

## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850

In Reply Refer To:  
2010-TA-0286  
2009-TA-0172  
2009-FA-0073

**JUL - 2 2010**

Mr. Charles Jencks  
Honuaula Partners, LLC  
c/o Goodfellow Brothers, Inc.  
P.O. Box 220  
Kihei, Hawaii 96753

Subject: Draft Environmental Impact Statement for Honuaula (Wailea 670), a Master-Planned Community in Wailea, Maui

Dear Mr. Jencks:

We are in receipt of your consultant's April 20, 2010, letter requesting comments on the Draft Environmental Impact Statement (DEIS) for the Honuaula Master-Planned Community located in the district of Makawao on the island of Maui [TMK 2-1-008:056 and 071]. The proposed project entails the development of a master-planned community of approximately 1,150 single-family and multi-family residences, a golf course and other recreational amenities, community-oriented parks, commercial and retail space, and a native plant preservation area on approximately 670 acres (271 hectares) on the leeward side of Haleakala. Off-site utility infrastructure improvements will entail the development of an additional 30 acres. The northern 75 percent of the property has historically been managed for livestock grazing and is currently dominated by buffel grass (*Cenchrus ciliaris*) and non-native shrubs. Approximately 130 acres (53 hectares) at the southern end of the property is covered by aa lava that contains remnants of native Hawaiian dry forest. A 22-acre (9-hectare) Native Plant Preservation Area will be conserved within the southern portion of the property.

On April 8, 2009, we provided you with project recommendations (enclosed as requested) based on information we received in your October 2008, Environmental Impact Statement Preparation Notice. In a March 9, 2010, letter to us, you indicated you would address our comments in the DEIS and in a multi-species Habitat Conservation Plan (HCP) you would prepare pursuant to section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (16 USC 1531 *et seq.*) (ESA) and Hawaii Revised Statutes §195D. In a June 4, 2010, letter your consultant indicated the comment period had been extended to June 30, 2010.

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As you address in "Wildlife Survey of Honua'ula (Wailea 670) Kihei, Maui", prepared by SWCA Environmental Consultants (Report), which is appended to your DEIS, the Hawaiian hoary bat (*Lasiurus cinereus semotus*), the endangered Blackburn's sphinx moth (*Manduca blackburni*), the threatened Newell's shearwater (*Puffinus auricularis newelli*) and the endangered Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*) (collectively referred to as seabirds) occur in the project vicinity. As your Report also discusses, water features and greens associated with the proposed golf course may attract the endangered Hawaiian goose (*Branta (=Nesochen) sandvicensis*) and the following three endangered waterbirds: Hawaiian coot (*Fulica americana alai*), Hawaiian duck (*Anas wyvilliana*), and Hawaiian stilt (*Himantopus mexicanus knudseni*). In addition, as outlined in our enclosed April 8, 2009 letter, populations of eight endangered plant species, two critical habitat units for the Blackburn's sphinx moth, and significant portions of critical habitat units for five plant species are located within the leeward Haleakala area where significant increases in wildfire threat are likely to occur as a result of human activities, such as the proposed project, within the Kihei-Wailea-Makena area.

Based on the project information you provided in the DEIS and updated information in our files, we refined our recommendations regarding measures to minimize potential adverse impacts to listed resources. In a June 18, 2010, meeting with our staff, you agreed to incorporate our updated recommendations to minimize the potential for adverse project impacts to the Hawaiian hoary bat and listed bird species and you indicated you would adopt measures to minimize harm to Blackburn's sphinx moths. In this meeting, you and your environmental consultants also presented information regarding the project's proposed Native Plant Preservation Area and related plant conservation areas, as well as your proposed measures to minimize wildfire threat.

You also reiterated your interest in coordinating with our office and the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW) to develop measures, in your HCP, to offset unavoidable impacts to listed species and their habitat.

The following sections summarize our recommendations and our June 18, 2010, discussion:

### **Hawaiian Hoary Bat**

Hawaiian hoary bats are known to roost in native and non-native trees and shrubs taller than 15 feet (4.6 meters). Between July 1 and August 15, young Hawaiian hoary bat pups, which are incapable of flight, may be harmed or killed if their roost site is disturbed.

Your DEIS indicates a qualified wildlife biologist will monitor for bats during vegetation clearing activities and that such monitoring is intended to avoid impacts to juvenile bats.

However, the small size and brown coloration of Hawaiian hoary bat pups and juveniles makes it extremely difficult for even an experienced bat biologist to detect them in woody vegetation.

