of the Project
18 chloride's on the order 3500 to 4,000. So none of the
19 groundwater beneath the Project can be used for
20 irrigation unless you did some kind of a desalting
21 process.

22 Groundwater flow rate per mile of coastline
23 has been estimated at the range of two or
24 three million gallons a day. That's actually very low
25 in comparison to areas like South Kohala where the

1 flow rate may be three or four times as great or down
2 in the Keauhou area where it's at least twice or three
3 times as great.

4 So you really have an apparently starved
5 groundwater flow coming to the shoreline basically
6 between the Keahole Airport and the old Kona Airport.

7 The water is also anomalously cold. It's --
8 even if you're near the shoreline you tap into the
9 groundwater maybe 10, 15 feet belowground. You stand
10 on the hot lava, the top of the lens may be 67
11 degrees.

12 As you go down to maybe a hundred feet below
13 sea level it's already down to 62 or 63 degrees.
14 Put my instrument in to create that profile of
15 salinity and temperature changes and the instrument
16 comes out, condensate all over it, very cold like you
17 had pulled it out of an icebox rather than pulled it
18 out of a well in a nearshore area.

19 All of these attributes of the groundwater
20 appear to be because of an unusual circumstance of
21 seawater circulation. To get temperatures on the
22 order of 62 or 63 degrees you have to go very deep in
23 the ocean. Seven feet deep in the ocean, for example,
24 the water is still 66 degree.

25 Can't tell you exact depth you need to go to

1 but you have to go far deeper in the ocean to get a
2 temperature you can find a hundred feet below sea
3 level on land.

4 Further, the high-level groundwater that's
5 moving towards the shoreline in some fashion the
6 presumption that it all just leaks somehow into the
7 basal lens. We don't find a lot of evidence of that.

8 And among other things is that the
9 high-level groundwater relative to the basal
10 groundwater is quite warm from a low of 69 to as high
11 as 73 degrees. So it's a really unique occurrence.

12 We don't really know what creates the
13 high-level groundwater. And we certainly don't know
14 the mechanism that the high-level groundwater moves
15 through or even beneath the lens to discharge
16 offshore.

17 To get into the aspects of the Project that
18 have the potential to affect groundwater, there are
19 four. First, as has been discussed, the probable
20 source of drinking water and irrigation -- and a
21 portion of irrigation water will be desalted
22 saltwater.

23 That source of saltwater may come from NELHA
24 or it may come from a deep well which would tap into
25 salt -- saline groundwater 25 feet BT or more on the

1 order of 75 percent salinity of seawater.

2 So either it will come out of the ground
3 below the brackish basal lens. Or it will come as
4 seawater imparted into the site from NELHA.

5 The wastewater treatment is proposed to be
6 to R-1 quality which makes its reuse for irrigation
7 relatively easy to do. So most of the wastewater
8 generated onsite will, in fact, be reused for
9 irrigation.

10 There may be short periods of time when you
11 get days and days of rain where a portion of that has
12 to go into a disposal well which would deliver the
13 effluent deep. But in most instances virtually --
14 essentially all of the wastewater treated to R-1 would
15 be reused for irrigation.

16 Stormwater disposal. Obviously the
17 development of the property will create localized
18 stormwater runoff that will be directed into catch
19 basins.

20 And in a number of these catch basins will
21 be what we refer to as drywells, stormwater disposal
22 wells. So that would be the manner of handling the
23 runoff produced in the urbanized areas.

24 The last aspect of the Project that has the
25 potential to impact groundwater is just the irrigation

1 of landscaped areas, the application of fertilizers
2 and the portion of that that percolates down to the
3 groundwater below.

4 In terms of numbers and -- and I deal with
5 year 'round numbers because the groundwater body is
6 large and has a way of buffering the seasonable
7 variation of use. The product water from the RO would
8 be about 800,000 gallons a day, .8 million gallons a
9 day.

10 That process will also probably develop on
11 the order of a million gallons a day of RO
12 concentrate.

13 In other words, 1.8 million gallons of feed
14 water goes into the plant; 800,000 becomes the
15 product, water, the drinking water portion of which
16 goes to irrigation.

17 And a million gallons a day, more than half,
18 becomes a prime essentially or close to double the
19 salinity of seawater.

20 The disposal of that will be in deep
21 disposal wells. There will be two of them. They will
22 probably be delivering that concentrate depending, on
23 where it is on the site, somewhere between 2 and 300
24 feet below sea level to an area where the salinity of
25 the receiving groundwater is probably around 30 or

1 basically half the salinity of the concentrate.

2 So the concentrate will be higher salinity,
3 more dense. It will not rise in the water column. It
4 will end up making its way offshore at depth.

5 The wastewater generation. Again, as a year
6 'round average my assessment used a quantity of
7 330,000 gallons a day.

8 If you wanted to put that in the perspective
9 of some of the other projects in West Hawai'i: Mauna
10 Kea today is about 250,000 gallons of wastewater.
11 Maun Lani is about 350,000. Waikoloa Resort area
12 about half million. Hualalai Resort's about 140,000.
13 The number we're using is 330,000.

14 The percolation to groundwater of excess
15 irrigation water is about 100,000 gallons a day in
16 total.

17 And the rainfall runoff into these disposal
18 wells, obviously it's episodic with rainfall events,
19 but if you average it over a year it's on the order of
20 a 120,000 gallons a day a year 'round average.

21 So when I put those various activities which
22 have the potential to impact groundwater, make various
23 assumptions about their qualities, make various
24 assumptions about what happens as it travels through
25 the vadose zone, the unsaturated zone before it

1 reaches groundwater, I come up with an increase in the
2 groundwater flow rate of about 5.8 percent.

3 That might sound a little anomalous. But
4 this Project is not drawing any of the basal
5 groundwater for its use.

6 It's importing saltwater either from NELH or
7 from way down deep in the lens. What gets returned to
8 the lens is this 5.8 percent increase in the total
9 flow.

10 There will also be an increase in the
11 nitrogen loading on the order of 6 percent and
12 increase of the phosphorus loading on the order of
13 4.3 percent, based on my calculations.

14 Those kinds of changes if you go out and
15 sample wells in the area, and we have over the years,
16 those kinds of changes are pretty much within what we
17 see as the natural variability from one sampling event
18 to the next.

19 I've also been asked to talk a little bit
20 about the feed water supply to the RO plant in
21 particular if we're using wells onsite. There's an
22 agreement with the Park Service.

23 And that agreement says that the feed water
24 well will tap groundwater that's 25 PPT or greater,
25 about 75 percent or so the salinity of seawater.

1 Depending on where that feed water well is
2 located on the site you'd have to go a hundred feet
3 below sea level, possibly, and draw from below a
4 hundred feet. Or if you're closer to the shoreline
5 you might find that slightly shallower.

6 The agreement also requires a disposal well
7 to return the brine in a zone where the salinity is at
8 least 30 PPT or greater. That could end up being 2-
9 to 300 feet below sea level. And that concludes my
10 testimony.

11 CHAIRMAN PILTZ: County, questions?

12 MR. GONZALEZ: Thank you, Mr. Chair. No
13 questions from the county.

14 CHAIRMAN PILTZ: Bryan.

15 CROSS-EXAMINATION

16 BY MR. YEE:

17 Q I understand that you said there will be no
18 surface water entering or leaving the Project Area,
19 correct?

20 A That's correct.

21 Q Then I also heard you say there will be no
22 importing of groundwater, is that right?

23 A I don't think I actually said that. What
24 was that in reference to? We are not withdrawing
25 water from the basal lens.

1 We are bringing saltwater as a feed water
2 source for desal either from deep below the basal lens
3 or offsite from NELH.

4 Q So I take it then desalination is the means
5 by which potable water will be provided for the site.

6 A At the present time that is the preferred
7 alternative. I don't think participating in a mauka
8 drinking water well has been entirely eliminated.

9 But I think the preferred alternative is RO
10 because the pace at which you develop it is entirely
11 within your own control.

12 Q If you do not develop a desal plant what
13 would have to happen?

14 A They would have to get potable water from
15 another source. Likely that would be -- well, it's
16 yet to be determined, but conventional thinking would
17 be participating in a well that would be mauka of
18 Mamalahoa Highway and adding the infrastructure or
19 improving in certain areas the infrastructure
20 necessary to bring that water makai.

21 Q I take it from your discussion there has not
22 been a lot of development of that alternative.

23 A To my understanding, yes.

24 Q So you have no time schedule -- because you
25 haven't developed it you have no time schedule for how

1 long that alternative would take.

2 A A time and cost and finding a suitable site,
3 a number of things.

4 Q Okay. So let's focus on desalination for a
5 moment then. If you do desalinate water, do you have
6 a location for the desal plant?

7 A I don't think it's been selected
8 specifically. It may be in the near vicinity of where
9 the wastewater treatment plant is shown on that plan.
10 It could well be in the northeast corner of the site
11 instead.

12 Q Would the location be somewhere adjacent to
13 the NELHA property, then, or close to the NELHA
14 property?

15 A Well, I think those are the locations that
16 have been looked at. I don't know if Martin Nakasone,
17 who follows, has another site. But I know those are
18 the two possibilities that have been looked at.

19 Q You would normally locate the desal plant
20 close to the feed source, correct?

21 A Normally you would. It's not a requirement.
22 It's a convenience certainly because the operator of
23 the plant is also the operator of the well.

24 Q My question, then, is if generally you do
25 not allow injection wells within about a quarter mile

1 of the feed source, correct?

2 A Not generally. Absolutely.

3 Q You do not allow injection wells within a
4 quarter mile of the feed source, correct?

5 A Yeah. And it's sort of important to know
6 that if there's preexisting injection wells within the
7 quarter mile they get grandfathered in if you are able
8 to convince DOH that they will not harm your supply
9 well.

10 Once the supply well becomes certified as a
11 drinking water source, then there's the quarter mile
12 buffer around it within which no disposal wells can be
13 located.

14 Q Are you aware there's conservation area
15 within the NELHA property that's intended to be
16 developed?

17 A No, I'm not.

18 Q If your feed source is located or if the
19 desal plant and feed source are located near the NELHA
20 property, would that, then, prevent NELHA from having
21 injection wells within a quarter mile of that feed
22 source?

23 A Yes, it would.

24 Q So that if NELHA intends to develop that
25 conservation area, that would inhibit some of the

1 alternatives available to NELHA with respect to their
2 tenants who would have to have an injection well,
3 correct?

4 A They would have to put it outside that
5 quarter mile buffer.

6 Q So that would impair NELHA's ability to
7 develop their property.

8 A Yes. This issue has only come up actually
9 very recently when we've started to put drinking water
10 wells on the makai side of the UIC line, never really
11 envisioned by the UIC process.

12 So in the process of trying to get your feed
13 water source certified as a drinking water well,
14 you're required to draw the buffer, inform all the
15 landowners within the quarter mile radius, have them
16 comment on how it does or doesn't affect what they
17 plan to do with their property. So they would be
18 involved in that process.

19 Q I understood that there's some flexibility,
20 however, in locating that feed source, is that
21 correct?

22 A Yes. It does not have to be at the
23 treatment plant.

24 Q So it's possible to locate that feed source
25 away from the NELHA property?

1 A It is possible.

2 Q There will be runoff is, of course, an issue
3 for any project, correct?

4 A Yes.

5 Q In this case the runoff would lead down
6 toward the ocean?

7 A Depending on how the grading goes, but you
8 know nothing is going to cross that conservation area
9 and then the beach berm which is higher than the land
10 behind it. There will be no direct runoff to the
11 ocean.

12 Q Well, that would depend on the amount of
13 rain that falls, though, doesn't it?

14 A No, it doesn't. A 500-year event is not
15 going to have runoff on the shoreline. I can tell you
16 that with flat certainty.

17 Q The Petitioner has agreed to, I think, what
18 some of us are calling the NPS agreement, National
19 Park Service agreement between the Petitioner and the
20 National Park Service.

21 A That's my understanding.

22 Q What does the NPS agreement do with respect
23 to water?

24 A Well, that's a little vague. But it --

25 Q What does it protect? What is the purpose

1 for this NPS agreement with respect to the protection
2 of water and water resources?

3 A It's, I would guess the basic objective is
4 to protect the quantity of groundwater flowing through
5 the park and the water quality of the groundwater
6 flowing through the park.

7 MR. YEE: That's all the questions I have.

8 CHAIRMAN PILTZ: Intervenor?

9 CROSS-EXAMINATION

10 BY MR. LIND:

11 Q Good day, Mr. Nance. Since the EIS has been
12 finalized have there been any discussions with NELHA
13 about supplying the water to the Project?

14 A I have not been involved in such
15 discussions. Others may have but I don't have any
16 knowledge of that.

17 Q Is there any preference to use one source of
18 the feed water versus another?

19 A There's advantages to both. I think the
20 NELHA source is probably preferable. It would require
21 a pre-filtration that the groundwater wouldn't
22 require.

23 But on the other hand, it wouldn't have
24 silicone and other things that the saline groundwater
25 has that are a problem for the RO. I would say of the

1 two sources the NELHA source is probably on balance a
2 better choice.

