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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 ERIC GUNTHER**

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**WRITTEN DIRECT TESTIMONY OF  
ERIC B. GUNTHER**

**BACKGROUND QUESTIONS**

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

Eric B. Guinther  
AECOS Consultants  
45-309 Akimala Pl.  
Kaneohe, Hawaii 96744

2. *What is your current occupation?*

Biologist/ecologist.

3. *Do you have a specialty area?*

Field botany and wetlands identification.

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

Since 1973 (34 years).

5. *What is your educational background?*

BA- University of the Pacific, Stockton, CA.  
Graduate studies, UoP and University of Hawaii (1966 – 1975).

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

Yes.

7. *Is Petitioner's Exhibit "44" a true and correct copy of your curriculum vitae?*

Yes.

8. *Could you briefly describe your training and experience?*

My educational experience and interests in the sciences was very broad, although I settled on biology after a couple of years in college. My initial interests were in aquatic ecology, and upon moving to Hawaii, I studied both marine (coral reef) ecology and aquatic environments at the interface between freshwater and marine environments. My interest in wetlands and hobby as a gardener and plant collector led me in the direction of doing botanical surveys as I gradually turned

1 over marine survey work to younger and stronger employees at AECOS.  
2 Approximately 70-80% of my field work now entails use of my botanical  
3 knowledge.  
4

5 **9. *Where are you employed?***  
6

7 Self-employed at AECOS Consultants and employed as President of AECOS Inc.,  
8 a Hawaii corporation, specializing in water quality testing, environmental  
9 permitting, and consulting (field surveys and reports) on natural resource matters.  
10

11 **10. *How long have you been employed at AECOS Consultants?***  
12

13 I have been with AECOS, Inc. since 1973 (34 years), however, I started AECOS  
14 Consultants in 1996.  
15

16 **11. *What is your title or position?***  
17

18 I am the owner of ACEOS Consultants, which has been in business for over 11  
19 years.  
20

21 **12. *Could you briefly describe what AECOS Consultants does?***  
22

23 AECOS Consultants provides consultants with expertise in various biological  
24 disciplines to clients requiring plant/animal identifications and natural resource  
25 surveys.  
26

27 **13. *Could you briefly describe your duties and responsibilities?***  
28

29 AECOS Consultants is a sole-proprietorship. I conduct the botanical (and  
30 occasionally, coral reef) surveys and as needed build a team of other independent  
31 consultants (experts in their field) to conduct natural resource surveys.  
32

33 **14. *Could you briefly describe to us some of the recent projects in which you have***  
34 ***performed flora surveys?***  
35

36 In 2006-2007:

37 Kilauea Falls Ranch, Kauai

38 US Navy – All wetlands on Navy property on Guam and Tinian

39 US Navy – All wetlands in and around Pearl Harbor on and off Navy property

40 Oahu Landfills Site Selection EIS

41 HIARNG sites – at Kekaha (Kauai), Waiawa (Oahu), Ukumehame (Maui), and

42 Keaukaha (KMR, Hilo)

43 Majuro (RMI) Airport expansion (2 projects)

44 Mauna Lani 550, Mauna Lani Resort, Hawaii

45 First Assembly of God church facility expansion, in Ahuimanu

46 Auwahi Wind Farm EIS, Ulupalakua to Kihei, Maui

1 Wetlands determination for Hawaii Preparatory Academy, Kamuela  
2 Diamond Head Endangered Plants surveys (2 projects)  
3 Imperium Renewables site, Barbers Point Deep Draft Harbor, Oahu  
4 Alexander Dam (Kauai) Mitigation Project  
5 Waikoloa Highlands Project, Hawaii  
6 Tinian (CNMI) New Landfill  
7 Kona Subdivision, Kailua-Kona  
8 Plantation Partners Project, Kealia, Kauai  
9 Laiopua rare plants survey, Kailua, Kona  
10 Kapolei Harborside Project, Kapolei, Oahu  
11 Makaiwa Hills Project, Makakilo, Oahu  
12 Puako property survey, Hawaii  
13

14 **15. Do you possess specialized knowledge within your field?**

15  
16 It would not be possible to conduct a botanical survey without a knowledge of  
17 floristic taxonomy; knowledge of wetlands ecology and the regulatory aspects of  
18 wetlands delineation.  
19

20 **16. Have you previously been qualified to testify as an expert in these fields?**

21  
22 Yes.  
23

24 **17. If yes, by whom?**

25  
26 Land Use Commission. I have also testified in state court cases.  
27

28 **18. Are you familiar with the petition area and the existing characteristics of this**  
29 **area located in the South Kohala District on the island of Hawaii?**

30  
31 Yes.  
32

33 **19. Are you familiar with Waikoloa Mauka, LLC's ("Petitioner") Waikoloa**  
34 **Highlands ("Project")?**

35  
36 Yes.  
37

38 **20. How did you familiarize yourself with the Project?**

39  
40 I was approached by Reginald David to join with him to conduct a botanical  
41 survey and prepare a report of my findings.  
42

1 **21. *Did you conduct a field survey?***  
2

3 Yes. It is nearly always necessary in a natural resources inventory and  
4 assessment--to insure up-to-date information--to include a field survey of a  
5 project site.  
6