In our June 18, 2010, meeting, you agreed to minimize the potential for harm to Hawaiian hoary bat pups by avoiding removal and trimming of woody plants greater than 15 feet (4.6 meters) tall during the peak Hawaiian hoary bat pup rearing season (July 1 through August 15).

### **Listed and Migratory Seabirds**

As you discuss on page 18 of your Report, outdoor lighting, such as street lights, can adversely impact listed and migratory seabird species protected under the ESA or the Migratory Bird Treaty Act of 1918 [16 U.S.C. 703 *et seq.*; 40 Stat. 755] as amended. Seabirds may traverse the project area at night during the breeding season (February 1 through December 15). Any outdoor lighting could result in seabird disorientation, fallout, injury and mortality. Young birds

(fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable. The seabirds are attracted to lights and after circling the lights they may collide with nearby wires, buildings, or other structures or they may land on the ground due to exhaustion. Downed seabirds are subject to high mortality caused by collision with automobiles, predation by dogs, cats, and wild animals, and starvation.

To minimize potential project impacts to seabirds, your DEIS indicates lights will be shielded pursuant to Maui County Code of Ordinances Chapter 20.35 (Outdoor Lighting), night-time construction will be avoided, and all staff will be provided with information regarding seabird fallout. Additionally, you agreed during our June 18, 2010 meeting, that all outdoor lights will be fully shielded in accordance with the enclosed "Seabird Friendly Lighting Solutions" guide we provided to you prior to our meeting. Despite modifications to your project to avoid and minimize impacts to seabirds, if you anticipate that impacts to listed seabirds may still occur, we recommend you address such impacts as part of your HCP.

### **Other Endangered Bird Species**

As you discuss on page 17 of your Report, the endangered Hawaiian goose, Hawaiian coot, Hawaiian duck, and Hawaiian stilt may be attracted to drainage ditches, golf course water features, and mowed grass areas in the project site increasing their vulnerability to collision with vehicles, injuries due to golf operations, and exposure to domesticated animal predators. In our June 18, 2010 meeting, we recommended and you agreed, to implement measures prohibiting free movement of pets, discouraging the feeding of feral animals, and preventing increases in the populations of house mice, rats, mongoose, and feral cats (such as by installing sturdy animal-proof garbage containers). These measures should be incorporated into any community rules and regulations, such as the covenants, conditions, and restrictions instituted for the Honuaula Master-Planned Community development project and a public education program will be developed to ensure project effectiveness. You indicated the aforementioned measures, in addition to unavoidable human disturbance to these species would be addressed in your Final EIS and in your HCP.

### **Blackburn's Sphinx Moth**

Surveys of tree tobacco (*Nicotiana glauca*) plants indicate that foraging by Blackburn's sphinx moth larvae is scattered throughout the southern and northern portions of the proposed project area. Page 70 of the DEIS indicates that during surveys conducted in 2008 and 2009, evidence of the Blackburn's sphinx moth, including the occurrence of "frass, chewed stems and leaves, and live caterpillars" on the non-native tree tobacco, was found within the project site (SWCA 2010). According to your Report, native plants on which adult moths are likely to take nectar from, such as koali awahia (*Ipomea indica*), maiapilo (*Capparis sandwichiana*), and iliee (*Plumbago zeylanica*) are widespread throughout the Honuaula property. As addressed on page 17 of your Report, the potential loss of these food plants for adult moths exists in portions of the property. Your Report also states that removal of tree tobacco plants during construction will likely result in the loss of non-native feeding habitat for the caterpillar, or moth's larval stage. In addition, because the proposed project area lies between two Blackburn's sphinx moth critical habitat units, and as such likely enhances the connectivity between the two areas, habitat loss within the project site could adversely impact the Blackburn's sphinx moth populations within this region of Maui. Because Blackburn's sphinx moth larvae burrow into the substrate near host

plants and may remain in a state of torpor for up to a year before emerging from the soil, soil disturbance in the vicinity of host plants may harm Blackburn's sphinx moth larvae.

We recommend that a qualified biologist should conduct surveys to estimate Blackburn's sphinx moth population size within areas proposed for development. This information may be used to estimate project impacts. The biologist should consult with DLNR and Service regarding survey methods.