3 Q Is there any plans to put the RO plant
4 within the conservation or shoreline park area?

5 A I don't believe that's the case.

6 MR. LIND: That's all my questions.

7 CHAIRMAN PILTZ: Commissioners? Ms. Judge.

8 COMMISSIONER JUDGE: Good morning,
9 Mr. Nance.

10 THE WITNESS: Good morning.

11 COMMISSIONER JUDGE: Regarding the drywells
12 that would hold the water, I guess, before it
13 recharges into the ground. You're saying that there
14 will be phosphorous and nitrogen that will enter the
15 groundwater from those.

16 Are there any mitigation that exists that
17 you can clean that water so that there is no nitrogen
18 or phosphorous that goes into the groundwater?

19 THE WITNESS: Well, what we're talking about
20 is not particulate matter. What we're talking about
21 is dissolved constituents.

22 So unless that were somehow captured and you
23 had some kind of vegetative process that could uptake
24 that, but within the timeframe of a runoff and
25 disposal removing dissolved constituents isn't -- you

1 can remove particulate but you don't really remove
2 dissolved constituents.

3 You'd have to basically divert it into some
4 kind of water feature that had hyacinths or something
5 growing, try to strip out the dissolved constituents
6 from the water. But other than that you wouldn't be
7 doing it.

8 COMMISSIONER JUDGE: There are ways to do it
9 but it's just not a common practice?

10 THE WITNESS: It is not a common practice,
11 yes.

12 COMMISSIONER JUDGE: Okay. Is it not common
13 practice because it's expensive? Or I mean 'cause we
14 heard testimony yesterday that the nitrogen levels
15 have gone up, I think, in the order of 400 percent.
16 So...

17 THE WITNESS: I didn't hear yesterday's
18 testimony, but just a few things in response. It
19 isn't practiced because it is probably from a land
20 area and from a cost impractical.

21 But the realities are regardless of somebody
22 telling you things have gone up 400 percent, which I
23 have been watching water quality here for a long time
24 and I do not agree with that, it's not a real problem.

25 I mean if you look at -- and we've studied

1 water quality in inland wells, nearshore wells and on
2 the shoreline all the way up and down this coast. And
3 you do see nutrient levels increasing in groundwater
4 as they move to the shoreline.

5 The reality is, and the truth that people
6 don't want to hear, is that we see those increases in
7 undeveloped areas in the same sort of magnitude that
8 we see them in developed areas.

9 So that the idea that somehow these
10 stormwater disposal wells are going to be creating a
11 problem with nutrients, that's not correct. It has
12 not occurred.

13 I know, you know, some people don't want to
14 hear that. Steve Dollar, who will follow me, can talk
15 to that, about what's happening at the shoreline. But
16 it's not really the case.

17 Every time we have grabbed a sample of
18 runoff in the Kona area, analyzed its nutrient content
19 it's been less than the natural background levels in
20 groundwater.

21 It actually will dilute the nutrient
22 concentration in the groundwater before it goes to the
23 shoreline.

24 COMMISSIONER JUDGE: Okay. Switching over
25 to injection wells. You explained how the brine from

1 these, I guess, the waste from the desalinization
2 process will be injected. Again there's a lot of
3 theories on injection wells too.

4 What effects does that create when you put
5 that highly concentrated saline into a lower -- what
6 are some of the things that happen from that?

7 THE WITNESS: Okay. You should conceive of
8 the motion of groundwater toward the shoreline. And
9 the basal lens in this area, what I call the brackish
10 basal lens, is only about 10 feet thick.

11 It actually drags through friction moving a
12 couple feet per day, big drag, it drags the saltwater
13 beneath it to the shoreline.

14 And what you get beneath this brackish lens
15 is a very large saltwater circulation scheme where
16 saltwater is drawn up from great depth, come inland,
17 turns, is dragged offshore by the movement of the
18 basal groundwater.

19 We are going to be injecting into this
20 saltwater zone. We are not injecting into the basal
21 groundwater and it is not going to rise into that
22 basal groundwater partly because of the permeabilities
23 of stratigraphy, and partly because it's denser than
24 the receiving groundwater.

25 So that will migrate offshore, possibly

1 taking years to get there in travel time, and
2 discharge ultimately into the ocean way offshore where
3 it will be mixed to background level and absolutely
4 undiscernible.

5 COMMISSIONER JUDGE: Okay. So that's it.
6 It's just a rotating source of saltwater.

7 THE WITNESS: There's these deep saltwater
8 circulation schemes which are basically driven by the
9 movement of basal groundwater to the shoreline.

10 COMMISSIONER JUDGE: So in your professional
11 opinion that has no discernible...

12 THE WITNESS: That's why we are proposing it
13 as we are.

14 COMMISSIONER JUDGE: All right. Thank you.

15 CHAIRMAN PILTZ: Questions? Redirect?

16 REDIRECT-EXAMINATION

17 BY MS. BENCK:

18 Q Tom, quick question for you. And I have it
19 in front of me if you don't have your copy. But
20 Petitioner's Exhibit 28 is the NPS agreement.

21 Do you recollect the way that we're going to
22 be doing the monitoring to help substantiate the
23 evidence, the non-effect that you were just
24 describing? Or would you like to look at my copy?

25 A Let me wing it. Tell me if I didn't get it

1 right. There's basically two kinds of monitoring
2 that's envisioned in the agreement. One is to monitor
3 the effects of RO both as a feed water well, if
4 there's a feed water well onsite and a disposal well.

5 So it requires that we not only monitor
6 what's happening in the feed water well itself.

7 And basically what that would say is that if
8 we start out pumpin' water, let's pick a number, 30
9 PPT salinity, over a period of time if that salinity
10 stays the same or gets slightly saltier, we will not
11 have been pulling the fresher basal groundwater into
12 it as a result. So that's the first order monitoring.

13 We are also required to put monitor wells in
14 near proximity to demonstrate that separate and apart
15 from what's happening in the supply well, we're going
16 to be monitoring the basal groundwater and the
17 saltwater below it to see what's happening. So the RO
18 has its own set of monitoring requirements.

19 And then there's also a groundwater
20 monitoring plan which requires at least one
21 up-gradient monitoring well and two down-gradient
22 monitor wells and they will primarily be looking at
23 the kinds of influences I talked about in the basal
24 lens: Changes of salinity and changes in water
25 chemistry. Is that all of it?

1 Q You got it. Thank you very much.

2 CHAIRMAN PILTZ: Okay. Thank you.

3 MS. BENCK: No further questions.

4 CHAIRMAN PILTZ: All right. We're going to
5 take a break for lunch, be back at 1:00.

6 (Recess was held. 1:10)

7 CHAIRMAN PILTZ: We're back on the record.
8 Ms. Benck, your next witness please.

9 MS. BENCK: Thank you, Chairman. The next
10 witness we'd like to call is Dr. Steve Dollar. He's
11 our water quality expert.

12 Dr. Dollar prepared an assessment of the
13 marine water chemistry that was included in the Final
14 EIS. He also prepared a marine environmental
15 assessment that was included in the EIS. And he
16 summarized those reports.

17 If you'd like to discuss your assumptions in
18 your reports and then the findings that you had,
19 please.

20 THE WITNESS: Okay.

21 CHAIRMAN PILTZ: Let me swear you in,
22 please.

23 STEVEN DOLLAR, Ph.D.
24 being first duly sworn to tell the truth, was examined
25 and testified as follows:

1 THE WITNESS: I do.

2 CHAIRMAN PILTZ: State your name and address
3 for the record. And we'll also accept your background
4 as an expert witness.

5 THE WITNESS: Thank you. My name is Steven
6 Dollar. My address 1039 Wa'akaua Place, Honolulu.

7 To summarize, I'm an oceanographer and I
8 spend my time doing two things. One is looking at
9 coral reefs mainly around Hawai'i and the factors that
10 affect the structure of these reefs.

11 And secondly the second thing I do is look
12 at nutrient dynamics in the nearshore zone. That's
13 how nutrients are affected from input to land and what
14 happens to 'em and how they affect the marine
15 environment.

16 And I was asked to do two studies for this
17 Project: One, to look at the effects of nutrients and
18 other water chemistries parameters in the nearshore
19 ocean. And the second is how these nutrients might
20 affect the marine biology of the reef structure that's
21 here.

22 As a brief background, back in 1985 along
23 with some other researchers from the University of
24 Hawai'i we were curious about what the effects of all
25 the golf courses popping up around the state at that

1 time were.

2 As you may recall that was the period of
3 huge -- the Japanese bubble and there was lots of golf
4 course. There's about 80 of them now in the state.
5 What was the effect of fertilizers and nutrients that
6 were going on these courses to the nearshore marine
7 environment.

8 So we developed a method that was sort of
9 borrowed from the scientists that study estuaries to
10 look at what the nutrient, how these nutrients affect
11 the nearshore ocean coming from land.

12 And, by the way, that method now has become
13 integrated into the state water quality standards.
14 There's a special standard for West Hawai'i that uses
15 the same methods that I used and sort of helped put
16 together.

17 Now, we applied methods to the shoreline
18 here for the 'O'oma Project. Picking up where Tom
19 Nance left off, he told you how the nutrients from
20 land get to the shoreline. What I do is look at what
21 happens from the shoreline out into the ocean.

22 This is somewhat of a unique area in that,
23 as he said, the groundwater flow rate is very small
24 relative to a lot of areas throughout West Hawai'i.
25 And the concentrations of nutrients is relatively low.

1 One thing -- I'd like to sort of digress a
2 bit here. One of the biggest misconceptions -- not
3 misconceptions -- one of the hardest things to get
4 people to understand when we talk about this stuff is
5 that naturally occurring background groundwater has
6 got a lot of nutrients in it. That's just the way it
7 is. And processes are not fully well-known.

8 But compared to ocean water, groundwater has
9 got a very high nutrient load. It can get higher from
10 activities of humans like golf courses and
11 fertilization and things like that. But it's key to
12 understand that without any effects from humans
13 groundwater has high nutrient levels.

14 The other point to make is that it's about
15 as high as the deep seawater that's pumped out from
16 NELH next door. The reason that that water is pumped
17 up, one, it's cold and two, it's got a lot of
18 nutrients in it.

19 That's what makes it valuable as a resource.
20 That's why NELH is where it is. You get that deep
21 high nutrient water, seawater very close to shore.

22 So anyway when we apply the methods to the
23 shoreline here off of the 'O'oma site we see, sure
24 enough as pretty much everywhere there's a zone of
25 mixing where there's groundwater mixing with ocean

1 water. Here it's very small for several reasons.

2 One, the input is very small. There's not a lot of
3 groundwater.

4 Two, the mixing just from ocean processes,
5 waves and currents and stirring dilutes that
6 groundwater very quickly. Where we have bays and
7 inlets like Kealakekua Bay or Honokohau you see a much
8 greater input because the way groundwater dynamic
9 flows into these embayments.

10 Open coastlines, there's much less flow and
11 it's mixed a lot more because they're not protected
12 from waves.

13 So when I take the numbers that Tom talked
14 about, he saw about a 4 percent increase in nitrate
15 and about -- no, 6 percent for nitrate, 4 percent for
16 phosphate that he saw added as a result of the
17 processes that will go on with this development.

18 If we have take that 4 percent and 6 percent
19 and look at the ocean, the highest nutrient levels I
20 could find in the ocean -- what we do is we have a
21 little instrument that we walk along, we measure
22 salinity and that tells us where the groundwater is
23 coming in. When you dilute that groundwater at the
24 shoreline it reduces that input to about 1 percent.

25 So we see 1 percent increase or project 1

1 percent increase from Tom's numbers. And that only
2 will extend about a hundred feet off the shoreline in
3 the calmest of days because it's mixed up.

4 And this is typical that we see pretty much
5 everywhere. And we have looked at almost every golf
6 course along this whole coast and a lot of
7 developments.

8 So when you take that result you can
9 interpret it to mean not much is going to happen in
10 terms of what you can measure, and in terms of the
11 impact or the effect it's essentially nothing.

12 And when you get further offshore where the
13 reefs are there's no effect. So as you saw there was
14 a letter of -- I'm not sure it was support, but from
15 the Sea Grant College.

16 They understand these things too. They see
17 that this is a Project probably which will have the
18 most, the smallest minimal effect of anyplace on the
19 shoreline for the combination of these factors. And
20 I'll stop there and take questions.

21 MS. BENCK: I have no questions.

22 CHAIRMAN PILTZ: Do you have cross examine?

23 MS. BENCK: I don't, thank you.

24 CHAIRMAN PILTZ: County?

25 MR. GONZALEZ: No questions.

1 CHAIRMAN PILTZ: OP?

2 CROSS-EXAMINATION

3 BY MR. YEE:

4 Q Mr. Dollar, what are some of the resources
5 that are in the shoreline area or off the coast?

6 A You mean the coral reef communities?

7 Q Yes.

8 A There's coral reef communities that are
9 composed of corals, fishes, other invertebrates,
10 algae.

11 Q And there's been public testimony that
12 actually I think has been, differed. What is the
13 classification of the water off 'O'oma?