7  
8 **SURVEY REPORT**  
9

10 **22. *Did you prepare any reports in conjunction with the Environmental Impact***  
11 ***Statement (EIS) for the Project?***  
12

13 Yes.  
14

15 **23. *What did the report consist of?***  
16

17 Report of findings following a field survey of the site over two days in May 2006.  
18 The flora of the Project area is comprised of some 58 species of vascular plants,  
19 including two species of ferns. Both ferns are native species, one is an endemic.  
20 Of the 56-species of flowering plants observed, ten (18%) are known to have been  
21 present in the Hawaiian Islands prior to the arrival of James Cook in 1778. Of  
22 these ten, four are endemic, and the remaining six are indigenous species. If we  
23 consider the abundance estimates for these native species, several are very  
24 abundant in the Project area: notably kāwelu (*Eragrostis variabilis*) and ‘ilima  
25 (*Sida fallax*). Both were most abundant in the central part of the property.  
26

27 **24. *Was this report prepared by you or under your supervision?***  
28

29 Yes, by me.  
30

31 **25. *Is Petitioner’s Exhibit “45” a true and correct copy of your report?***  
32

33 Yes. Copy of the report prepared jointly by myself and Reginald David.  
34  
35

36 **26. *Could you please summarize the scope of your study?***  
37

38 Determine the distribution and extent of botanical resources on an approx. 700-  
39 acre site at TMK: (3) 6-8-002:016 and 6-8-003:032, Waikoloa, South Kohala  
40 District, Hawaii. Ascertain if significant plant resources and, in particular, if any  
41 listed plant species, occurred on the Project site. Assess impacts of development  
42 of the Project site on botanical resources.  
43

1    **27.    *Could you describe the methodology used to conduct your study of the flora in***  
2    ***the area?***

3  
4    The Project area was traversed in a manner that resulted in all habitats presently  
5    being surveyed, the survey consisting of noting the names of all plants  
6    encountered and estimating their relative abundance. Photographs and plant  
7    material were collected to aid in identifications as needed. GPS waypoints were  
8    recorded at intervals to enable mapping of the routes taken to cover the property.

9  
10   **28.    *Is the methodology you employed consistent with accepted industry standards?***

11    Yes. The method is standard for an inventory survey.

12  
13  
14   **29.    *Could you briefly discuss your findings with respect to the flora of the area?***

15  
16    The site is nearly completely covered with grassland and the terrain becomes  
17    increasingly stony to the south of Auwaiakeakua Gulch. The flora of the Project  
18    area is comprised mostly of lichens on exposed rock surfaces and flowering  
19    plants. Over much of the area, alien plant species predominate. A total of 58-  
20    species of plants including two species of native ferns, were observed. Of these,  
21    approx. 18% are native species and the remainder are naturalized alien species. A  
22    sizable area of native, kāwelu grassland was present.

23  
24    No plant species currently listed as endangered, threatened, or proposed for listing  
25    under either the federal or the State of Hawaii’s endangered species programs  
26    were recorded within or close to the proposed Project site. The subject property is  
27    mostly covered by non-native grasslands, and these grasslands are best developed  
28    along the low areas of Auwaiakeakua Gulch. A native kāwelu grassland occupies  
29    the more central part of the property roughly between the highway (Waikoloa  
30    Road) and the gulch and the quarry entrance road and the powerline road. Close  
31    to the highway and close to the gulch, non-native grasses dominate, and within  
32    the kāwelu stand, non-native grasses dominate all areas of previous grading, as  
33    has occurred for access roads and fire suppression. This distribution suggests that  
34    a kāwelu grassland is capable of excluding the prolific non-native grasses—such  
35    as bufflegass and fountain grass that now dominate the landscape of West  
36    Hawaii—until a disturbance and then non-natives invade and are effective at  
37    preventing reestablishment of kāwelu.

38  
39   **30.    *What type of flora is the Project area comprised mostly of?***

40  
41    Plants adapted to open grasslands, especially grasses and short stature shrubs.  
42    Non-native plants predominant in both numbers of species and biomass.

43

1 **31. *Are there any plant species in the area that are listed as endangered,***  
2 ***threatened, or proposed for listing under the federal or the State of Hawaii***  
3 ***endangered species programs?***

4  
5 No.

6  
7 **32. *What impact will the Project have on the flora of the area?***

8  
9 Clearly, the nature of the site will change wherever lots and infrastructure are  
10 developed. The native kāwelu grassland appears particularly susceptible to  
11 alteration and removal wherever grading occurs.

12  
13 **33. *Are the native plant assemblages endemic to Hawaii?***

14  
15 Kāwelu grass is an endemic species, therefore, the kāwelu grassland assemblage  
16 is unique to Hawaii.

17  
18 **34. *Will development place any native plant species on the endangered or***  
19 ***threatened list?***

20  
21 No.

22  
23 **35. *What do you recommend to remedy the adverse impacts, if any, to the native***  
24 ***plant assemblages after development?***

25  
26 Preventing disturbance of a portion of the kāwelu grassland assemblage would be  
27 the only way to preserve the assemblage intact on site. Species comprising the  
28 assemblage (or others, such as ‘akia) could be used in some of the landscaping of  
29 common areas. Undisturbed, these plants are also vulnerable to destruction by  
30 wildfires, which are a growing threat to all of the native vegetation in this area.  
31