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WAIKOLOA MAUKA, LLC

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Petition of

DOCKET NO. A06-767

WAIKOLOA MAUKA, LLC

To Amend the Agricultural Land Use District
Boundaries into the Rural Land Use District for
Approximately 731.581 Acres in South Kohala
District, Island of Hawaii, Tax Map Key No. (3)
6-8-02:016 (por.)

**WAIKOLOA MAUKA, LLC'S
WRITTEN DIRECT TESTIMONY OF REGINALD E. DAVID**

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**WRITTEN DIRECT TESTIMONY OF
REGINALD E. DAVID**

BACKGROUND QUESTIONS

1. *Please state your name and business address for the record.*

Reginald E. David
P.O. Box 1371
Kailua-Kona, Hawaii 96745

2. *What is your current occupation?*

Consulting Biologist.

3. *Do you have a specialty area?*

Yes, the censusing of birds, terrestrial mammals, including bats, as well as regulatory issues regarding endangered avian and mammalian species in Hawaii and the Tropical Pacific.

4. *How long have you been a consultant by profession?*

15-years.

5. *Do you presently belong to any professional organizations or associations?*

- American Ornithologist's Union;
- Association of Field Ornithologists;
- Cooper's Ornithological Society;
- Wilson's Ornithological Society; and
- The Wildlife Society.

I also have served on, or I am currently serving on the following professionally associated boards, committees and the like:

- U.S. Fish and Wildlife Service (“USFWS”) and Department of Land and Natural Resources (“DLNR”), Newell’s Shearwater Working Group
- USFWS and DLNR, Hawaiian Hoary Bat Technical Working Group
- The Mauna Kea Management Board – Environmental Committee
- USFWS, 'Alala Recovery Team Member: 1994 – Present
- Hawai‘i Natural Heritage Program, Ornithological Advisory Committee
- National Audubon Society: Board of Directors member: 1993-1996
- Hawaii Audubon Society: Board of Directors member: 1989 - 1996, 1998
- Hawai‘i Audubon Society: Treasurer 1998
- Hawai‘i Audubon Society: President 1990-1994

- USFWS and DLNR, Hawaii Endangered Waterfowl Recovery Team Advisory Committee

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4 **6. *Did you provide a copy of your curriculum vitae for the purposes of this***
5 ***hearing?***

6
7 Yes.

8
9 **7. *Is Petitioner’s Exhibit “47” a true and accurate copy of your curriculum vitae?***

10
11 Yes.

12
13 **8. *Could you briefly summarize your training and experience as a terrestrial***
14 ***vertebrate biologist?***

15
16 I started participating in bird surveys in the early 1980’s, and participated as a
17 volunteer conducting forest bird counts on all of the major Hawaiian Islands for
18 the USFWS and the State Hawaii Division of Forestry and Wildlife (“DOFAW”),
19 after several years of working as a volunteer I started training the next crop of
20 biologists to conduct bird and bat surveys. I have trained biologists working for
21 the USFWS, DOFAW, U.S. Army National Guard, U.S. Army, the Nature
22 Conservancy of Hawaii, and for governmental agencies in Guam, Commonwealth
23 of the Northern Marianas (“CNMI”) and the Republic of Belau to conduct avian
24 and mammalian surveys over the intervening years.

25
26 Furthermore, I have conducted over 250 faunal surveys on all of the main
27 Hawaiian Islands as well as on Midway, Nihoa, Necker, and Kure Atolls. I am
28 also experienced in the radar tracking of seabirds and bats as well as
29 ultrasonic censusing of bats. I have authored over 20 peer reviewed papers, one
30 book (Hawaii’s Birds – published by the Hawaii Audubon Society) and over 200
31 technical reports on birds and mammals, for various state, and federal and
32 commonwealth agencies, and as well as private developers in Hawaii, the
33 Tropical Pacific, and Asia.

34
35 **9. *Where you are you currently employed?***

36
37 Rana Productions, Ltd.

38
39 **10. *How long have you been employed at Rana Productions, Ltd.?***

40
41 15 years.

1 **11. What is your title or position?**

2

3

President.

4

5 **12. Could you briefly describe what Rana Productions, Ltd. does?**

6

7

8

We design and conduct avian and mammalian surveys, and prepare reports detailing those efforts and findings. Additionally, we prepare endangered species regulatory documentation and negotiate endangered species minimization and mitigation on behalf of private, state, and federal entities with the USFWS and DOFAW.