14 A As I understand it they're double A.

15 Q So when someone from the public testified
16 that there was an impairment of the waters, that's not
17 the waters off 'O'oma?

18 A Well, I think, you know, I wasn't here
19 yesterday so I'm not sure exactly what they meant, but
20 there's a document that the Department of Health puts
21 out. It's, I think the 404B requirement. What that
22 does it lists impaired waters around the state.

23 And I happened to be looking through it the
24 other day. And all the waters everywhere on the Kona
25 coast are impaired. And it's listed as impaired.

1 The reason is because, as I said before,
2 there's water quality standards that apply for
3 everywhere but here now -- they used to apply for
4 here -- don't take into account the mixing of
5 groundwater from land in the ocean.

6 The original water quality standards were
7 developed by guys going out in boats and just taking
8 samples offshore. That was turned into the standards.
9 Now, if you look at water that's being influenced by
10 the shoreline, by land even in completely natural
11 cases it exceeds the water quality standards. And
12 that's why they're listed as impaired.

13 Q But it's also classified as double A.

14 A That's correct. The A and double A,
15 whatever those are classified based on uses.

16 Q What does that mean? What does a double A
17 classification mean?

18 A I don't have it right in front of me. To
19 the best of my recollection it's research, recreation
20 there's no discharge or things like that. But I can't
21 quote it exactly.

22 Q Are the waters considered to be an area of
23 value to the state?

24 A Absolutely.

25 Q Did you look at all about the anchialine

1 ponds on the property?

2 A There's only one on the property. And, yes,
3 we did look at it.

4 Q Were you the one who looked at whether there
5 was any impact to the anchialine ponds?

6 A I'm not sure what you mean by "impact". But
7 we looked at the water quality in the biological
8 community, yes.

9 Q And you concluded there would be no impact
10 to the anchialine ponds?

11 A That's true.

12 Q I take that it that would be with the
13 assumption that appropriate mitigation measures were
14 being taken?

15 A That's a good assumption.

16 Q Would you be able to list for us today what
17 those mitigation measures would be?

18 A Yes. Primarily keeping the pond protected
19 from introduction of alien species.

20 Q I'm sorry. Could you say that again.

21 A Keeping the pond from introduction of alien
22 species, primarily fish.

23 Q Anything else?

24 A That's probably the most important one.

25 Q Are there any other less important ones?

1 A Well, keeping it just protected from input
2 of any extraneous materials.

3 Q Are you aware that NELHA has pipes that pull
4 water from the shallow water?

5 A I am.

6 Q Did you look at the impact to those pipes?

7 A The impact to those pipes? I'm not sure
8 what you mean.

9 Q Or the lack of impact to the water that
10 those pipes would pull from.

11 A What you got to remember is that what I did
12 I looked at the impact or the projected impact from
13 that Project.

14 That pales in comparison to the input of
15 high nutrient water from NELHA itself which is much
16 closer to where the shallow water intake pipes are.

17 Q So you didn't think it was necessary to look
18 at the impact to the water being pulled from NELHA?

19 A I'm not sure what you mean by "looking at
20 the impacts of that water". You mean sampling that
21 water?

22 Q Let me backtrack. The water from -- NELHA
23 pulls water from both deep and shallow areas, correct?

24 A That's correct.

25 Q That water is being used for aquaculture,

1 correct?

2 A That's correct.

3 Q So when you're looking at the water that's
4 going to be pulled from NELHA, if you change that
5 water wouldn't you want to know whether it would have
6 an impact on NELHA's functioning?

7 A Yeah. But the point I made is that the
8 effect from this Project will not extend to where the
9 NELHA shallow water pipe is.

10 Q And that was my question.

11 A Okay.

12 Q So you concluded there'd be no impact to the
13 water being pulled from NELHA.

14 A Okay. If you state it like that that's
15 correct.

16 Q Okay. Is the NPS agreement of assistance in
17 ensuring that there are no significant impacts from
18 this development?

19 A The NPS agreement doesn't have any
20 conditions regarding the ocean so I'm not really aware
21 of it.

22 Q I'm sorry. Fair enough. And you submitted,
23 I think -- well, I assume it was you who submitted
24 some of the exhibits regarding criticism of the UH
25 study in 2004?

1 A That's correct.

2 Q I understand that the UH study concluded
3 that there were increases in total nitrogen and
4 dissolved organic nitrogen at at least two locations?

5 A That's correct.

6 Q And did you disagree with that conclusion?

7 A I disagreed with how they came at that
8 conclusion, yes.

9 Q Was your disagreement that you thought that
10 you affirmatively believed that it's wrong? Or was
11 your conclusion that they did not analyze it correctly
12 so you could not rely on the numbers they reached?

13 A That second. The analysis was faulty.

14 Q So you're not telling us that you know, that
15 you know that these developments have not affected
16 nitrogen. You're simply saying the UH study failed to
17 prove it.

18 A Could you repeat that?

19 Q You're telling us the UH study failed to
20 prove there's an increase in nitrogen content due to
21 land development.

22 A No.

23 Q Okay. What are you saying then?

24 A In fact there is an increase in nitrogen.
25 And I published several papers that show that. The

1 problem I had with the UH Hilo study is that, as I
2 said before, they failed to understand or to
3 incorporate the fact that nitrogen levels in
4 groundwater are higher than ocean water, among other
5 things.

6 They selected to -- by the way, I need to
7 say none of the studies in that report were mine. So
8 I'm just analyzing it based on an academic critique
9 rather than defending anything that I did.

10 But the way they selected their samples they
11 didn't use the entire study set. The way they
12 analyzed it. The most important I think is that form
13 of nitrogen that's most important to changes in the
14 biological communities is nitrate.

15 And you'll notice what you said there
16 there's changes in total nitrogen, dissolved organic
17 nitrogen, not nitrate.

18 So a lot of that might have to do with
19 understanding what the measurements of total nitrogen
20 and dissolved organic nitrogen are as opposed to
21 nitrate in terms of interpreting degradation to marine
22 waters.

23 Q Were there any valid conclusions reached by
24 that UH study in your opinion?

25 A You know, it's been a while since I read it.

1 I don't recall.

2 Q With respect to anchialine ponds, are those
3 impacted by nutrient concentrations?

4 A It depends.

5 Q Can they be impacted by nutrient
6 concentrations?

7 A If there's other factors involved, yes.

8 Q I'm not sure I understood your answer.

9 A Okay. Anchialine ponds, which are by
10 definition they're landlocked ponds that receive both
11 groundwater -- mixed groundwater and ocean water --
12 typically are very high in nutrients, much higher than
13 ocean water because of the input of groundwater.

14 They're not nutrient limited. By that
15 meaning that the concentration of nutrients is not
16 what regulates what's in the ponds.

17 Nutrient limitation means if you got enough
18 nutrient to satisfy the nutritional requirements you
19 can add more nitrate or more nutrients and nothing
20 happens. Just the concentration goes up.

21 That's the way the ponds work here. Some of
22 the ponds here at Waikoloa in the middle of the golf
23 course have nitrate concentrations hundreds of times
24 higher than ponds that aren't in the golf course, and
25 the biological communities are just the same.

1 So you have to look at not just the
2 concentrations but the dynamics that's going on within
3 the ponds.

4 Q So if's there's adequate nutrients, are you
5 saying any more nutrients added has no impact on the
6 anchialine ponds?

7 A As long as the rest of the community in the
8 ponds is intact and controlling that balance, yes.

9 Q Does the increased nutrient levels allow for
10 a change to the community that might exist in the
11 anchialine ponds?

12 A If other factors aren't involved, meaning
13 introduction of alien species, that change the
14 biological composition, no.

15 Q So if alien species --

16 A That's been well documented. I'm not --
17 I've reports that document this.

18 Q Okay. So if I understand it correctly
19 you're saying if alien species are kept out the
20 nutrient levels as long as it's adequate isn't
21 important.

22 A It's always adequate.

23 Q Okay. If alien species are introduced, then
24 an increase in nutrient levels might allow for the
25 continuation of those alien species?

1 A No. The alien species have nothing to do
2 with the nutrients. They're fish. But what happens
3 if you have alien species that prey on the shrimp that
4 are the natural inhabitants of the pond that in turn
5 graze on the algae that's growing in the ponds, then
6 you can have an upset of the balance. And you can
7 have degradation of the ponds.

8 Q I'm just going to ask one more question
9 because I was just confused. So I'm just trying to
10 understand. I thought you were linking the nutrient
11 concentrations to something that occurs in the
12 anchialine ponds.

13 I thought you were linking it to the alien
14 species. You're telling me now no, they're just
15 completely independent factors.

16 A That's true, yes.

17 Q And the nutrient concentrations are really,
18 it sounds to me, like, irrelevant to the health of the
19 anchialine ponds?

20 A As long as other factors are in balance,
21 that's correct.

22 Q What if other factors are not in balance?
23 How does the nutrient concentration play an impact or
24 role in the anchialine pond?

25 A Well, it's already elevated to the point

1 that if the balance is upset then you're going to get
2 degradation to the ponds even with background nutrient
3 concentration.

4 Q Doesn't that reach you to the conclusion
5 then that the nutrient concentration is irrelevant?

6 A Yes.

7 Q Okay. That's what I was asking. You know
8 that there's a pollution prevention plan that's
9 included as part of the agreement?

10 A As I said I haven't read the agreement.

11 Q Oh, you're not familiar with the agreement.
12 I'm sorry. Okay. In that case I have no further
13 questions.

14 CHAIRMAN PILTZ: Intervenor?

15 CROSS-EXAMINATION

16 BY MR. LIND:

17 Q I have a couple questions. Dr. Dollar, when
18 you did the nutrient assessment, did you analyze data
19 from other developments either upslope or next to
20 'O'oma to come to your conclusions?

21 A Did I analyze other developments that are
22 incorporated into this report?

23 Q Yeah.

24 A No.

25 Q Is it possible that the cumulative effect of

1 lots of developments around this area would add more
2 nutrients to the groundwater system?

3 A You know, you'd have to ask that question to
4 Mr. Nance because I just pick up what he gives me at
5 the shoreline. And I think what you're asking is --

6 Q I'm asking at the shoreline, what comes out.
7 If you add up all the nutrient inputs from all the
8 developments would you come to a different conclusion?

9 A That's what I said. I'm just taking the
10 contractions at the shoreline from what Mr. Nance
11 gives me.

12 Q So there's no data from other developments
13 in that.

14 A Well, for this case I don't think there are,
15 no.

16 MR. LIND: Thank you. That's all.

17 CHAIRMAN PILTZ: Commissioners?

18 Commissioner Judge.

19 COMMISSIONER JUDGE: Dr. Dollar, you were
20 saying that, as I understood it, there are two factors
21 at 'O'oma, that the groundwater moves slowly and then
22 it gets mixed up.

23 Will development and adding more water, you
24 know, from development, will that cause the water to
25 move any faster underneath or will it --

1 THE WITNESS: I don't remember saying
2 anything about movement of water. What I said the
3 amount of water is lower. The movement of it is very
4 slow anyway. But it's the volume, the loading that's
5 small.

6 COMMISSIONER JUDGE: Okay. So right now the
7 volume is less. Well, okay you, didn't say "slowly".
8 So if one assumes with the development will that
9 create more volume?

10 THE WITNESS: Yes. I think Mr. Nance
11 estimated 6 percent increase in groundwater volume.

12 COMMISSIONER JUDGE: Okay. So the 6 percent
13 is in volume and also nitrates. That's the 6 percent?

14 THE WITNESS: It happens to be the same
15 number, yeah.

16 COMMISSIONER JUDGE: Okay. What happens --
17 I don't know, we talk about nitrates and phosphates.
18 What do those do if you have too much of that? What
19 does it do to the ocean environment that you study?

20 THE WITNESS: Okay. If in situations where
21 you have too much nitrogen or phosphorous it's called
22 eutrophication. That's a term when you have too many
23 nutrients for the system to assimilate.

24 You usually get increases in algae either
25 plankton or attached filamentous algae. That's the

1 situation mainly in places where the circulation isn't
2 fast enough to turn that water over and circulate it
3 out before these plankton blooms could occur.

4 COMMISSIONER JUDGE: So what numbers does
5 that -- what percentages do you have to have to have
6 that eutrophication? I guess that's what causes the
7 algae blooms?

8 THE WITNESS: It can. As far as a number, I
9 can't really give you a number on the concentration of
10 algae -- of nutrients because it's also a function of
11 the movement of the water. A great example of this is
12 Honokohau Harbor.

13 At the mauka end of Honokohau Harbor we get
14 increased groundwater nutrients from the discharge
15 from the Kealakehe sewage treatment plant. Okay.
16 Gets into the harbor in relatively high
17 concentrations.

18 But you don't see these plankton blooms
19 because the water dynamics in there you get a surface
20 plume of freshwater that jets out the mouth of the
21 harbor before anything could happen.

22 So it's not just the concentration. It's
23 the hydrodynamic of the situation as well. In 'O'oma
24 you have so much mixing I wouldn't even be able to
25 come up with -- you'd probably never get any effect in

1 the nearshore ocean from nutrients because it's mixed
2 so rapidly.