We also recommend that you minimize and offset anticipated direct and indirect project impacts to the moth in your HCP. Our office also offers our continued technical assistance on appropriate measures to be included eventually in your HCP. Permanent loss of Blackburn's sphinx moth habitat and potential project impacts to connectivity between Blackburn's sphinx moth critical habitat units should be included in your HCP. In our June 18, 2010, meeting, you agreed to coordinate with the U.S. Fish and Wildlife Service (Service) and State Department of Land and Natural Resources (DOFAW) staff as you draft off-site conservation measures to offset adverse project impacts to the Blackburn's sphinx moth.

#### **Native Dry Shrubland Ecosystem/Important Plant Habitat**

Maui County Ordinance Number 3554, Bill Number 22 (2008) repealing Ordinance No. 2171 (1992) and establishing Kihei-Makena Project District 9 (Wailea 670) Zoning (Conditional Zoning), for approximately 670 acres situated at Paeahu, Palauea, Keauhou, Maui, requires a "conservation easement (entitled "Native Plant Preservation Area") for the conservation of native plants and significant cultural sites in Kihei-Makena District Project District 9" within the proposed Honua'ula Master-planned Community development project. The easement "shall comprise the proportion of the portion of the property south of latitude 20°40'15.00"N, excluding portions that the DLNR, the Service, and the United States Corps of Engineers find do not merit preservation, but shall not be less than 18 acres and shall not exceed 130 acres."

The DEIS proposes to conserve a 22-acre Native Plant Preservation Area along with various 'conservation' and 'naturalized' areas interspersed between golf fairways, recreational trails, and mixed residential development within the southern portion of the property. We believe the entire 130-acre (56-hectare) area at the southern end of the project merits preservation. Pages 7-9 of SWCA's Conservation & Stewardship Plan state that scattered groves of large-stature *Erythrina sandwicensis* (wiliwili) and *Prosopis pallid* (kiawe) trees co-dominate the upper story of the kiawe-wiliwili shrubland, and that native shrubs, such as *Sida fallax* (ilima) and *Capparis sandwichiana* (maiapilo), and the native vine *Sicyos pachycarpus* (anunu), occur in the understory. Introduced shrubs, introduced grasses, and introduced vines and herbaceous species dominated the ground vegetation. SWCA found a total of 26 native species growing within the project site. Five individuals of *Canavalia pubescens* (awikiwiki), a candidate for listing pursuant to the ESA, currently occur within the kiawe-wiliwili shrubland on the Honuaula property. The remnant kiawe-wiliwili shrubland habitat is somewhat degraded as a result of historical grazing by feral deer, goats, and cattle and jeep trails occur on the property.

To minimize these adverse impacts to ecosystem integrity, we recommend that the conservation easement or Native Plant Protection Area include the roughly 130 acres (56 hectares)) within the aa lava flow which supports a somewhat degraded, yet functioning native dryland forest/shrubland ecosystem. As your reports indicate, the majority of the native plant species

observed during recent surveys occur in southern quarter of the project area. We believe that your rationale for the design of the Native Plant Preservation Area, based on the weighted density of eight 'uncommon' native plant species, will result in a significant percentage loss of individual native plants, and further habitat fragmentation. Therefore, to minimize adverse impacts to ecosystem integrity, we recommend that the conservation easement or Native Plant Preservation Area include a contiguous area of roughly 130 acres (56 hectares) which would encompass the majority of the mixed remnant kiawe-wiliwili shrubland.

Pages 25 through 28 of SWCA's Conservation & Stewardship Plan, which was appended to the DEIS, and as we discussed in our June 18, 2010 meeting, has identified numerous proposed mitigation measures and an interest in cooperating with and funding off-site conservation projects to offset the loss of habitat within the proposed project footprint. Your Final EIS should also include a description of these off-site conservation projects. In order to fully address this aspect of the project in your Final EIS, we suggest that a 130-acre (56-hectare) Native Plant Preservation Area, located within the southern portion of the property, be incorporated into the preferred alternative. Alternatively, your discussion of project alternatives (Section 6.0) in your Final EIS should thoroughly address any reasons conservation of the entire southern area was not included selected as the preferred alternative.

#### **Increased wildfire threat**

A number of recent human-caused fires have escaped containment by the available interagency initial attack fire suppression forces, resulting in significant impacts to listed species and critical habitat in the dry areas of Maui. Preliminary calculations reviewed at the June 9, 2009, Maui Wildfire Coordinating Group meeting indicate that in the absence of significant fuel treatments, significant fire suppression resource response by fire engines and heavy equipment would be necessary within the first 45 minutes of fire ignition in order to contain a wildfire burning under average summer fire danger conditions in the project vicinity.