11

12

13

13. Could you briefly describe your duties and responsibilities?

14

15

All of the above.

16

17

14. Could you briefly describe some of the recent projects in which you and your firm have performed botanical, avian and mammalian surveys?

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I have conducted faunal surveys for single lot owners of parcels of land of less than an-acre, up to multi-year surveys of very large federal projects such as the 56-mile long Saddle Road Project on the Big Island. We have also prepared and/or worked on large management plans such as the Integrated Natural Resources Management Plan for Navy Lands Guam, and prepared long term monitoring and programs such as the DOFAW Save our Shearwaters Program (“SOS”) on Kauai.

28

29

15. Could you briefly describe some of the projects in which you have performed terrestrial vertebrate surveys?

30

31

In 2006-2007:

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Auwahi Wind Farm EIS - Ulupalakua to Kihei, Maui
First Assembly of God church facility expansion - Ahuimanu, O‘ahu
Kilauea Falls Ranch - Kilauea, Kauai
HIARNG sites – at Kekaha (Kaua‘i), Waiawa (O‘ahu), Ukumehame (Maui), and Keaukaha (KMR, Hilo)
Nanakuli Site B - Waimanalo, O‘ahu
Ho‘opili Development Project - ‘Ewa, O‘ahu (5 separate surveys)
HECO Kahuku Wind Energy site (flora, fauna, and radar surveys) - Kahuku, O‘ahu
Imperium Renewables site - Barbers Point Deep Draft Harbor, O‘ahu
Keopu-Pu‘uhonua Production well site - Kona, Hawai‘i
Waikoloa Makai Development - Waikoloa, Hawai‘i
Tinian (“CNMI”) New Landfill
Laipala Subdivision - Kailua-Kona, Hawai‘i

- 1 South Kona Watershed Irrigation Project - Hawai'i
- 2 Mauna Lani 150 - Mauna Lani Resort, Hawai'i
- 3 Kealiakealanani Development - Kealia, Kaua'i
- 4 Alexander Dam (Kauai) Mitigation Project - Kalaheo, Kaua'i
- 5 UH Hilo, Hawaiian Hawk Playback Surveys - Hilo, Hawai'i
- 6 Kanaha Pond Ecosystem Restoration Plan - Maui
- 7 Waikoloa Highlands Project - Waikoloa, Hawai'i
- 8 Kukuau Street to Kapiolani Road Mohouli Drainage Improvement Project - Hilo
- 9 Kapolei Harborside Project - Kapolei, O'ahu
- 10 Lihue International Airport Master Plan - Lihue, Kaua'i
- 11 Mana Industrial Park - Hilo, Hawai'i
- 12 Mamalahoa Highway to Kawaihae Road Connector Project - Waimea, Hawai'i
- 13 Kona Kai Ola Development - Kona, Hawai'i
- 14 Makaiwa Hills Project - Makakilo, O'ahu

15

16 **16. Do you possess specialized knowledge within your field?**

17

18 Yes, the history and distribution of avian and mammalian species in Hawaii, and
19 the state and federal regulatory processes associated with them.

20

21 **17. Have you ever published any written works pertaining to your field?**

22

23 Yes, I have published one book titled "Hawaii's Birds" published by the Hawaii
24 Audubon Society, as well as 23 papers.

25

26 **18. Have you been previously qualified to testify as an expert in your field?**

27

28 Yes.

29

30 **19. On how many occasions have you been qualified to testify as an expert in your
31 field?**

32

- 33 Kapolei Property Development, LUC Docket A06-763
- 34 Anahola Subdivision – HCC
- 35 Hawaiian Electric Company, Inc. Conservation District Use Application - BLNR
- 36 TSA Corporation Kaloko Development – LUC
- 37 Saddle Road Improvement Project, Conservation District Use Application -
38 BLNR
- 39 Kapolei Harborside – LUC

40

41 In addition, my qualifications are used as an example of how to qualify an expert
42 witness without an academic background in a workbook prepared by University
43 of Hawaii, Richardson School of Law, Associate Professor, Casey Jarman, titled
44 "Making Your Voice Count: A Citizen Guide to Contested Case Hearings, A
45 workbook of the Environmental Law Program."