3 COMMISSIONER JUDGE: Okay. The impaired
4 waters, what does that mean "impaired waters"?

5 THE WITNESS: Well, it's like I said, it's
6 kind of an artificial thing. The Department of Health
7 is required by the Clean Water Act every, I think, two
8 years, typically four years, two to four years to put
9 together this document that's called the 404B.

10 What it is they look -- and this was just
11 done in 2009 -- they look at all the coastal waters.
12 If somebody says, "We want that to be impaired because
13 we think the level of nitrate is too high or
14 chlorophyll is too high" there's a process you can go
15 through.

16 And there's actually an outline in this
17 document on how to do that. If you pass it, if it
18 passes all these criteria it gets listed as impaired
19 in the table. There's a table of all the water
20 values.

21 You can also go through the process of
22 delisting it if you can show something changed and now
23 it's not impaired anymore. Then it gets delisted as
24 it's not a rigorous test of any one particular place
25 for a whole bunch of physical and chemical parameters.

1 It's just kind of just an, almost comes from
2 everywhere. You can just get it listed because of one
3 particular thing.

4 Like I said, virtually every place for West
5 Hawai'i is listed as impaired. Because if you look at
6 the shoreline -- and a lot of that's from the work
7 that I've done and Richard Brock has done.

8 And they take the water quality measurements
9 that we make in the nearshore areas and they exceed
10 the water quality standards. So they get listed as
11 impaired even though it might be from completely
12 natural factors.

13 COMMISSIONER JUDGE: Okay. There's no real
14 link, then, between this double A classification? You
15 don't go from double A to be impaired. They're two
16 separate --

17 THE WITNESS: Two separate things, yes.

18 COMMISSIONER JUDGE: Okay. And the double A
19 classification isn't based on water chemistry. It's
20 based upon...

21 THE WITNESS: It's based upon usage.

22 COMMISSIONER JUDGE: Okay. Thank you.

23 CHAIRMAN PILTZ: Commissioners, any other
24 questions? Redirect?

25 REDIRECT-EXAMINATION

1

2 BY MS. BENCK:

3 Q Dr. Dollar, the nutrient loading or the
4 nutrients that would be going out into the water from
5 this Project, are they within the natural variability
6 percentages?

7 A Definitely.

8 Q So, in fact, even if this Project wasn't
9 here that's the same amount of stuff that would be
10 flowing in and out?

11 A Well, it's going to be increased a little
12 bit by the Project, but it's still way lower than what
13 the natural input is from other areas on this
14 coastline.

15 MS. BENCK: Thank you. That's my only
16 question.

17 CHAIRMAN PILTZ: Thank you.

18 RECROSS-EXAMINATION

19 BY MR. LIND:

20 Q Sir, in terms of the natural variability,
21 could you define that?

22 A Could I define that?

23 Q Yes, for the Commissioners?

24 A In numbers?

25 Q No, just how you use it, how you calculate

1 it?

2 A Oh, the background levels we determine by
3 looking at water and wells. Tom Nance talked about
4 there's hundreds of wells probably along this
5 coastline.

6 Many of them that are for potable sources
7 are located up above any development. So the water
8 pulled out of there is essentially pristine in terms
9 of being affected by humans.

10 If you go along the coastline from
11 Kealakekua to Kawaihae you'll see that natural --
12 you'll see that natural background levels vary
13 depending where you are.

14 At Kukio, for instance, it's two to three
15 times higher than anywhere else for some unknown
16 reason. So there's quite a range.

17 That's why I was saying above this Project
18 within that range we're at the very low end. So if
19 you add a little bit more to it you're still going to
20 be within that envelope of natural variability.

21 Q Is the baseline that you're referring to
22 measured prior to any of the developments?

23 A Well, they're measured now. But I said
24 they're above, they're mauka, they're above any of the
25 developments so they're not being influenced. Water

1 doesn't flow uphill.

2 Q How far up mauka?

3 A Again, you'd have to talk to Mr. Nance about
4 the wells.

5 Q I'm just trying to get an understanding of
6 the baseline being either before developments or above
7 developments.

8 Mr. Nance testified about the barrier in the
9 groundwater. And if they're above the barrier in the
10 groundwater that affects the natural variabilities.

11 A Right. That does. But that barrier as I
12 understand it is very limited in geographical range.
13 It doesn't extend all the way from Kawaihae to
14 whatever you want to call the limits of West Hawai'i
15 are.

16 Q Right. But it is mauka of 'O'oma, correct?

17 A Mauka of which?

18 Q Of 'O'oma, this petition.

19 A As I understand, yes.

20 Q Right. Right. Okay. When you add to the
21 natural variability does that change the baseline? Or
22 are you still comparing what any project adds to that
23 to the original baseline you start with?

24 A The baseline's the baseline. That doesn't
25 change. What changes from the project is what gets

1 added at the shoreline. The baseline is what we
2 measure up above any development.

3 That's at high elevation so that doesn't
4 change. And the time that water takes to get from
5 that elevation to the shoreline is on the order of
6 decades to centuries. So if you measure it, then it
7 has no relation to what's really going on now. It's
8 the baseline.

9 Q Is the baseline a picture in time also as
10 you -- if the baseline was established in 1990 does it
11 stay?

12 A As I said the water we measured in 1990
13 probably fell as rain -- well, not at the shoreline
14 but probably fell as rain at the shoreline, fell as
15 rain, reaches the shoreline hundreds of years later.
16 So we continually measure it. That's one of the
17 reasons we see such a constant baseline that varies in
18 space but not time.

19 MR. LIND: Okay. No further questions.

20 CHAIRMAN PILTZ: Any other redirect? Thank
21 you. Ms. Benck, your next witness.

22 MS. BENCK: Our next witness is Martin
23 Nakasone. He's the Project engineer. He'll be
24 speaking about the engineering aspects of the Project
25 and especially on the wastewater treatment.

1 This infrastructure goes from the roadway
2 infrastructure to utilities to power, comm, cable,
3 water, wastewater. And I'll be touching upon several
4 of these utilities and services, as we call them.

5 Presently there are, other than a dirt road
6 there are no internal roadways or developed roadways
7 within the property. So these will be all new
8 roadways that will be developed. They're being
9 planned for private ownership and maintenance.

10 In addition, we would like to say that the
11 Project would do its part to construct or fund the
12 construction of the parallel makai road within the
13 Project boundaries per the County's Regional
14 Circulation Plan. So that is in the plan.

15 With regards to water system: Due to the
16 availability of the effluent for reuse, which I will
17 go into a little later, what we are looking at for
18 potable uses are mainly potable consumption, general
19 household, commercial uses and irrigation of
20 landscaping within one's property.

21 In developing the numbers for the demand of
22 how much potable water will be used, we basically used
23 the county standards for flow demands.

24 There are several systems, as you've heard,
25 that we've discussed or considered for a potable water

1 source.

2 The one that we feel that gives us the best
3 grasp on or the control on our future based upon
4 executing and pushing our timeline on development is a
5 desalinization plant onsite.

6 This gives us -- this gives the Petitioner
7 the control over the location, development rather than
8 it being a partnership or working with the county
9 system.

10 Like to also add that the County Water Board
11 passed a resolution to support the development of this
12 desalination plant.

13 MS. BENCK: Just a point of clarification.
14 Mr. Nakasone is talking about the Water Board
15 resolution. If anybody cares to look it over it was
16 included as Appendix N in the Final EIS.

17 It's just a statement from the Water Board
18 supporting the desal, development of that and
19 potentially accepting it for dedication. Thank you.

20 THE WITNESS: As described in the previous
21 two testimonies, the onsite desalinization plant would
22 be using deep wells for feedwells and a Reverse
23 Osmosis or RO plant and going through an onsite
24 distribution system for potable requirements.

25 An alternate source that has been considered

1 is the possibility of tying into the county water
2 system. And that is something that we'll be happy to
3 continue exploring. But, again, by doing an onsite
4 desal plant it does give the Petitioner a little more
5 control on development.

6 With regards to wastewater, and this has
7 been a concern over the past two testimonies as well,
8 the three closest facilities are located in that area
9 are the Crown Lands of Keauhou, the Kealakehe
10 wastewater treatment plant and the airport's
11 Department of Transportation treatment plant.

12 At this time those capacities, if they have
13 any, are spoken for. So, again, to stand independent
14 of this we are looking at a private treatment plant.

15 As mentioned in the water section, I guess,
16 the private wastewater treatment plant is recommended
17 based upon Department of Health and the County's
18 advocating use or re-use of reclaimed water for
19 irrigational purposes.

20 The proposed treatment plant will be onsite.
21 We'd use what they call MBR, membrane bioreactor
22 treatment process.

23 This is a process that is, allows a smaller
24 footprint and allows the treatment process to,
25 effluent to reach an R-1 level consistently.

1 Generally the MBR system can reduce wastewater
2 concentrations for solids and BOD from 200 milligrams
3 per liter to less than 1.

4 And nitrogen levels from a typical influent
5 range of 30+ to under 5 milligrams per liter and
6 phosphorous from a typical influent range from 7 to 12
7 milligrams per liter to under 2.

8 And these limits on these constituents are
9 part of the National Park Service's agreement.

10 With regards to stormwater, it is a policy
11 or standard that whenever you do do development you
12 don't increase or have a net increase. And everything
13 else, any increase is kept onsite, thereby not
14 impacting your downstream flows from a quantity
15 standpoint.

16 The soils conditions and the practice on
17 West Hawai'i has been and will continue to be, I
18 think, basically use of detention ponds and/or
19 drywells.

20 So within the roadway system we're looking
21 at catch basin or drain inlets tying in with a series
22 of piping and leaning towards either drywells or
23 retention ponds.

24 Of course, during construction as well as
25 post-construction, the consideration for Best

1 potable water demand that we have calculated, that's
2 based on the county standards?

3 A Yes.

4 Q And so does that take into account that
5 we'll be getting irrigation water for the wastewater
6 treatment plant?

7 A It takes into account the use of non-potable
8 or R-1 effluent water in the common areas.

9 Q In the common areas only.

10 A Right.

11 Q Thank you.

12 A For the West 'O'oma side we did consider
13 slightly elevated irrigation for personal lots based
14 upon historical numbers of the properties in the area.
15 But from a household standpoint, and a density
16 standpoint for commercial zones it is based upon
17 county standards.

18 Q Thank you. I want to ask you a couple
19 questions about timing. There were some concerns
20 expressed earlier. I know you don't have the
21 development chart in front of you. That's okay. I'm
22 going to try to walk you through it.

23 A Okay.

24 Q What we're projecting as final subdivision
25 approval by late 2012. And then we anticipate

1 constructing our water infrastructure, and sewer
2 infrastructure from late 2012 and completing it early
3 2015.

4 Does that November 2012 to January 2015
5 timeframe sound sufficient for construction of an RO
6 plant and the wastewater treatment plant?

7 A Yes.

8 Q In fact, does it sound like more time than
9 what's necessary?

10 A Yes. Because I believe in specifying water
11 system it goes beyond the plant, but includes, again,
12 the distribution for water and collection for
13 wastewater.

14 Q That's correct. So, in fact, although we'll
15 be selling lots to increase sales of lots in probably
16 late 2013, we'll have first-built product ready by
17 2014. The wastewater and water infrastructure will be
18 completed in 2015.

19 Will we have sufficient wastewater and water
20 infrastructure in place to service those homes that we
21 plan on selling in 2014?

22 A Yes.

23 Q Thank you.

24 That completes my questions.

25 CHAIRMAN PILTZ: County?

1 MR. GONZALEZ: County, no questions.

2 CHAIRMAN PILTZ: OP.

3 CROSS-EXAMINATION

4 BY MR. YEE:

5 Q You had indicated that the county
6 requirements that there be no net increase of
7 stormwater runoff. Well, do you remember that
8 statement?

9 A Yes, to downstream properties, correct.

10 Q Is there going to be any stormwater runoff
11 from this property?

12 A No net increase.

13 Q Where will the -- but any runoff that
14 occurs, none of it will go into the ocean, is that
15 correct? Or that is incorrect?

16 A There is current runoff now that goes to the
17 ocean?

18 Q Right. Do you remember me asking a question
19 is there going to be any stormwater runoff into the
20 ocean? They said: Absolutely not, not after a
21 500-year flood? Do you remember that answer?

22 A Earlier.

23 Q Yes.

24 A Yes.

25 Q Is that incorrect?

1 A (Pause)

2 Q Do you understand the question?

3 A Yeah. Under what context was that question
4 asked? I mean any stormwater if it occurs within
5 10 feet from the shoreline.

6 Q The county requirements -- let's go back a
7 step. The county requirement is you can allow the
8 existing level of stormwater runoff to continue to run
9 off as long as no additional runoff occurs.

10 A Correct.

11 Q So you could, under county requirements,
12 allow a certain amount of runoff to flow off the
13 Petition Area, correct?

14 A Correct.

15 Q Is it your testimony, then, there is, that's
16 the standard you're going to follow and you're going
17 to be allowing some additional runoff -- not
18 "additional runoff" that you're going to be allowing
19 runoff to occur from the property?