To minimize the wildfire threat posed by the development, the DEIS indicates that two acres will be set aside for Maui County's use developing a new fire station. Additionally, SWCA's Conservation and Stewardship Plan indicates that a Natural Resource Manager will be hired to develop a fire control plan in coordination with resource agencies and fire department officials.

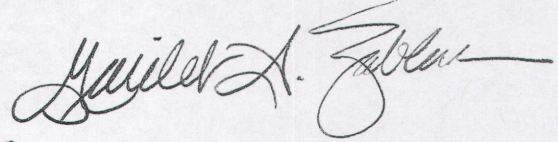
In our June 18, 2010, meeting you indicated that you are also coordinating with adjacent landowners to develop a 100-foot (30-meter) wide firebreak along portions of the upslope edge of the project area. In addition, you invited us to visit the site to see the extent to which grass fuel load is minimized in the area upslope from the project by intensive grazing. We recommend you ensure that fuel treatments, in combination with fire suppression responses, are adequate to ensure wildfires do not burn listed species and critical habitat in the leeward Haleakala area, and that these measures are presented in your Final EIS.

Mr. Charles Jencks

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We appreciate the opportunity to participate in the environmental review process for this project. Please contact Dawn Greenlee, Fish and Wildlife Biologist, Consultation and Technical Assistance Program (phone: 808-792-9469; fax: 808-792-9581), if you have any questions regarding our comments and recommendations.

Sincerely,

A handwritten signature in cursive script, appearing to read "Loyal Mehrhoff".

for Loyal Mehrhoff  
Field Supervisor

Enclosures

cc:

Mr. Tom Schnell, PBR Hawaii

Mr. John Ford, SWCA Environmental Consultants

Mr. Jeff Hunt, Maui County Planning Department

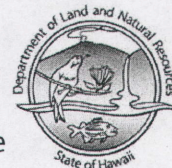
Dr. Scott Fretz, Hawaii Department of Land and Natural Resources

Dr. Fern Duvall, Hawaii Department of Land and Natural Resources



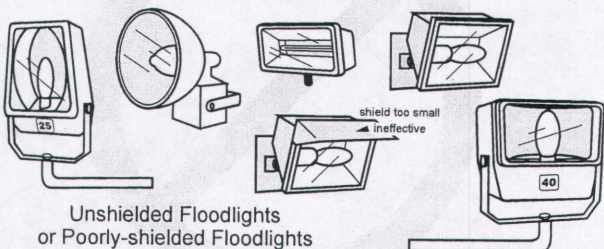
# SEABIRD FRIENDLY LIGHTING SOLUTIONS

Help eliminate seabird light attraction. Select the best fixture for your application using this guide. Avoid uplighting, always shield floodlights, and aim downlights carefully to avoid light trespass. For more information go to [www.kauai-seabirdhcp.info](http://www.kauai-seabirdhcp.info).

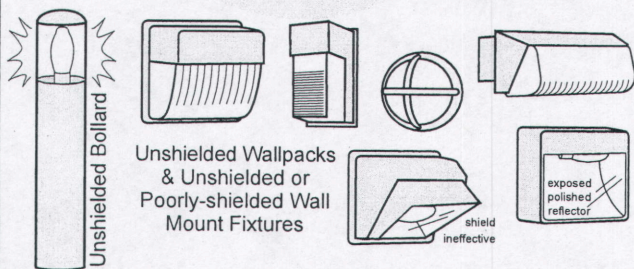


## Unacceptable / Discouraged

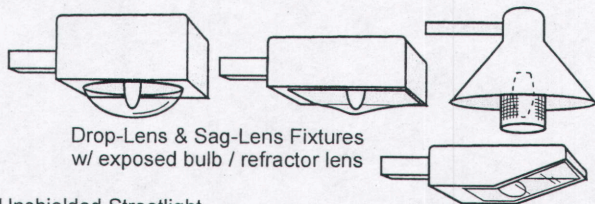
Fixtures that produce glare and light trespass



Unshielded Floodlights or Poorly-shielded Floodlights



Unshielded Wallpacks & Unshielded or Poorly-shielded Wall Mount Fixtures

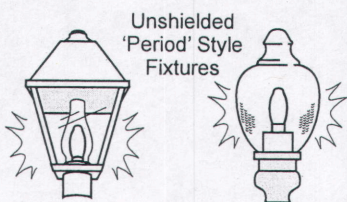
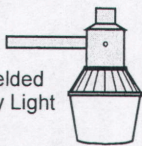


