



## United States Department of the Interior

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



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LAND USE COMMISSION  
STATE OF HAWAII

In Reply Refer To:  
2013-TA-0396  
2011-TA-0128  
2011-TA-0362

Mr. Daniel Orodener  
Executive Officer  
Department of Business, Economic Development, and Tourism  
State Land Use Commission  
P.O. Box 2359  
Honolulu, Hawaii 96804

Subject: Technical Assistance on the Second Draft Environmental Impact Statement for the proposed Kaloko Makai Development, North Kona, Hawaii

Dear Mr. Orodener:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter dated August 2, 2013, requesting our comments on the second draft environmental impact statement (DEIS) for the Kaloko Makai Development, proposed by the developer, SCD-TSA Kaloko Makai, LLC. We requested and received a time extension until October 8, 2013, to submit our comments and we thank you for the additional time. The Service previously provided extensive comments relative to this project on October 4, 2011 (Service file 2011-TA-0128 and 2011-TA-0362), and received your response to those comments on July 30, 2013.

At build-out, this master-planned community will have 5,000 single-family and multi-family residences, up to 1.1 million square feet of commercial space, light industrial use, three public schools, a dryland forest preserve, hospital, an urgent care medical facility, lodge, business center, recreational facilities, and supporting infrastructure. This housing project will be located on 1,139 acres of land that is currently undeveloped.

We reviewed the proposed project pursuant to the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Our databases, including data compiled by the Hawaii Biodiversity and Mapping Program, indicate the project site is on proposed critical habitat. On October 17, 2012 (77 FR 63927), the Service published a proposal to list 15 Hawaii Island species (13 plants, 1 anchialine pool shrimp, and 1 picture-wing fly) as endangered, and proposed 18,768 acres as critical habitat for 3 plant species (Service 2012). Critical habitat is being proposed for two previously listed plant species, wahine noho kula (*Isodendron*

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*pyrifolium*) and uhiuhi (*Mezoneuron kawaiense*), and for the newly proposed endangered species ko'oko'olau (*Bidens micrantha* ssp. *ctenophylla*). Approximately, 606 acres of proposed critical habitat in Unit 34 is located in the Kaloko Makai Development project area.

The following threatened and endangered animal species may be in the vicinity of the proposed project site: Hawaiian hoary bat (*Lasiurus cinereus semotus*), Blackburn's sphinx moth (*Manduca blackburni*), Newell's shearwater (*Puffinus auricularis newelli*), and Hawaiian petrel (*Pterodroma sandwichensis*). This area is also known to be occupied by endangered plant species 'aiea (*Nothoestrum breviflorum*), hala pepe (*Pleomele hawaiiensis*), ma'oloa (*Neraudia ovata*), uhiuhi (*Mezoneuron kawaiense*), and proposed endangered ko'oko'olau (*Bidens micrantha* ssp. *ctenophylla*).

The Kaloko Makai Development contains substantial native lowland dry forest habitat, some of which has been informally characterized by the Service as "high quality" and proposed as critical habitat for ma'oloa in 2002 (Service 2002). This area is one of the few remaining dry forests in the State of Hawai'i. It is also one of the last areas where ko'oko'olau is found in the wild in North Kona. Formerly, six plant species identified as endangered or as "species of concern" were known to occur on or near the project site; of these, five species presently remain. The former plant species include: *Mariscus fauriei* (taxonomically recognized as *Cyperus fauriei* but listed as endangered as *Mariscus fauriei*), and those that presently remain are: 'aiea, hala pepe, ma'oloa, ko'oko'olau, and uhiuhi.

About 606 acres of the Kaloko Makai Development project area are characterized as native lowland dry forest ecosystem by the Service in the proposed listing and critical habitat package published in October 2012 (Service 2012). Of this total lowland dry forest ecosystem, roughly 250 acres are considered "high quality" in the Kaloko Makai area (State of Hawai'i 1999). Around 150 acres of the high quality habitat are contained within the Kaloko Makai Dry Forest Preserve (Preserve), which will be set aside by the Applicant and will not be developed. Other high quality habitat remaining on the project site is found on the North side of Hina Lani Street on the 'a'ala lava flow and the area near the intersection of Ane Keohokālole Highway and Hina Lani Street. The alteration of the entire existing lowland dry forest due to the Kaloko Makai development may be detrimental to the long-term recovery of listed endangered plants in the area.