20 A My position is that the existing conditions
21 will remain.

22 Q The existing amount of runoff will remain
23 the same.

24 A Yes.

25 Q Is that right?

1 A Yes.

2 Q Where is that runoff going? Is that going
3 to change the location of where it runs off? Or
4 you're just continue -- it flows wherever it flows
5 currently?

6 A No. It's not going to change the pattern.
7 That's two constituents as far as that goes. It's the
8 quantity as well as the flow direction or discharge
9 point.

10 Q And where will it run off? Where will that
11 existing volume of runoff go?

12 A There's currently no, in that area,
13 direction to a given point so it's not considered a
14 point source discharge. Anything that falls within
15 the property is just considered sheet flow.

16 Anything above or in the developed areas
17 will be retained or disposed of via drywells. But
18 there will be no new source or storm drain outfall I
19 guess in this case. So there are no point source
20 discharges into the receiving waters.

21 Q Where will the nonpoint source discharges
22 go? Towards the ocean?

23 A It goes towards the ocean but, again,
24 there's a bank at the ocean.

25 Q Will all of that, then, be kept on the

1 property?

2 A I cannot speak to that.

3 Q I'm sorry?

4 A I can't answer that right now.

5 Q Because you don't know or you don't
6 understand the question? Why can't you answer it? Am
7 I being unclear? Do you not understand the question?

8 A Well...I'm sorry?

9 MR. GONZALEZ: Objection. It's
10 argumentative and it was compound before that. So if
11 you could break it up for clarity of the record.

12 THE WITNESS: Yeah.

13 Q (By Mr. Yee): I'll reask, but I don't think
14 there's a problem with the question.

15 CHAIRMAN PILTZ: Are you asking for where
16 the retention ponds might be?

17 MR. YEE: I think that's a good question.

18 Q Can you answer where the retention ponds are
19 going to be?

20 A They will be located and there are a lot of
21 greenway areas or park areas that are used for heavy
22 storm detention, and that's typical.

23 Q And that's water that's kept on property?

24 A Yes.

25 Q Will additional water go off property? You

1 said yes, correct?

2 A I didn't say additional water will go off
3 property.

4 Q I'm sorry. When I say "additional" I meant
5 in addition to the amount kept in the detention
6 basins. Or will all water be kept within the
7 detention basins?

8 A The net increase will be kept within the
9 detention basin and/or discharged via drywells onsite.

10 Q I think I'm getting to the question. I
11 thought I heard one witness say there'll be no
12 stormwater runoff go into the ocean. I thought I
13 heard your say: The existing level of stormwater
14 runoff will continue to go into the ocean.

15 Am I misunderstanding the testimony?

16 A Not my testimony.

17 Q Okay. So if the belief of one witness was
18 that no stormwater runoff would go into the ocean,
19 that would be incorrect understanding?

20 A How do I say this? I cannot absolutely say
21 that because there is a crevice, if there's a lava
22 tube within that area, yes, there can be discharge.

23 So I cannot say there will be no discharge
24 because I do not believe there is a dam there. But,
25 again, if you do have a break within the high points

1 there could be discharge but I don't...

2 Q When I use the term "discharge" I don't
3 necessarily mean a point source discharge. Are you
4 using the same definition?

5 A No. So you're talking any discharge.

6 Q Yes. Does that change your response?

7 A No. But that's a loaded question. I mean
8 in the sense if you get -- your rainfall occurs it
9 doesn't just occur upstream. Your rainfall occurs
10 right at the shoreline as well. That's part of the
11 property. And that's going to flow right where it's
12 right there.

13 Even the property during high tides it can
14 be raining in the water already. So how do you hold
15 me to saying there's no discharge?

16 Q Fair enough. Let's take the property above
17 the coastal preserve.

18 A Okay.

19 Q Will any of the water from there go into the
20 ocean?

21 A No.

22 Q And all of it will be kept somewhere onsite.

23 A Somewhere onsite or disposed via drywells.

24 Q Okay. By the way, I take it there are no
25 stormwater drains in the roadways, correct?

1 A In the...

2 Q There will be no stormwater drains that,
3 like, go straight into the ocean from the roadways,
4 correct?

5 A No.

6 Q With respect to the wastewater treatment
7 plant, at some point you'll need a DOH certification,
8 correct?

9 A Yes.

10 Q From the time of construction to the time of
11 certification how long does that take? From the time
12 you begin construction to the time you get the
13 certification how long does that take?

14 A A lot of the cert -- well, done right you
15 start working with the DOH during the design period.
16 And it goes into operation and you get certification
17 within a year.

18 Q Within a year of beginning construction?

19 A You need to meet certain criteria with
20 regards to the operations of the plant over a period
21 of time.

22 Q I still haven't heard --

23 A But you do receive -- but you do receive a
24 license to operate, so to speak, prior to that from
25 DOH.

1 Q So, again, how long would that take?

2 A Start up of the plant and acceptance can run
3 from three months to potentially a year.

4 Q The question was from the beginning, from
5 the time you began construction.

6 A Construction.

7 Q Yes. So the time you first started to break
8 ground?

9 A Of the treatment plant?

10 Q Yes.

11 A Eighteen months.

12 Q And that 18 months includes the amount of
13 time, goes into the time of the certificate of -- the
14 certification or the operator's license?

15 A Yes.

16 Q Which one? Both?

17 A Certification of the plant?

18 Q You gave me a period of 18 months.

19 Remember?

20 A Yes, from beginning of construction.

21 Q Until when?

22 A You asked me from beginning of the
23 construction to certification of the plant.

24 Q And that's 18 months.

25 A Yes.

1 Q That's what I'm asking. And how long will
2 it take to construct the desalinization plant, if one
3 is built?

4 A The plant itself?

5 Q Yes.

6 A Construction...

7 Q If you don't know you can --

8 A Probably comfortable eight, nine months.

9 Q Okay. So the additional time in your time
10 schedule is, then, for the development of the systems
11 to deliver or transfer the water or the sewage or all
12 the other parts of the sewage and water systems.

13 A I'm sorry. Did you just ask me about the
14 treatment plant or the desal plant?

15 Q I asked about both. I started with the
16 sewage plant and I moved to --

17 A Desal.

18 Q -- to the desal plant.

19 A But now you're going back to the sewer
20 because you said sewer.

21 Q Now I'm going back to the entire system. So
22 I only had asked about the plant. Now I'm asking
23 about the entire system.

24 So the additional time in the development
25 plan for the entire system then includes all the other

1 parts of the system, correct?

2 A Yes.

3 Q And did you look at the development schedule
4 from a construction perspective then?

5 A That development schedule?

6 Q Yes.

7 A That's adequate time for a plant and the
8 collection or distribution of the system.

9 Q Is it optimistic of simply a reasonable
10 timetable?

11 A It's very reasonable.

12 MR. YEE: No further questions, thank you.

13 CHAIRMAN PILTZ: Intervenor?

14 MR. LIND: Just a couple questions.

15 CROSS-EXAMINATION

16 BY MR. LIND:

17 Q I think you testified that stormwater would
18 be retained onsite or --

19 A Detained?

20 Q Retained onsite or what?

21 A Or discharged via drywells.

22 Q Drywells. How deep would the drywells be
23 drilled to?

24 A Typical drywells will run about 20 to 25
25 feet. There will be some shallow trenches that are

1 available that will not classify it as an injection
2 well. And these have lesser capacities.

3 But based upon the grading, potential
4 grading schemes, there are certain areas that will
5 have heavier flows and certain areas that will have
6 lesser flows.

7 Q So you'll have drywells and trenches?

8 A Drywells, trenches. It will be a system
9 comprised of what's typical because you have your
10 crown in your road you'll have a catch basin or drain
11 inlet, catch basin or drain inlet with pipe across.
12 And based upon the tributary area every so often you
13 would have a drywell.

14 And I said basically we will consider longer
15 transmissions or shallower wells that do not, are not
16 classified as injection wells because we will have the
17 feed water.

18 Under one condition we'll have the feed
19 water onsite. So we cannot drill injection within
20 that quarter mile radius.

21 So we're going to still need to take care of
22 the stormwater drainage should that feed water be the
23 option we'll pursue.

24 Q You said some places you won't have wells
25 that would be considered injection wells?

1 A Yes.

2 Q What's the definition of "injection wells"?

3 A From a storm drainage standpoint the
4 injection well, it falls under the UIC criteria. When
5 you go deeper than wider. So a 5-foot x 25-foot
6 injection drywell would fall under the injection well
7 or UIC criteria.

8 An 8 x 8 shallow well is a drainage well
9 would not be held under the UIC requirements.

10 Q So in the 8 x 8 situation you described
11 there does it have any permitting involved?

12 A Would be under the county permit on
13 drainage.

14 Q But grading?

15 A Yes.

16 Q But not from DOH?

17 A Not through DOH.

18 Q And I think it's always been confusing to
19 me, probably other people, when you say "injection
20 well" you may not actually have something actively
21 injecting. This is what you said was drywell,
22 correct?

23 A Yes.

24 Q So it just flows into it.

25 A Yes. And only during wet weather conditions

1 of course.

2 Q Where does it go after it gets into the
3 drywells or the trenches?

4 A The stormwater?

5 Q Yes.

6 A Under these drywells basically will
7 percolate down.

8 Q Into the groundwater.

9 A Yes.

10 Q Is there any additional treatment in the
11 drywells?

12 A These are for storm drain wells. There is
13 no treatment per se like a wastewater treatment plant.
14 There are BMPs included as part of overall planning.
15 Some of -- for example, some of them would be, like,
16 greenways, again minimizing the amount of pavement
17 prior to the drywell disposal area.

18 They do have filters within the catch basin
19 areas, again, for more solids. But these are natural
20 for stormwater runoffs if going through, and this is
21 typical, low-impact development scheme where you go
22 through some grassed area before discharge into the
23 structure thereby treating the stormwater.

24 Q So in the commercial area of the Project or,
25 I guess, residential too, both of them, the individual

1 drains in somebody's business or home they're going to
2 feed in -- all of those are going to feed into the
3 wastewater treatment plant?

4 A In the drains in someone's home?

5 Q (Nodding).

6 A As in sink and shower drain?

7 Q Drains there or --

8 A Yeah, those go to the treatment plant.

9 Q How about the businesses about drains there?

10 A Yes. Any of those will go to the treatment
11 plant.

12 Q So those businesses won't have drywells
13 themselves?

14 A The roadways and open areas will have
15 drywells. Any business or commercial purposes go to
16 the treatment plant.

17 Should it be a commercial business that has
18 a certain type of waste, let's say, like a restaurant,
19 there are pretreatment requirements before even going
20 into the wastewater collection system.

21 Q Just trying to make sure I get a handle on
22 the --

23 A Like, for example, oil/water separators
24 obvious ones for cooking, I guess.

25 Q But those are the systems that are going to

1 feed into the wastewater treatment--

2 A Wastewater, yes.

3 Q Oil/water separators are planned for other
4 drywells?

5 A Those are for, like, kitchen areas or some
6 commercial areas. Yeah, again, distinct difference
7 between the wastewater system where everyone's
8 plumbing hooks up to sewer water, sink, kitchen,
9 whatnot.

10 And your external stormwater system which
11 you'll see on the roadway as you've driving on the
12 highway or whatnot.

13 Q What about the stormwater collection for,
14 say, the commercial area parking lots and things like
15 that? Is it going to be tied into the wastewater
16 system, the wastewater treatment plant or drywells?

17 A A parking lot system would tie into a storm
18 drain system.

19 Q So the drywells?

20 A Yes.

21 MR. LIND: I think that's all I have.

22 Thanks.

23 CHAIRMAN PILTZ: Commissioners?

24 Commissioner Kanuha.

25 COMMISSIONER KANUHA: Thank you,

1 Mr. Chairman. Mr. Nakasone --

2 THE WITNESS: Yes.

3 COMMISSIONER KANUHA: -- your study on the
4 future infrastructure requirements for this Project at
5 this stage of the game, you looked at various
6 infrastructure components, correct?

7 THE WITNESS: Yes.

8 COMMISSIONER KANUHA: You looked at
9 roadways?

10 THE WITNESS: Yes.

11 COMMISSIONER KANUHA: Water?

12 THE WITNESS: Yes.

13 COMMISSIONER KANUHA: Wastewater?

14 THE WITNESS: Yes.

15 COMMISSIONER KANUHA: Stormwater drainage?

16 THE WITNESS: Yes.

17 COMMISSIONER KANUHA: Power, communications,
18 cable?

19 THE WITNESS: Yes.

20 COMMISSIONER KANUHA: Anything else?

21 THE WITNESS: No.

22 COMMISSIONER KANUHA: Okay. And in
23 projecting what these future infrastructure
24 requirements would be, what did you use? What's the
25 standard?

1 What are the requirements that you use to
2 determine what these requirements are going to be?
3 For example, roadways, you know.

4 How wide, how much fill? What do you use or
5 what did you use in this study?

6 THE WITNESS: For roadways we worked with
7 the planners. And I mean there are conditions and
8 there are requirements -- I shouldn't say
9 requirements -- there are some standards or guidelines
10 we can follow for the development of primary arterial,
11 secondary streets, what may be considered a driveway
12 for a townhome area or whatnot.