Drop-Lens & Sag-Lens Fixtures w/ exposed bulb / refractor lens

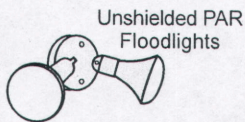
Unshielded Streetlight



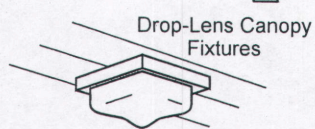
Unshielded Security Light



Unshielded 'Period' Style Fixtures

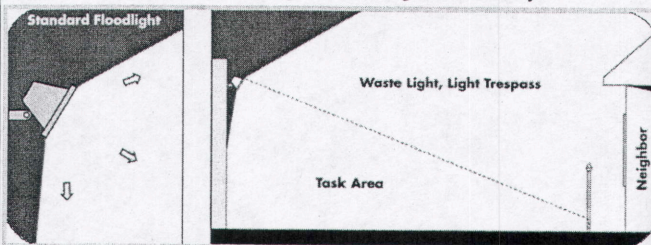


Unshielded PAR Floodlights



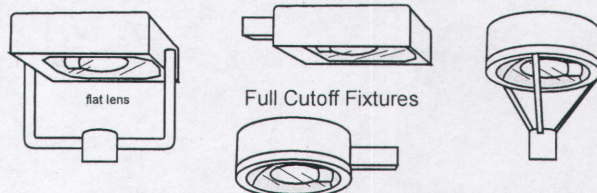
Drop-Lens Canopy Fixtures

Unshielded floodlight that is angled incorrectly



## Acceptable

Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night

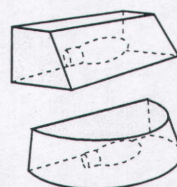
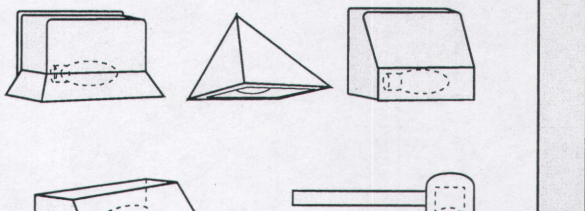


flat lens

Full Cutoff Fixtures

Fully Shielded Walkway Bollards

Fully Shielded Wallpack & Wall Mount Fixtures



Fully Shielded Fixtures

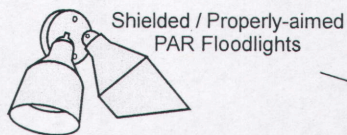
Full Cutoff Streetlight



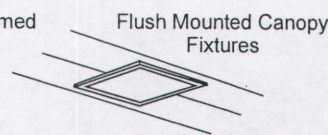
Fully Shielded Security Light



Fully Shielded 'Period' Style Fixtures  
bulb shielded in opaque top

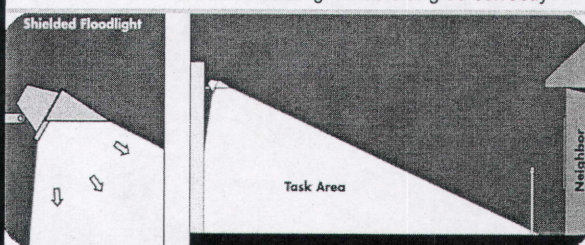


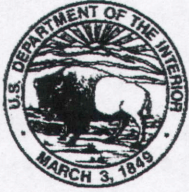
Shielded / Properly-aimed PAR Floodlights



Flush Mounted Canopy Fixtures

Shielded floodlight that is angled correctly





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850

In Reply Refer To:  
2009-TA-0172  
2009-FA-0073

APR 08 2009

PBR Hawaii  
ASB Tower, Suite 650  
1001 Bishop Street  
Honolulu, Hawaii 96813

Subject: Request for Technical Assistance for Proposed Honuaula Subdivision, Kihei, Maui

To Whom it May Concern:

This letter acknowledges the U.S. Fish and Wildlife Service's March 9, 2009, receipt of your request for comments on an Environmental Impact Statement Preparation Notice addressing the proposed development of approximately 670 acres in Kihei, Maui (TMKs (2) 2-1-008:056 and 071 and (2) 2-1-008:999 (por)). The proposed master planned community would include approximately 1,150 single family homes, commercial mixed uses, and a golf course. The northern 75 percent of the property has historically been managed for livestock grazing and is currently dominated by buffel grass and non-native shrubs. The southern portion of the property is covered by aa lava which contains scattered remnants of native Hawaiian dry forest. A 22-acre native plant preservation area would be conserved. Based on the project information you provided and pertinent information in our files, the threatened Newell's shearwater (*Puffinus auricularis newelli*) and the endangered Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*) (collectively referred to as seabirds) are known to traverse the project area. The endangered Blackburn's sphinx moth (*Manduca blackburni*) and the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) may also occur within the project site.