46

1 **20. *In which jurisdictions have you been qualified to testify as an expert in your***
2 ***field?***
3

4 Hawaii County Planning Department
5 State Land Use Commission
6 State Board of Land and Natural Resources
7 State Court
8

9 **WAIKOLOA HIGHLANDS**

10
11 **21. *Are you familiar with the Waikoloa area located in the South Kohala District***
12 ***on the island of Hawai‘i?***
13

14 Yes, I am. I have conducted extensive faunal surveys on lands to the north, east,
15 south and west of the subject property.
16

17 **22. *Are you familiar with the Waikoloa Highlands Project (“Project”) located***
18 ***within the South Kohala District of Hawaii?***
19

20 Yes I am.
21

22 **23. *How did you become familiar with the Project?***
23

24 I was hired by R. M. Towill Inc. to provide flora and fauna support for the
25 proposed project. Over the past 10-years I have also conducted more than 15
26 faunal surveys in the general project area, including the lands immediately to the
27 north of the site in 1996, 1999, and 2000 as part of the Department of the Army
28 DURP-FUDS Program, and the lands immediately to the south of the site in 2002
29 as part of the Saddle Road Extension Project, and the lands to the east in 1996 and
30 2007 as part of the Saddle Road Realignment and Improvement Project.
31

32 **FAUNA SURVEY**
33

34 **24. *Did you perform a botanical, avian and mammalian survey for the Project?***
35

36 I performed an avian and mammalian survey for the project. Eric Guinther, of
37 AECOS Consultants conducted a botanical survey under my direction.
38

39 **25. *Did you prepare a Report (“Report”) for the Project summarizing the botanical,***
40 ***avian, and mammalian surveys that were conducted on the subject property?***
41

42 I was the principal author of the document; Eric Guinther provided the material
43 for the botanical sections of the Report.
44

1 **26. *What did the Report consist of?***
2

3 The Report consisted of a description of the scope of the surveys undertaken, the
4 methodologies employed, the results of the surveys, and our conclusion and
5 recommendations.
6

7 **27. *Was this Report prepared by you or under your supervision?***
8

9 I was the principal author of the document; Eric Guinther provided the material
10 for the botanical sections of the report.
11

12 **28. *Is Petitioner's Exhibit "45" a true and accurate copy of your Report?***
13

14 Yes.
15

16 **29. *Could you please summarize the scope of your survey?***
17

18 The primary goals of the surveys was to determine if there were any Federal or
19 State of Hawai'i listed endangered, threatened avian, mammalian or botanical
20 resources, or any species which are currently proposed, for listing on, or in the
21 immediate vicinity of the proposed project site.
22

23 **30. *Could you please describe the methodology used to conduct your surveys?***
24

25 Twenty-one avian count stations were sited along linear transects within the
26 project site. Count stations were placed at approximately 300-meter intervals
27 equally spaced along these transects. Six-minute point counts were made at each
28 of the 21-count stations. Each station was counted once. Field observations were
29 made with the aid of Leitz 10 X 42 binoculars and by listening for vocalizations.
30 Counts were concentrated between 07:00 a.m. and 11:00 a.m., the peak of daily
31 bird activity. An additional two hours were spent within the project area on the
32 evenings of May 13, 2006, and on the morning of February 13, 2006, in an
33 attempt to detect nocturnally flying seabirds over-flying the project area. Time not
34 spent counting was used to search the remainder of the project site for species and
35 habitats that were not detected during count sessions.
36

37 The survey of mammals was limited to visual and auditory detection, coupled
38 with visual observation of scat, tracks, and other animal sign. A running tally was
39 kept of all vertebrate species observed and heard within the project area. Visual
40 and electronic scans, using a Broadband AnaBat II® ultrasonic bat detector, were
41 made for bats during crepuscular periods on the evening of May 13, 2006.
42

43 **31. *Is the methodology you employed consistent with accepted practice in your***
44 ***field?***

45 Yes.
46

1
2 **32. Could you briefly discuss your findings of the avian and mammalian surveys**
3 **that were conducted on the subject property?**
4

5 We recorded a total of 115 individual birds of nine different species, representing
6 seven separate families, were recorded during station counts. All nine species
7 detected are alien to the Hawaiian Islands.
8

9 Avian diversity and densities were extremely low. Three species, Black Francolin
10 (*Francolinus francolinus*), Sky Lark (*Alauda arvensis*), and African Silverbill
11 (*Lonchura cantans*), accounted for more than 90% of the total number of birds
12 recorded during station counts. The most common avian species recorded was
13 Black Francolin, which accounted for 38% of the total number of individual birds
14 recorded. A remarkably low number of five individual birds were recorded per
15 station count.
16