13 COMMISSIONER KANUHA: So for all of these
14 different components there's some kind of --

15 THE WITNESS: Standard.

16 COMMISSIONER KANUHA: -- standard or
17 requirements.

18 THE WITNESS: Yes. Those are the county
19 standards that we follow.

20 COMMISSIONER KANUHA: Okay. Beyond that
21 what further work has been done? In other words, are
22 there conceptual plans? Are there construction
23 drawings for any of these components?

24 THE WITNESS: Not at this time.

25 COMMISSIONER KANUHA: Why not?

1 THE WITNESS: Construction drawings?

2 COMMISSIONER KANUHA: Or something more than
3 conceptual plans.

4 THE WITNESS: We're just not in that phase
5 at this time. I do have conceptual layouts of the
6 utilities and the roadways.

7 COMMISSIONER KANUHA: Okay.

8 THE WITNESS: I do know which sections I
9 used. I do know what pipe sizes I used and what
10 depths we anticipated the lines to be at.

11 COMMISSIONER KANUHA: So at what point in
12 the process, assuming, you know, there's approvals on
13 the line and you get ready to construct, at what point
14 would real specific plans to meet these requirements
15 be started, for example?

16 THE WITNESS: From a design of construction
17 drawings standpoint?

18 COMMISSIONER KANUHA: Right.

19 THE WITNESS: The design documents can begin
20 as soon as the Petitioner feels confident that --

21 COMMISSIONER KANUHA: As soon as what?

22 THE WITNESS: As soon as it's comfortable
23 that it's a viable Project and we're going to go to
24 design and then construction.

25 COMMISSIONER KANUHA: So that's not normally

1 done at this stage of the entitlement process.

2 THE WITNESS: No.

3 COMMISSIONER KANUHA: What about the next
4 stages like rezoning or whatever permits? Do you
5 start doing it then?

6 THE WITNESS: Can you specify which permits?

7 COMMISSIONER KANUHA: Well, let's say
8 rezoning. You have to go through rezoning again.

9 THE WITNESS: They may be taken up to the
10 next level but not to construction drawing stage.

11 COMMISSIONER KANUHA: So after you pass
12 through rezoning or some other permits -- in other
13 words, when you get further down the entitlement line
14 isn't that when you actually start --

15 THE WITNESS: Hard design.

16 COMMISSIONER KANUHA: -- thinking about hard
17 design?

18 THE WITNESS: Yes.

19 COMMISSIONER KANUHA: Okay. Thank you.
20 That's all I wanted to know.

21 CHAIRMAN PILTZ: Let me ask you a couple
22 questions in regards to drainage. Right now in your
23 form you only show stormwater drainage. But what
24 about natural drainage?

25 Do you have -- what I can see here you say,

1 in a 10-year storm you're going to have 228.5 CFS.
2 What about natural drainage entering the Project mauka
3 and exiting the Project makai?

4 Do you have any data on that?

5 THE WITNESS: We do have the design data
6 that we used -- you're talking about the culvert
7 crossing.

8 CHAIRMAN PILTZ: Prior to construction
9 what's the CFS at the mauka-most part of the property?
10 And what happens with sheet flow at the bottom of the
11 Project makai?

12 THE WITNESS: Okay. Upstream for this
13 Project --

14 CHAIRMAN PILTZ: Yeah, Right.

15 THE WITNESS: -- the highway actually works
16 as a cutoff.

17 CHAIRMAN PILTZ: Okay.

18 THE WITNESS: So there are culverts crossing
19 the highway. But if the sheet-flows come down to the
20 highway from the mauka side and flows down?

21 CHAIRMAN PILTZ: And nothing flows past
22 that? Okay.

23 THE WITNESS: Not over this property.

24 CHAIRMAN PILTZ: Once the Project is started
25 and you now have hardened surfaces, what do you with

1 the water, the sheet flow off of that?

2 Will all of that be considered stormwater
3 drainage and you're going to put that into the
4 wastewater plant?

5 THE WITNESS: That's all considered
6 stormwater drainage that does not go into the
7 treatment plant.

8 CHAIRMAN PILTZ: Okay.

9 THE WITNESS: The comparison that we do from
10 existing to future conditions --

11 CHAIRMAN PILTZ: Okay.

12 THE WITNESS: -- includes the increase in
13 nonpermeable surface.

14 CHAIRMAN PILTZ: Right.

15 THE WITNESS: Which results directly in the
16 increase of flow. And based upon those increases and
17 the capacity of a drywell we will estimate by
18 tributary, smaller tributary areas in the property how
19 to capture those flows. But, again, those do not go
20 through the treatment plant.

21 CHAIRMAN PILTZ: Okay. They'll just
22 percolate down into the ground then.

23 THE WITNESS: Yes.

24 CHAIRMAN PILTZ: That's correct?

25 THE WITNESS: Yes.

1 CHAIRMAN PILTZ: You've only talked
2 underground retention basins. Will you have any open
3 retention basins on the property?

4 THE WITNESS: I talked about
5 retention/detention basins within the parkway area.
6 These are not considered underground ones.

7 CHAIRMAN PILTZ: Okay.

8 THE WITNESS: Our underground structures are
9 the piping and the drywells.

10 CHAIRMAN PILTZ: Okay. And about getting
11 utiliies, the electrical power coming in, I guess you
12 have what they say a 150-foot x 150-foot area for the
13 substation transformer, substation area.

14 THE WITNESS: Yes.

15 CHAIRMAN PILTZ: And you're going to have a
16 tower on one side of the highway and have another
17 tower on the other side. But is that shown or
18 indicated on the plans?

19 THE WITNESS: That is -- having it on the
20 mauka side is an option, alternative. It's either/or.
21 Both facilities whether telephone and the power.

22 CHAIRMAN PILTZ: Would you cross the highway
23 underground?

24 THE WITNESS: We do not need to.

25 CHAIRMAN PILTZ: You're going to put a tower

1 on the makai side.

2 THE WITNESS: Yes.

3 CHAIRMAN PILTZ: And then you'll go
4 underground.

5 THE WITNESS: We can put the substation on
6 the makai side of the highway on the property. So we
7 would not have to cross.

8 CHAIRMAN PILTZ: Okay. So right now you've
9 not determined how that's going to happen.

10 THE WITNESS: Correct. I think what you're
11 reading there is a alternative to possibly having it
12 on the mauka side of the highway. It's either/or.

13 CHAIRMAN PILTZ: Okay. All right.
14 Commissioner Lezy.

15 COMMISSIONER LEZY: Thank you, Chair. I
16 just have a couple quick questions. The first mostly
17 I think for my own personal education. I understand
18 that it's become fairly standard here in Kona to use
19 desalination as a preferred method for providing
20 potable water.

21 One question I had, though, is what sort of
22 redundancy measures are taken so that there's a, I
23 guess, a fail safe for providing potable water,
24 assuming that the desalination plant, the RO plant
25 went down?

1 THE WITNESS: There are redundancies built
2 within the plant for power as well as process. This
3 is the same for the wastewater treatment plant.

4 So there is no alternative per se as well as
5 completely separate plant. But within the plant
6 there's requirements for redundancy and treatment
7 processing and power, should the power go off.

8 COMMISSIONER LEZY: Okay. Earlier
9 Commissioner Kanuha posed a question to the planner,
10 Mr. Witten, regarding the estimate for the cost for
11 completion of this Project. And that question was
12 actually deferred to you.

13 And I'd like to know if you can provide us
14 with an estimate of the total cost.

15 THE WITNESS: Yes. I believe he deferred to
16 myself and Dr. Bouslog with regards to that double
17 difference I guess. The numbers I have are for the
18 infrastructure portion.

19 So just to specify that and the total
20 infrastructure development. And because they're
21 alternatives considered it ranges from, it's in the
22 \$110- to \$120 million range for infrastructure
23 development.

24 COMMISSIONER LEZY: And just for purposes of
25 clarity then, that range, it takes into account the

1 fact that there may be alternate decisions made as far
2 as what particular --

3 THE WITNESS: Location of the plant, wells,
4 et cetera, yes.

5 COMMISSIONER LEZY: Okay. Thank you.

6 CHAIRMAN PILTZ: Commissioner Judge.

7 COMMISSIONER JUDGE: Thank you. Just to
8 further clarify the question that Commissioner Lezy
9 just asked. This 110 to 120 million what
10 infrastructure does that include?

11 Does that include the wastewater facility,
12 the desal plant, the roadways, the storm drains, all
13 the communication? Is that the whole --

14 THE WITNESS: Within the roadways, yes. I
15 mean in a sense it doesn't include the individual
16 residential units.

17 COMMISSIONER JUDGE: Right. Okay. So
18 that's wrapped in there.

19 THE WITNESS: It does include the plants
20 though, the treatment facilities, the drainage
21 structure, the conduits, the piping and the roadway.

22 COMMISSIONER JUDGE: Okay. Thank you.

23 CHAIRMAN PILTZ: Okay. Any other questions?
24 Redirect?

25 REDIRECT-EXAMINATION

1 BY MS. BENCK:

2 Q Martin, just a quick question. Thanks. I
3 know you were helping me on the technical aspects of
4 entering into the agreement that the Petitioner
5 entered into with the National Park Service.

6 And Exhibit C to that agreement is a draft
7 of a declaration of CC&R's related to stormwater and
8 surface water runoff.

9 Have you heard anything from the Project
10 team or from the Petitioner that would lead you to
11 believe that we are not going to comply either with
12 the NPS agreement or with Exhibit C, that declaration
13 of CC&R's regarding the stormwater runoff?

14 A No. I have not heard otherwise.

15 MS. BENCK: Thank you very much. That's all
16 my questions.

17 CHAIRMAN PILTZ: Okay. Redirect, county?

18 MR. GONZALEZ: Nothing.

19 CHAIRMAN PILTZ: OP?

20 MR. YEE: No redirect.

21 MR. LIND: Nothing.

22 CHAIRMAN PILTZ: Let's take a 10 minute
23 break.

24 (Recess was held.)

25 CHAIRMAN PILTZ: We are back on the record.

1 Okay. Ms. Benck, you have another witness?

2 MS. BENCK: Yes, we do. Thank you. Our
3 next witness is Yoichi Ebisu. And he's going to talk
4 about noise. He did the acoustic study.

5 If I could, Commissioners, there was
6 questions about what are the noise contours and where
7 all the lines, the current lines flowing on the map.

8 The best picture that we have is in Tom
9 Witten's PowerPoint presentation.

10 It may take a few seconds for you to flip
11 through that exhibit. It was Exhibit 80.
12 Unfortunately the slides aren't numbered.

13 CHAIRMAN PILTZ: Okay. Oh.

14 MS. BENCK: But this would be the picture
15 I'd ask you to look at as you're listening to
16 Mr. Ebisu. It's called the Noise Contour Maps/
17 Source: State of Hawai'i. And it's got a 2008 and
18 2013. It's got the Project concept plan and the noise
19 contours overlaid on the plan.

20 CHAIRMAN PILTZ: Where is it? About half
21 way through?

22 MS. BENCK: A little more than half way
23 through.

24 MR. YEE: Could I, just for your
25 information, Office of Planning's Exhibit 21 I believe

1 is also a noise contour map for 2013 which we received
2 from the Department of Transportation. I'm not sure
3 it will be helpful but for your information.

4 MS. BENCK: Right. And that's helpful.
5 However, I think because we're talking about the
6 Petition Area I think it would be more helpful to look
7 at the noise contours overlaid on the concept plans.

8 MR. YEE: Sure.

9 MS. BENCK: So that's why we're going to ask
10 the Commissioners to pay attention to those noise
11 contour maps for this portion of the testimony if we
12 could, please.

13 CHAIRMAN PILTZ: Okay. Very good.

14 MS. BENCK: With all that being said again
15 I'd like to introduce Yoichi Ebisu. And as I said he
16 conducted the acoustic study that was included in the
17 Final EIS.

18 He also summarized that study which was
19 submitted as Petitioner's Exhibit 40. And after you
20 swear him in I'd like to ask him a few questions, if I
21 may.

22 YOICHI EBISU,
23 being first duly sworn to tell the truth, was examined
24 and testified as follows:.

25 THE WITNESS: I do.

1 CHAIRMAN PILTZ: And we'll accept your
2 information as an expert witness. So please state
3 your name and address for the record.

4 THE WITNESS: Yoichi Ebisu, 1523 Oliver
5 Street, Honolulu, Hawai'i 96822.

6 CHAIRMAN PILTZ: Go ahead, Ms. Benck.

7 DIRECT EXAMINATION

8 BY MS. BENCK:

9 Q Thank you. Yoichi, after I just described
10 this picture of the noise contour maps, could you tell
11 us what these maps are, where they are in the approval
12 process, what these lines mean?

13 So first, if I could, where are these maps
14 in the approval process?

15 A I don't know exactly. But I read in the
16 trade magazine that the FAA had accepted what we call
17 the noise exposure maps for Kona International Airport
18 at Keahole under the 14 CFR Part 150 Noise
19 Compatibility Program that was in the process of being
20 completed right now.