The proposed project is located in a dry area of Maui where wildland fires interdependent with the proposed project may impact resources protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (ESA). To assist you, we have drafted a preliminary project action area to delineate the extent of the area which may be impacted by wildland fires associated with the proposed development (Figure 1). The action area is bounded along its north side by areas which are (according to information provided by James Robello, Maui County Executive Director, U.S. Department of Agriculture (USDA) Farm Service Agency, on January 6, 2009) intensively managed for agricultural purposes. The southern perimeter of the action area follows a lava flow which may serve as a fuelbreak. We have requested additional information from USDA regarding the spatial extent of intensive agricultural management in the vicinity of the proposed project area, upon which revisions to the draft action area could be based.

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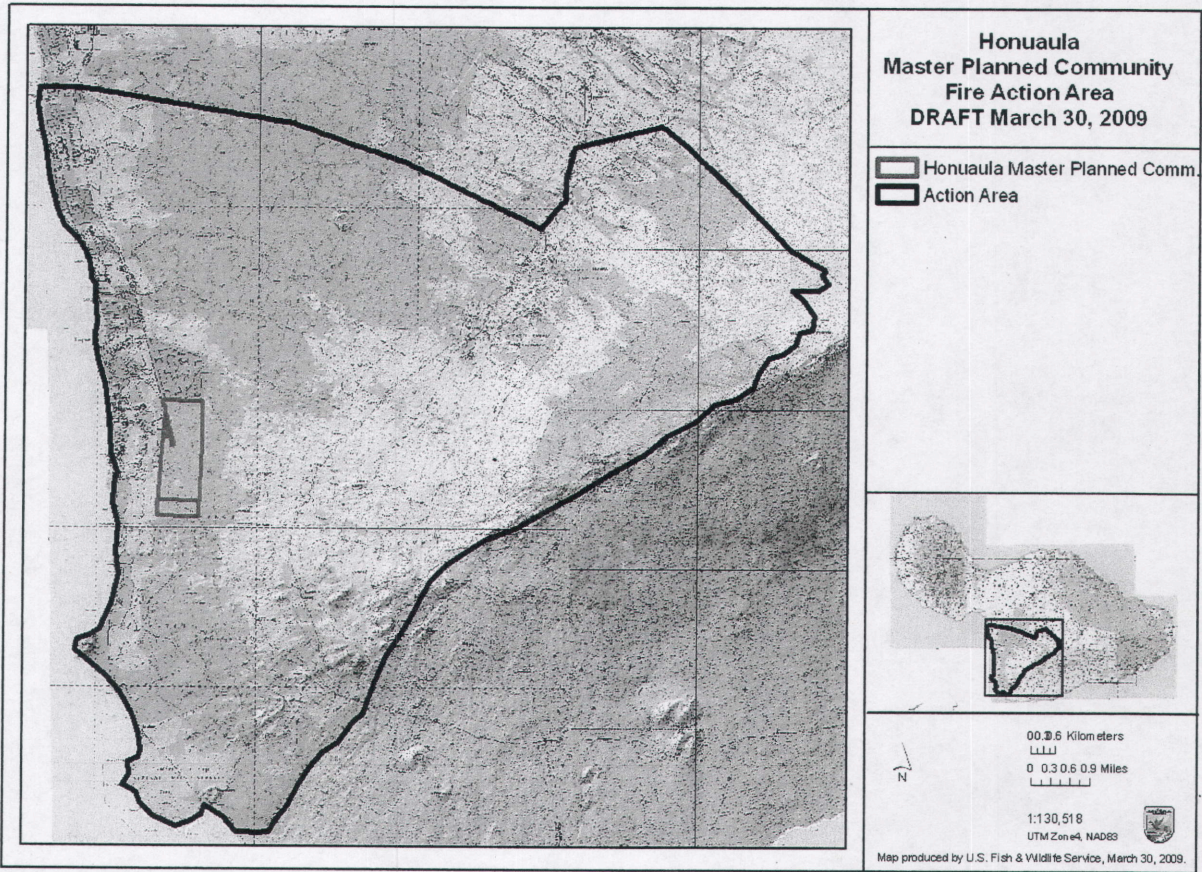


Figure 1. Honuaula project draft action area.

