

1 8. **Have you even been qualified as an expert witness in bird and mammal surveys**
2 **before the Land Use Commission?**

3 Yes, several times over the past 30 years.

4 9. **Are you familiar with the proposed development plans for the Pu'unene Heavy**
5 **Industrial Subdivision ("Project") and the Petition Area?**

6 Yes. I understand that approximately 86 acre Petition Area located in Pulehunui,
7 Wailuku, Maui, at tax map parcel number (2) 3-8-008: 019, is proposed to be developed as a
8 heavy industrial subdivision.

9 10. **Are you familiar with the birds and mammals within and around the Petition Area?**

10 Yes

11 11. **How did you familiarize yourself with the Project and the birds and mammals in and**
12 **around the Project?**

13 I prepared a study titled Avifaunal and Feral Mammal Survey for the Proposed Pu'unene
14 Heavy Industrial Subdivision, dated August 8, 2011, a copy of which was included as Appendix F
15 of the Environmental Assessment that was prepared by Chris Hart & Partners. The
16 Environmental Assessment was filed a Petitioner's Exhibit 1.

17 12. **Please describe the scope of your Survey.**

18 I conducted a two day field survey of the 86-acre Petition Area on July 6 and July 7, 2011.
19 Data were collected in the early morning and late in the day because that is when birds and
20 mammals are most active and therefore more likely to be detected. I surveyed the entire Petition
21 Area, as well as adjoining lands including the Hawaiian Commercial and Sugar Company
22 ("HC&S") irrigation reservoir located outside, and to the north, of the Petition Area.

23 13. **How did you conduct the survey?**

24 Visual and auditory observations of the Petition Area and surrounding areas, as described
25 above. I used a Petterson Electronic AB Ultrasound Detector D 100 to listen for echolocating the
26 Hawaiian Hoary Bat. Echolocation is the use of sound waves and echoes to determine where
27 objects are in space.

1 **14. What birds did you observe during the survey?**

2 No endangered or threatened bird species were observed within the Petition Area. The
3 birds observed at the Petition Area were the usual array of introduced birds, such as Cattle Egret,
4 Gray Francolin, Spotted Dove, Ring-necked Pheasant and House Finch. A complete list is shown
5 in Table One of the survey.

6 Outside of the Petition Area, around the HC&S irrigation reservoir, I observed 16 Auku'u,
7 also known as the Black-crowned Night Heron. This species is not endangered or threatened, but
8 is indigenous to Hawaii. Also by the irrigation reservoir, and outside of the Petition Area, I
9 observed 40 Koloa, also known as the Hawaiian Duck, and 31 Hawaiian Coot, also known as
10 Alaekē'oke'o. The Koloa and the Hawaiian Coot are endangered species, however the Coot is
11 still reasonably common on Maui. I noted that the birds did not respond to the traffic noise from
12 the nearby roadways.

13 **15. What migratory shorebirds did you observe during the survey?**

14 I did not observe any migratory shorebirds. However, such birds are typically in Hawaii
15 between the months of August to April, so would likely not be observed in July. The only
16 migratory bird species that could potentially be found within the Petition Area is the Pacific
17 Golden Plover, also known as Kolea. The Kolea is not listed as a threatened or endangered
18 species.

19 **16. Did you observe any threatened or endangered bird species within the Petition Area?**

20 No.

21 **17. What mammals did you observe?**

22 The only feral mammal observed was the Small Indian Mongoose. However, in my
23 expert opinion, it is likely that rats and mice, and perhaps also feral cats, can be found within the
24 Petition Area.

25 **18. Did you observe or detect any Hawaiian Hoary Bats within the Petition Area?**

26 No, I did not see any Bats, nor were any detected by the Peterson Electronic AB
27 Ultrasound Detector D 100. I do not know of any recent documented records of Hawaiian Hoary
28 Bats around the Petition Area.

1 19. **Did you observe any threatened or endangered mammals within the Petition Area?**

2 No.

3 20. **Did you rely on any other studies or consultations in drawing your conclusions and**
4 **making your assessment of the Project?**

5 Yes, and those studies are listed as Sources Cited in my Survey.

6 21. **Did you read the letter dated June 3, 2013, from the U.S. Fish and Wildlife Service**
7 **raising concerns about the potential for various endangered species to be located within the**
8 **Petition Area?**

9 I have read the letter and will address those aspects that are relevant to my Survey.

10 The Service stated a concern that the planned installation of stormwater detention basins
11 within the Petition Area could pose an attractive nuisance to the endangered Hawaiian Silt,
12 Hawaiian Coot and Hawaiian Duck. I understand that the Petition Area is relatively dry, with
13 only about 13 inches of precipitation per year. I further understand that the Project engineer,
14 Stacy Otomo, may be able to provide information on how long it may take for water within the
15 detention basins to evaporate or percolate. Nevertheless, it is possible that heavy rain events
16 could produce temporary local flooding that might attract Hawaiian Stilt.

17 The Service noted that the Hawaiian Hoary Bas could roost in the trees or shrubs in the
18 Petition Area. For this reason, the Service recommends that trees and shrubs more than 15 feet
19 tall not be cut or trimmed during the Bat breeding season, which runs from June 1 to September
20 15. The Service also recommends that barbed wire fencing not be used at the Project because
21 Bats can become entangled in barbed wire. This is a reasonable request, as there are cases where
22 Bats have been entangled in barbed wire.

23 As previously discussed, I did not observe any Hawaiian Hoary Bats at the Petition Area,
24 nor am I aware of any studies or surveys that identified such Bats in or around the Petition Area.
25 Nevertheless, it is reasonable to restrict the trimming of trees or shrubs over 15 feet in height
26 during the months of June through September, and also to avoid the use of barbed wire fencing.

27 The Service indicated that the Hawaiian petrel and Newell's shearwater could fly over the
28 Petition Area during their March through December breeding season. Thus, the Service

1 recommended that outdoor lighting at the Project be shielded so that the light bulb is not visible
2 at, or above bulb-height. The use of light shields could mitigate the light-attraction problem.

3 22. **In your professional opinion, will the development of the Project have an adverse**
4 **effect on any threatened or endangered bird or mammal species?**

5 Based on my professional opinion, no, the Project will not have an adverse effect on any
6 threatened or endangered species. No such species were observed within the Petition Area, nor
7 have any been reported in recent studies done by other experts. The endangered Koloa and
8 Alaeke'oke'o that I observed at the HC&S irrigation reservoir that is located outside of the
9 Petition Area is shielded by vegetation so development of the Petition Area and the Project should
10 not impact the waterbirds at the HC&S reservoir.

11
12 DATED: Honolulu, Hawaii, August 14, 2013.

13
14 Respectfully submitted,

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18 PHILLIP L BRUNER

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