21 So these two maps, one for the year 2008,
22 which can be considered the existing noise contours
23 over the Project Site, and what we call the five-year
24 noise exposure map which is a five-year forecast per
25 federal regulations. It's a five-year forecast noise

1 exposure maps.

2 Those two maps, the base year and the
3 five-year constitute the official -- well, it will
4 constitute the official noise exposure maps for Kona
5 International Airport.

6 Q Thank you. And do these noise contour lines
7 include the anticipated military flights that will be
8 going in and out of the airport?

9 A Both the existing and the five-year forecast
10 which includes the new proposed C-17 runway which was
11 forecast to occur before 2013.

12 So it includes both the forecasted civilian
13 as well as the military aircraft up to the year 2013.
14 That's the five-year forecast map.

15 Q Thank you. We heard a lot of discussion
16 about the FAA regulations and the 65 DNL line versus
17 the 60 DNL line versus the 55 DNL line. Can you
18 explain to us what the FAA 65 line is and how that may
19 be different from the 60 DNL line?

20 A The FAA as part of U.S. DOT, Department of
21 Transportation, was required by the Aviation Safety
22 and Noise Abatement Act of 1979 to, No. 1: Define how
23 to best measure aircraft noise.

24 No. 2: Define an acceptable or unacceptable
25 threshold, what level is acceptable or unacceptable at

1 the federal level and then develop a program whereby
2 airports develop noise exposure maps like these.

3 And in return these maps gets disclosed to
4 the public, and the airport receives limited immunity
5 from litigation once these maps are published, should
6 anyone move into the unacceptable contour level.

7 So as part of the first step FAA determined
8 that the metric or method that we will use in all
9 airport noise maps is what we call the day/night
10 average sound level.

11 On these maps it says contour 65 but that
12 contour 65 represents 65 DNL. It's on the upper
13 left-hand corner of the figures.

14 So DNL is the accepted measure of how we
15 generate these contours. All right. In addition, the
16 FAA determined that as far as the federal regulatory
17 level for acceptable aircraft noise level, the 65 DNL
18 line represents the threshold, the line of demarcation
19 between what is considered acceptable aircraft noise
20 and what is considered unacceptable. All right.

21 So on these two figures the noise levels are
22 increasing from the lower right-hand corner to the
23 upper left-hand corner. You see the contour numbers
24 are increasing from 55, 60 to 65.

25 So inside that curved area contained within

1 that 65 contour -- and it's larger in the 2013 map as
2 opposed to the 2008 -- but within that curved 65 DNL
3 area is what the federal government considers
4 unacceptable for noise-sensitive developments like
5 residential uses, schools, hospitals, et cetera.

6 Q Yoichi, if I could ask you, do you see on
7 the concept plan for the record absolutely any
8 development proposed at the 'O'oma Project Site within
9 the 65 DNL line?

10 A That's negative. There is no what we call
11 incompatible land uses planned within the 65 DNL
12 contour. So it's fully compatible per the FAA or
13 federal noise standards.

14 Q Now, the county standards and perhaps
15 "standards" isn't the right word to use -- the county
16 practice is the 65 or the 60?

17 A It's not -- I don't -- it's not the county.
18 I believe it's at the state level. All right.
19 Because the airports, at least Kona and other large
20 public airports are owned by the state.

21 The state has determined that as a planning
22 level, and it's not a standard, all right, but it's a
23 planning criteria, that for local planning criteria
24 the acceptable level should be a little bit more
25 stringent than the federal level.

1 So they've picked 60 DNL as a line of
2 demarcation between what is acceptable and what is
3 unacceptable.

4 They essentially did this based on
5 recommendations that we made back in the '80s when the
6 Part 150 process was beginning. They have basically
7 maintained that throughout.

8 So if you look at the noise study you'll see
9 a table 3 that has various DNL levels and various
10 levels of acceptable. It's a matrix of acceptable
11 land uses.

12 Q Thank you. So, Yoichi, the 60, the State's
13 60 DNL level for the State of Hawai'i, does that take
14 into account that people do keep their windows open,
15 there's a lot of open air living here in the State of
16 Hawai'i?

17 A That's correct. That's why it was
18 recommended to drop it at least five units.

19 Q If you could, tell us what the difference is
20 between the 55 and the 60. What kind of uses would be
21 permitted between the 55 and 60 that then wouldn't be
22 permitted from 60 and beyond?

23 A Essentially below the 60. In other words,
24 anything between at 55 and 60 or even below the 55
25 essentially no, no land uses, even the most sensitive

1 ones like residential uses, would be considered
2 incompatible. All right. Or unacceptable. That's
3 what the 60 line is.

4 Q Now, when we talked about -- again, from the
5 55 to 60 there are no such things as incompatible land
6 uses. However, we did talk about sound attenuation
7 measures, nevertheless.

8 Could you explain how just being in an
9 enclosed structure would reduce the sound, the
10 interior sound level even when you're within that 55
11 to 60 band?

12 A Okay. There's some misunderstanding here.
13 All right. From the standpoint of planning criteria,
14 right, it's a black and white affair.

15 Anything below the 60, even at 55, or
16 between 55 and 60 is considered compatible. There's
17 no incompatibility below 60. All right.

18 And above 60 the more sensitive uses like
19 residential, schools, et cetera, become incompatible
20 by the state planning criteria.

21 The 55 line that we typically would like to
22 show on maps like these is there for a reason. And
23 the reason for that is that it is a recommended line
24 for noise disclosure.

25 So why pick the 55 line as a line of

1 demarcation for disclosure purposes? All right. Here
2 we have the 60 line that's a line of demarcation or
3 build and no build. And we have a 55 contour line now
4 for disclose or no disclose. All right?

5 And the reason for that is that in coming up
6 with the 60 criteria recommendation we were aware of
7 the federal level of 65.

8 And we were aware of the EPA, Environmental
9 Protection Agency's scientific study recommendation
10 and determination that the level of 55 DNL is the
11 so-called safe level.

12 In other words, it's a level below which
13 there should be absolutely no adverse noise impacts
14 from environmental noise, whether it's aircraft
15 traffic, whatever. All right.

16 So that 55 DNL level is out there in the
17 scientific community as being the safe level. All
18 right. But why didn't we pick the 55 as a recommended
19 criteria for local construction? All right.

20 The reason being is that like the federal
21 government, the FAA, they were also aware of the 55
22 contour, but they made a determination that if they
23 used that as a regulatory level, that lower level as a
24 regulatory level, the cost of mitigation would be too
25 high that it becomes an unpracticable level.

1 So instead of picking 55 as a level for
2 build or no build, they decided to use 65. In our
3 case we also decided that it was impracticable for
4 Hawai'i to go with the 55 contour as the build or no
5 build line.

6 Then we got confirmation from that from the
7 Department of Transportation locally as we developed
8 this criteria. So the 60 contour was picked as a
9 compromise level. It's a compromise level that should
10 be affordable to mitigate. All right.

11 In other words, you just don't pick a
12 regulatory level or encroachment level and forget
13 about mitigation because it's the mitigation costs
14 that, if you want to be fair and mitigate whatever you
15 consider to be impact causing, then you have to
16 essentially include the cost of mitigation.

17 And that's what the -- that's why we see the
18 55 contour there.

19 And to cover this gap, this twilight zone
20 between the 55 contour and the 60 contour, we
21 recommend that to cover, to minimize the risk of
22 adverse noise impacts is that they use that 55 line in
23 all disclosures or real estate transactions around
24 airports. And there is an existing state statute that
25 also requires that, similar to tsunami zones.

1 So with the 60 contour being the planning
2 level for build and no build, and the 55 being the
3 disclosure line, it's our opinion that we have a
4 relatively fair and consistent system to work from
5 that's fairly easy to use.

6 Q Again, that 60 line isn't a no build. It's
7 no residential build.

8 A No noise-sensitive, yes.

9 Q I want to go back to, if we could,
10 between -- I understand that between 55 and 60 is too
11 limiting. But let's say from 60 and then traveling
12 mauka as it gets quieter.

13 When a home is constructed, and I don't mean
14 with any special measures, not special window panes,
15 nothing, when a home is constructed, what sort of
16 interior noise should somebody expect to experience in
17 that band?

18 A Okay. For naturally ventilated homes
19 non-air conditioned, windows open, doors open, most of
20 the sound from outside will come in through the open
21 window and door irrespective of how well you build the
22 wall, how well you build the roof. All right.

23 That reduction from going outside to inside
24 in terms of noise levels averages about 10 points, in
25 other words, 10 DNL units.

1 So if I'm on the 60 contour line with 60 DNL
2 outside, when I go inside my naturally ventilated
3 house, my interior noise level should be around 60
4 minus 10 or 50 DNL. All right.

5 Q I believe at one point you mentioned that 55
6 was considered an unconditionally safe level. So the
7 interior noise that we'd be having here would be
8 quieter than what's already been determined as the
9 unconditionally safe level of noise?

10 A That's correct. For a typical naturally
11 ventilated house, if I'm on the 55 contour, the
12 unconditionally acceptable level, my interior level
13 would be 55 minus 10 or 45 DNL.

14 And that 45 DNL is a level at which EPA used
15 to determine that 55 was the so-called safe level.

16 Q So I assume if there is central air
17 conditioning it would just make it that much quieter?

18 A That's correct. Once you close all the
19 windows and doors, even for a typical nowadays double
20 wall construction house without special windows or
21 doors, just a heavy door, you'll get about 20 dB of
22 reduction.

23 In other words, that 10 point reduction that
24 occurred with your windows and doors open now
25 increases to 20. All right.

1 So if I'm sitting on the 60 contour line and
2 go inside my air conditioned house with windows and
3 doors closed, my interior noise level should be 60
4 minus 20 or 40 which is five units below the safe
5 level indoors.

6 Q That's it on my questions. If you care to
7 summarize any other aspects of your report, go ahead.
8 Otherwise I'm going to open you for questions from the
9 other parties.

10 A We can open it up.

11 CHAIRMAN PILTZ: County?

12 MR. GONZALEZ: County no questions.

13 CHAIRMAN PILTZ: OP.

14 CROSS-EXAMINATION

15 BY MR. YEE:

16 Q You concluded in your report that traffic
17 noise mitigation measures might be required along the
18 makai frontage road. Do you remember that?

19 A That's correct.

20 Q Will the Petitioner be instituting noise
21 mitigation measures to reduce traffic noise levels?

22 A I believe they're aware of it and they will
23 be is what I heard.

24 Q To what standards or to what level will they
25 have reduced it?

1 A Okay. The criteria that was used for
2 traffic noise was 65 DNL. I don't wanna confuse
3 anybody. But remember for traffic noise we don't have
4 the equivalent local planning level.

5 But the 65 DNL is a federal regulatory level
6 for essentially aircraft and traffic, any noise
7 sources.

8 So we're using the 65 DNL standard, federal
9 standard which is FHA, HUD, et cetera. We determined
10 that along that frontage road the noise levels could
11 exceed 65 DNL. And therefore mitigation measures were
12 required.

13 Q I guess the question was, when I said the
14 standard I meant what's the standard of mitigation?
15 At what level do you reduce it to?

16 A By FHA HUD standards what you'd need to do
17 is reduce it at least five units dB below the normal
18 construction for housing in that area. So remember 10
19 dB is naturally ventilated. So minimum would be at
20 least 15 dB I would suspect.

21 So if you air condition and close you will
22 meet the minimum requirements of 20 dB which also
23 produces the 45 interior that EPA has indicated as
24 being a safe level indoors.

25 Q And Petitioner will be doing that --

1 A Correct.

2 Q -- to reduce it by 15.

3 A I believe so, yes.

4 Q Okay. With respect to generally there is a
5 noise code, correct, a state noise code?

6 A Department of Health has -- in their
7 administrative rules they have what they call a
8 community noise level, acceptable community noise
9 levels for specifically fixed machinery like things
10 that run, things that are fixed in place and typically
11 put out steady noise levels like machinery, air
12 conditioning units, generators, et cetera.

13 Q This does not apply to aircraft or cars or
14 traffic, correct?

15 A Motor vehicles or any portable device
16 actually.

17 Q Nevertheless, the DNL for the aircraft, for
18 example, is an average?

19 A That's correct.

20 Q So sometimes it will be louder, sometimes it
21 will be quieter but the average, but the DNL indicates
22 what the average amount is.

23 A Right. The average DNL, you can consider
24 that to be the equivalent level or the steady state
25 level.

1 So it's equivalent to a steady machinery
2 source that essentially runs at a certain level during
3 the daytime, at nighttime it gets 10 dB quieter.

4 Q So if you had a fixed machinery, the
5 expectation within a residential area would be 55 in
6 the day and 45 at night.

7 A For low-density residential, not
8 multi-family, right.

9 Q Correct. And the homes within the 55 DNL
10 contour map from the airport, could they be designed
11 to reduce the level -- if I heard you correctly, they
12 can be easily designed to reduce the level of interior
13 noise to 45?

14 A With air conditioning. It requires a total
15 closure. So you need to air condition.

16 Q And is it your understanding that other
17 measures are possible to reduce the noise further,
18 other reasonable measures exist such as enhanced
19 insulation or window panes that could reduce the noise
20 further?