The draft action area contains five listed animal species, eight listed plant species (Table 1), and designated critical habitat for one insect and five plant taxa (Table 2) occurs within the area which may be impacted by wildland fires resulting from the proposed development.

**Table 1. Threatened and endangered species occurring within action area.**

Scientific Name	Common Name	Status
<b>Mammals</b>		
<i>Lasiurus cinereus semotus</i>	Hawaiian hoary bat	Endangered
<b>Birds</b>		
<i>Branta sandvicensis</i>	Hawaiian goose	Endangered
<i>Fulica americana alai</i>	Hawaiian coot	Endangered
<i>Himantopus mexicanus knudseni</i>	Hawaiian stilt	Endangered

**Table 1 (continued). Threatened and endangered species occurring within the draft action area.**

Scientific Name	Common Name	Status
Insects		
<i>Manduca blackburni</i>	Blackburn's sphinx moth	Endangered
Plants		
<i>Abutilon menziesii</i>	kooloa ula	Endangered
<i>Achyranthes splendens</i> var. <i>rotundata</i>	round-leaved chaff-flower	Endangered
<i>Bonamia menziesii</i>	no common name	Endangered
<i>Diellia erecta</i>	no common name	Endangered
<i>Diplazium molokaiense</i>	no common name	Endangered
<i>Geranium arboreum</i>	Hawaiian red-flowered geranium	Endangered
<i>Hibiscus brackenridgei</i>	mao hau hele; native yellow hibiscus	Endangered
<i>Melicope knudsenii</i>	alani	Endangered

**Table 2. Critical habitat units occurring within the draft action area.**

Critical Habitat Unit	Portion of Critical Habitat Unit Within Draft Action Area	
	Hectares (Acres)	Percent of Unit
Insect		
<i>Manduca blackburni</i> – Maui 1	1503 ha (3715 ac)	94 %
<i>Manduca blackburni</i> – Maui 2	578 ha (1429 ac)	96 %
Plants		
<i>Argyroxiphium sandwicense</i> ssp. <i>macrocephalum</i> - Unit 9	497 ha (1228 ac)	5%
<i>Bidens micrantha</i> ssp. <i>kalealaha</i> – Unit 9 b	32 ha (80 ac)	2%
<i>Clermontia lindseyana</i> – Unit 9 b	60 ha (148 ac)	100%
<i>Diellia erecta</i> – Unit 9 a	2 ha (5 ac)	100 %
<i>Geranium arboretum</i> – Unit 9 a	145 ha (358 ac)	20 %
<i>Geranium arboretum</i> – Unit 14 b	452 ha (1116 ac)	100 %
<i>Geranium arboretum</i> – Unit 15 c	251 ha (621 ac)	38 %

We recommend the following measures be incorporated into the project's Draft Environmental Impact Statement to minimize potential project impacts to listed species:

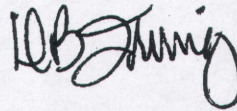
- Seabirds may traverse the project area at night during the breeding season (February 1 through December 15). Any outdoor lighting, particularly when used during each year's peak fledging period (September 15 through December 15), could result in seabird disorientation, fallout, and injury or mortality. Potential impacts to seabirds can be minimized by shielding outdoor lights associated with the project, avoiding night-time construction, and providing all project staff and residents with information regarding

seabird fallout. All project lights should be shielded so the bulb can be seen only from below.