17 A total of eight mammalian species were detected during the course of this
18 survey. A lone European house mouse (*Mus musculus domesticus*) was seen
19 crossing a four-wheel drive road adjacent to the Hawaiian Electric Light
20 Companies substation located east of the Waikoloa Post Office. Several dogs
21 (*Canis f. familiaris*) were heard barking from within the Waikoloa Stables,
22 located just north of the project site. One small Indian mongoose (*Herpestes a.*
23 *auropunctatus*) was seen walking down the Pu‘u Hīna‘i Quarry access road. A
24 litter of cats (*Felis catus*) were heard within Waiakeakua Gulch, west of the
25 quarry. Several herds of goats (*Capra h. hircus*) were seen within the project site
26 on all three days that we were on the property. Additionally, scat, tracks, and sign
27 of dog, cat, horse (*Equus c. caballus*), pig (*Sus s. scrofa*), goat, and sheep (*Ovis*
28 *aries*) were encountered at numerous locations within the study site. All mammals
29 recorded are considered to be alien to the Hawaiian Islands. Hawai‘i’s sole
30 endemic terrestrial mammalian species, the endangered Hawaiian hoary bat, was
31 not detected during the course of this survey.
32

33 **33. Are you familiar with any previous surveys conducted by third parties on lands**
34 **within similar habitat in the South Kohala District?**
35

36 Yes I am. In fact, I have conducted something on the order of nine faunal surveys
37 on lands with similar habitat in the South Kohala District over the past 10-years.
38

39 **34. How do the findings of your survey compare to previous surveys conducted by**
40 **third parties on lands within similar habitat in the South Kohala District?**
41

42 Our findings were similar to those reported from other surveys conducted on
43 lands with similar habitat in the South Kohala District over the past 10-years.
44

1 **35. *Could you briefly discuss the other mammalian or avian resources, if any, that***
2 ***might be affected by the development of the proposed Project?***
3

4 It is likely that Hawaiian hoary bats over-fly the general project area on a seasonal
5 basis. Both Hawaiian Petrel and Newell’s Shearwaters likely over-fly the project
6 site on a seasonal basis.
7

8 **36. *Could you briefly discuss the potential impact that the development of the***
9 ***proposed Project poses, if any, to protected species?***
10

11 ***Hawaiian Hoary Bat***

12 There is no suitable vegetation on the site for Hawaiian hoary bats to roost in, so
13 it is unlikely that the clearing of the current vegetation and the development of a
14 subdivision on this property will result in deleterious impacts to this species. The
15 planting of trees and ornamental vegetation following development may increase
16 the presence of prey items for this insectivorous bat, and thus may in fact enhance
17 foraging resources for this species in the area.
18

19 ***Hawaiian Petrel and Newell’s Shearwater***

20 The principal potential impact that the development of the proposed Waikoloa
21 Highlands Subdivision poses to Hawaiian Petrels and Newell’s Shearwaters is the
22 increased threat that birds will be downed after becoming disoriented by street
23 lights associated with the new development.
24

25 **37. *Based on your survey, what conclusions, if any, were you able to make with***
26 ***respect to impact that the development of the proposed Project would have on***
27 ***native avian or mammalian resources?***
28

29 It is not expected that the development of the proposed Waikoloa Highlands
30 Subdivision will result in deleterious impacts to native avian or mammalian
31 resources present within the South Kohala District.
32

33 **38. *Based on your survey, what recommendations, if any, can you make to***
34 ***minimize the potential harmful impacts to native avian or mammalian***
35 ***resources that the development of the proposed Project would have?***
36

37 If streetlights are installed in conjunction with the various new roads planned for
38 this new subdivision, it is recommended that lights be shielded to reduce the
39 potential for interactions of nocturnally flying Hawaiian Petrels and Newell’s
40 Shearwaters with external lights and man-made structures. This minimization
41 effort would serve the dual purpose of minimizing the threat of disorientation and
42 downing of Hawaiian Petrels and Newell’s Shearwaters, while at the same time
43 complying with the Hawaii County Code § 14 – 50 et seq. which requires the
44 shielding of exterior lights so as to lower the ambient glare caused by unshielded
45 lighting to the astronomical observatories located on Mauna Kea.
46