21 A Further, yeah, if you need to.

22 Q And different people, you would agree, have
23 different comfort levels on sounds.

24 A People have different sensitivities to
25 sounds, right, that's correct.

1 Q Which is also one of the reasons why you
2 would want to make sure people are given notice of
3 what they're going to be buying into?

4 A That's the purpose of the disclosure is to
5 cover that aspect and the band between 60 and 55 DNL.

6 MR. YEE: Okay. That's it. Thank you.

7 CHAIRMAN PILTZ: Intervenor?

8 MR. LIND: No questions.

9 CHAIRMAN PILTZ: Commissioners? Okay.
10 Commissioner Lezy.

11 COMMISSIONER LEZY: Just a few quick
12 follow-up questions. If we look at the noise contour
13 maps that were part of Mr. Witten's PowerPoint
14 presentation, obviously there's a change in the
15 contours between 2008 and 2013. And I expect the
16 reason behind that is an increased number of aircraft
17 landings?

18 THE WITNESS: I believe so, yes. It's
19 primarily attributed to the C-17 operations.

20 COMMISSIONER LEZY: Okay. Is it reasonable
21 to expect or do you know, can you offer an opinion
22 that the change in the contours as far as obviously
23 their intrusion into the Petition Area would it be
24 expected to continue over time?

25 THE WITNESS: Well, the best indicator that

1 we have of what the future holds comes from the prior
2 Master Plan which had developed contours up to the
3 2020 time period at that time. And now the current
4 Master Plan that has forecasted contours out to the
5 year 2030.

6 And based on what we saw, I've seen for the
7 2030 contours that were developed under the current
8 master plan, we don't see that kind of incursion into
9 the Project Site.

10 COMMISSIONER LEZY: Okay. Thank you. I
11 guess my only other question for you is: In your past
12 experience are you aware of any other residential
13 development, whether here on the Big Island or
14 elsewhere in the state, that has a similar noise
15 exposure as is projected for the Petition Area here?

16 THE WITNESS: The best examples I think
17 recent ones are probably in 'Ewa, 'Ewa on the west
18 side of O'ahu because that area has essentially
19 aircraft noise exposure primarily from aircraft
20 landing to Honolulu Airport during tradewind
21 conditions.

22 They have contours that range from 50 to 60
23 to 65. But they tend to be much narrower and longer
24 because they represent a single approach flight path
25 to the airport on what they call the instrument

1 landing approach.

2 So the contours are there, 55, 60. And then
3 if you add the contours, the noise contours from
4 Barbers Point Airport, the former Barbers Point
5 Airport now called Kalaeloa Airport, you'll see the 55
6 contours essentially spread from Barbers Point, 'Ewa
7 Marina down to Fort Weaver Road essentially.

8 So we have some history of reclassifications
9 and up to building in that 'Ewa Plain.

10 COMMISSIONER LEZY: A fair comparison with
11 this Petition Area?

12 THE WITNESS: I think so. I mean we, we --
13 the same criteria, the 60 DNL contour essentially I
14 believe was applied to that area. And as far as I
15 know there hasn't been any real serious kind a
16 litigation or threats, things like that.

17 COMMISSIONER LEZY: Thank you.

18 CHAIRMAN PILTZ: Commissioner Teves.

19 COMMISSIONER TEVES: Hi, Mr. Ebisu. Earlier
20 the Petitioner's planner testified the Petition Area
21 is about two miles from the existing Kona Airport
22 runway. What's the distance between the southern edge
23 of the runway and the Petition Area?

24 THE WITNESS: I believe it's about one mile.

25 COMMISSIONER TEVES: It's that close.

1 THE WITNESS: One mile is almost the same
2 distance as from the middle of the airport runway up
3 to the mauka side where the ag subdivision now is,
4 where the house lots are.

5 And it's also about the same distance at
6 Lihue Airport from the runway to the closest
7 residential area.

8 So we do have some examples of residential
9 developments within about a mile of the airports. We
10 also have other examples that where they're inside one
11 mile.

12 Examples being at Kahului Airport where the
13 separation distances are real short. They're in the
14 hundreds of feet. As well as Hilo right here where we
15 have Keaukaha subdivision up on the makai side of the
16 runway. And they're pretty much right on the airport
17 property line.

18 COMMISSINER TEVES: Okay. Thank you.

19 CHAIRMAN PILTZ: Commissioner Judge.

20 COMMISSIONER JUDGE: Good afternoon. I'm
21 looking at your study that you conducted. On Page 39
22 you talk about usually the louder aircraft noise
23 events that occur at nighttime and early morning due
24 to thermal ducting effects.

25 Can you explain more about that?

1 THE WITNESS: In Kona we have the high
2 likelihood of what we call thermal ducting effect.
3 Thermal ducting is when the sound travels from the
4 ground, goes up in the air and then reverses
5 directions and comes back down. All right.

6 Normally on a warm daytime when the ground
7 is warm, the ground temperature is higher than the air
8 temperature, the sound tends to bend upward so it
9 doesn't come back down.

10 But in Kona, because of what we call the
11 drainage winds, the cold air from the high mountains
12 come down the mountain slopes at night. And the winds
13 also die, the offshore breezes go away.

14 So what happens is that you get what we call
15 thermal inversions where the ground temperature is
16 actually now lower than the air temperature, or at
17 least the air temperatures near the ground are lower
18 than they are up high because of these heavier
19 drainage winds. So the sound can actually go up and
20 then come back down usually before sunrise.

21 So what happens is that early in the
22 morning, like when we have these cargo flights, Aloha
23 cargo flights, sometimes you can hear them much better
24 during these periods when the sound has reversed
25 direction.

1 So they tend to be louder both on the sound
2 meter and what you hear with your ear. That's because
3 of the thermal ducting effect.

4 At Kona, fortunately for the Project, the
5 cargo flights, because they occur, they occur at
6 night/early morning, because they occur during the
7 non-busy hours of the airport and because the winds
8 are low typically at night, they tend to like to come
9 in from the north on the opposite side of the airport,
10 the north side.

11 They land from that side. And then when
12 they go out they don't come towards the Project but
13 they go back towards the north.

14 So the Project never sees those flights
15 because they're all on the north side of the airport.
16 And they can do that because the winds are low and
17 because there's no traffic. All right.

18 There's no traffic so they can do that. So
19 that, that helps to minimize noise impacts on the
20 Project Site.

21 But at the Project Site when we were there,
22 we were there 24 hours a day for about six days, we
23 did see some of that thermal ducting from a cargo
24 flight.

25 I mean it wasn't loud but it was audible

1 where normally it wouldn't be audible, but it was
2 audible. So we attributed that to thermal ducting.

3 But it's a very low level because of the
4 fact that they're starting at least a mile away and
5 they're going in the other direction.

6 COMMISSIONER JUDGE: But the unusually
7 louder, those thermal ducting events happen late at
8 night or earlier in the morning.

9 THE WITNESS: Before sunrise.

10 COMMISSIONER JUDGE: Before sunrise.

11 THE WITNESS: Yes.

12 COMMISSIONER JUDGE: When you say in your
13 quote, "located within the 60 DNL" is that between 60
14 and 65 or that between 55 and 60?

15 THE WITNESS: If you're within the contour
16 we intend to mean it's between 60 and 65. In other
17 words, the noise levels at that location is higher
18 than 60.

19 COMMISSIONER JUDGE: Okay. When you did the
20 summary in your testimony your last sentence was "This
21 should also help to minimize risks of future
22 complaints regarding aircraft noise over the Project
23 Site."

24 So that, I guess, that indicates to me that
25 there's a sort of a level of awareness that there will

1 be future complaints about aircraft noise.

2 THE WITNESS: There's always a risk of
3 future complaints about aircraft noise wherever you
4 are. Whether you're inside the 55 or outside the 55 or
5 outside the 60.

6 And as long as the events is audible and the
7 person who hears it has some objection to this,
8 there's always a risk of complaint.

9 So our recommendation is essentially to at
10 least be able to separate those that are, you know,
11 within criteria and those that are outside the
12 criteria.

13 In other words, we have to be able to
14 segregate what has to be considered frivolous in some
15 case and what has to be considered significant.

16 COMMISSIONER JUDGE: Okay. Looking at the
17 contour maps. And right now given the 2013 there are
18 no, there are no homes planned in that area between
19 the 60 and 65.

20 If, for whatever reason, airport expansion,
21 different kinds of airplanes, more military planes,
22 all of a sudden in 2020 the new one comes out and that
23 line has now shifted back and it's going half way
24 through the houses and those houses were not built
25 under the assumptions that they're comfortable now.

1 That's no longer going to be the case, will it?

2 THE WITNESS: That's a possibility.

3 Remember, let's go back to the old legal framework for
4 aircraft noise and land use planning. That's the ASNA
5 Act I mentioned earlier: the Aviation Safety and Noise
6 Abatement Act of 1979, which was passed by Congress
7 specifically for these kinds of decisions that you are
8 trying to render right now.

9 Okay. So remember I said that the Act
10 required the disclosure of the noise for the current
11 and the plus five year period. Right?

12 And once those maps are disclosed it puts
13 the responsibility on the airports to mitigate any
14 existing uses that are incompatible, in other words,
15 inside as far as the federal government is concerned
16 the 65 DNL.

17 And as far as I'm concerned for the state
18 it's inside the 60, whatever existing is there and
19 didn't come in as a result of encroachment, you know,
20 recently, then they're obligated to mitigate that.

21 And the federal government does have funds
22 to mitigate. The Act does provide for those funds.
23 Now, that essentially handles the existing condition.

24 On the part of the landowner, the developer,
25 the person who owns currently compatible lands but who

1 wishes to develop it, he now has the responsibility to
2 also comply with those contours in respect to the
3 standards.

4 So it's a balance now between the airport's
5 interest and the developer's interest where the
6 developer, if he encroaches into that standard,
7 whatever and the federal government's case it's 65
8 DNL; in the State's case it's the 60 DNL, whenever he
9 goes and builds something inside that zone that's not
10 compatible, then, you know, then the triggers for
11 things like easements and noise mitigation,
12 attenuation should occur. All right? I mean that's
13 to be fair.

14 But if he stays outside of that contour,
15 then in all fairness he shouldn't have to do anything
16 because that's the regulatory standard. He may not be
17 hundred percent safe by the 55 DNL, but that's the way
18 it is.

19 Now, for the future condition, in other
20 words, after these maps are published, 20 years from
21 now things have changed or could have changed, okay,
22 the ASNA Act does not immunize the airport at all for
23 growth.

24 In other words, if these maps have not been
25 updated, and by some reason whether it's a new runway,

1 airport increasing operations, lot more nighttime
2 flights, whatever, or change in flight paths, the
3 contours grow, right, where it now encompasses the
4 development, right and a lot more vacant area.

5 Well, there is no immunization for that by
6 the ASNA Act. So how do you handle that if you were
7 at the airport level?

8 Well, the Act does allow you to update your
9 maps. You don't have to wait 20 years to update your
10 map.

11 These maps don't change very much. Like if
12 you look at the old 2001 contours that are in my
13 report and you compare it to the 2007, they really
14 don't change that much. So they move very slowly.

15 So if there's any inkling, and if you do
16 your master plans on a periodic, relatively frequent
17 basis, you can always get the most accurate line of
18 demarcation and keep up, keep up with any changes in
19 growth. And that's how you immunize yourself.

20 But you're not immunized for any increase
21 that occurs over formerly compatible land that now
22 becomes incompatible. In other words, you're still
23 responsible for mitigating on that.

24 CHAIRMAN PILTZ: We are going to have to cut
25 it short.

1 COMMISSIONER JUDGE: Could I ask one more
2 question?

3 CHAIRMAN PILTZ: He's got to have a short
4 answer or else you're going to miss your airplane.

5 COMMISSIONER JUDGE: Okay. This is exactly
6 where we're going because we had testimony yesterday
7 about okay, what happens in 2040?

8 Here we sit, all these houses are now in the
9 65. Who -- the airport is responsible then to
10 mitigate it?

11 THE WITNESS: If there was no, if there was
12 no encroachment into any contour, yes.

13 COMMISSIONER JUDGE: So originally, just
14 take today, today it's not. Somebody buys a house in
15 2013. It's still in this 60. Now 20 years from now
16 it's 65 they can't hear themselves talk. It's the
17 federal government's responsibility to fix that
18 problem.

19 THE WITNESS: That's correct.

20 COMMISSIONER JUDGE: Okay.

21 THE WITNESS: And it could occur on any
22 noise contour boundary you pick as a regulatory level
23 whether it's 55, 60 or whatever.

24 CHAIRMAN PILTZ: Thank you very much. I
25 hope you don't have a redirect.

1 MS. BENCK: No.

2 (Laughter).

3 CHAIRMAN PILTZ: 'Cause we're going to have
4 to cut it short. We've got to meet an aircraft very
5 soon. And we're going to defer the legislative
6 update. And so we're going to call an adjournment.
7 We're adjourned.

8 (The proceedings were adjourned at 3:30 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 4th day of March 2010;

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 _____ 2010

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