- Blackburn's sphinx moth may occur in the project area. The adult moth feeds on nectar from native plants including beach morning glory (*Ipomoea pes-caprae*), iliee (*Plumbago zeylanica*), maiapilo (*Capparis sandwichiana*), and the larvae feed upon non-native tree tobacco (*Nicotiana glauca*) and the native (*Nothocestrum latifolium*). All of these species may occur on the project site. We recommend you survey the site for the presence of Blackburn's sphinx moth host plants and if host plants are found, contact our office for further assistance.
- To minimize impacts to the endangered Hawaiian hoary bat, woody plants suitable for bat roosting should not be removed or trimmed during the bat birthing and pup rearing season (April to August). If this avoidance measure can not be implemented, bat surveys should be conducted and, if this species is found, our office should be contacted for additional assistance.
- Development may result in an increased fire risk. A number of recent human-caused fires have escaped containment by the available interagency initial attack fire suppression forces, resulting in significant impacts to listed species and critical habitat in the dry areas of Maui. In the project vicinity, intensive grazing may be reducing fuel load and wildland fire threat to listed resources. The Maui Wildland Fire Coordinating Group is partnering with our office to coordinate the development of fuelbreaks, water sources for firefighting, fire prevention projects, and an increased fire suppression response to minimize the impact of human-caused wildfires to listed plants, animals, and critical habitat on Maui. Agricultural practices implemented by private landowners in the project vicinity could be coordinated to minimize fuel load and fire threat. We recommend you coordinate with Maui County Department of Fire and Public Safety, Hawaii Department of Land and Natural Resources, USDA Farm Service Agency, USDA Natural Resource Conservation Service, adjacent landowners, and our office to ensure any wildland fire risk to listed resources, interdependent with the proposed development, is minimized.
- We recommend the use of native plants for landscaping purposes in order to reduce the spread of non-native invasive species. If native plants do not meet your landscaping objectives, we recommend that you choose species that are thought to have a low risk of becoming invasive. The following websites are good resources to use when choosing landscaping plants: Pacific Island Ecosystems at Risk (<http://www.hear.org/Pier/>), Hawaii-Pacific Weed Risk Assessment ([http://www.botany.hawaii.edu/faculty/daehler/wra/full\\_table.asp](http://www.botany.hawaii.edu/faculty/daehler/wra/full_table.asp)) and Global Compendium of Weeds ([www.hear.org/gcw](http://www.hear.org/gcw)).
- To minimize erosion, sedimentation, and other adverse impacts to aquatic fish and wildlife resources and nearby coral reef ecosystems, we recommend that applicable measures identified in the enclosed list of Standard Best Management Practices (BMP) for fish and wildlife be incorporated into the project's BMP Plan.

Implementation of these recommendations does not alleviate your responsibilities pursuant to the ESA, if a listed species may be affected by the proposed action. If the proposed project may affect a listed species and the project is funded, authorized, or carried about by a Federal agency, you should request that the Federal agency consult with us under section 7(a)(2) of the ESA. If there is no Federal nexus for the proposed action you should obtain an incidental take permit pursuant to section 10(a)(2)(B) of the ESA if incidental take of a listed species cannot be avoided. If you have questions or would like additional information, please contact Consultation and Technical Assistance Program Fish and Wildlife Biologist, Dawn Greenlee (phone: 808-792-9400; fax: 808-792-9581).

Sincerely,



Patrick Leonard  
Field Supervisor

Enclosure

cc:

Office of Environmental Quality Control, State Land Use Commission, Honolulu, Hawaii  
Maui Planning Department, Wailuku, Hawaii

Enclosure

**U.S. Fish and Wildlife Service  
Recommended Standard Best Management Practices**

The U.S. Fish and Wildlife Service recommends that the following measures be incorporated into projects to minimize the degradation of water quality and impacts to aquatic fish and wildlife resources:

- a. Turbidity and siltation from project-related work will be minimized and contained to within the vicinity of the site through the appropriate use of effective silt containment devices and the curtailment of work during adverse weather conditions;
- b. Dredging and filling in the aquatic environment will be designed to avoid or minimize the loss special aquatic site habitat (pool/riffle areas, wetlands, etc.) and the unavoidable loss of such habitat will be compensated for;
- c. All project-related materials and equipment (dredges, barges, backhoes, etc.) to be placed in the water will be cleaned of pollutants prior to use;
- d. No project-related materials (fill, revetment rock, pipe, etc.) will be stockpiled in the water (stream channels, wetlands, etc.);
- e. All debris removed from the aquatic environment will be disposed of at an approved upland or ocean dumping site;
- f. No contamination (trash or debris disposal, alien species introductions, etc.) of adjacent aquatic environments (stream channels, wetlands, etc.) will result from project-related activities;
- g. Fueling of project-related vehicles and equipment should take place away from the water and a contingency plan to control petroleum products accidentally spilled during the project will be developed. Absorbent pads and containment booms will be stored on-site, if appropriate, to facilitate the clean-up of accidental petroleum releases;
- h. Any under-layer fills used in the project will be protected from erosion with (rock, core-loc units, etc.) as soon after placement as practicable; and
- i. Any soil exposed near water as part of the project will be protected from erosion (with plastic sheeting, filter fabric, etc.) after exposure and stabilized as soon as practicable (with vegetation matting, hydroseeding, etc.).