Comments regarding the DEIS are as follows:

### **Blackburn's sphinx moth**

In the DEIS, the developer identifies that the endangered Blackburn's sphinx moth was not found in the project area during Steve Montgomery's 2008 survey. However, our records indicate that the Blackburn's sphinx moth may occur in the project area. The adult moths feed on nectar from native plants including pōhuehue (*Ipomoea pes-caprae*), 'ilie'e (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*). The larvae feed upon the native 'aiea (*Nothoestrum brevifolium*) and nonnative tree tobacco (*Nicotiana glauca*) which can be found in disturbed area such as open fields, roadway margins, and dry to moist forests. During his 2006 survey, Art Whistler identified pōhuehue and maiapilo within the project area. In the 2012

survey, Reginald David identified maiapilo and 'aiea within the project area. Any of the other species may also occur on the project site. As stated in your response comments to the Service, "a survey of planned construction sites during the wet season preceding construction will be planned. If any potential host plants are found, your office will be contacted to determine an appropriate course of action." We recommend you incorporate this language as avoidance and minimization measures for Blackburn's sphinx moth in the Final EIS (FEIS).

### **Hawaiian hoary bat**

The endangered Hawaiian hoary bat may occur within the proposed project area, and as stated in the DEIS the 2006 survey by Reginald David detected a single Hawaiian hoary bat flying down-slope above the project area. Hawaiian hoary bats roost in nonnative and native woody vegetation at heights greater than 15 feet. If trees or shrubs suitable for bat roosting are cleared during the bat breeding season, there is a risk that breeding bats could inadvertently be harmed or killed. Young bats, which are incapable of flight, are particularly vulnerable during the bat-birthing and pup-rearing season (June 1 through September 15). To minimize potential impacts to the Hawaiian hoary bat, woody plants greater than 15 feet tall should not be removed or trimmed between June 1 and September 15 throughout the development and ongoing operation of the proposed project. As stated in your response comments to the Service, "The Petitioner will incorporate the recommended protocols to address the Hawaiian hoary bat." We recommend you incorporate this language for the Hawaiian hoary bat in the FEIS.

### **Listed and Migratory Seabirds**

Hawaiian petrels and Newell's shearwaters (collectively known as seabirds) may traverse the project area at night during the breeding season. Outdoor lighting at this project site could result in seabird disorientation, fallout, and injury or mortality. 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 increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. 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.

To minimize potential project impacts to seabirds during their breeding season, all outdoor lights should be fully shielded so the bulb can only be seen from below bulb height and only used when necessary. Automatic motion sensor switches and controls should be installed on all outdoor lights and/or lights should be turned off when human activity is not occurring in the lighted area. Any increase in night-time lighting, particularly during each year's peak fallout period (September 15 through December 15), could result in seabird injury or mortality. Nighttime construction should be avoided during the seabird fledging period, September 15 through December 15. If nighttime construction occurs during other times of year, all lighting should be shielded and directed toward the ground to avoid attracting adult seabirds as they travel from the ocean to their breeding areas. As stated in the DEIS, we commend your efforts to shield all "external lighting that may be required in conjunction with development of the project" to reduce impacts to listed seabirds.

### **Native lowland dry forest ecosystem/Important plant habitat**

We appreciate your efforts to avoid impacts to the native dryland forest that occurs within the footprint of your proposed project by setting aside and preserving approximately 150 acres (60.7 hectares) as the Preserve in perpetuity. We recommend you prepare and implement a management plan for the Preserve that includes conservation actions such as fencing, invasive species control, and predator control. It is to our understanding that no future development and encroachment will occur to reduce the area set aside as the Preserve.

On August 25, 2010, we received a letter from B.J. Leithead Todd, Hawai'i County Planning Director, informing us the Hawai'i County Planning Department will require Stanford Carr Developments to formally set-aside 150 acres of dryland forest and implement conservation measures as a condition of approval for county land entitlements on this property. In conversations between the Service and Applicants Representatives on August 16, 2010, we agreed to the following conservation measures: (1) set aside 150 acres in perpetuity for the creation of the Preserve; (2) install 4-foot (ft.) (1.2-meter (m)) hogwire fence around remaining unfenced portion of the Preserve (height to exclude goats); (3) monitor fence and remove ungulates; (4) after Federal Highways Administration completes their five year weed control program, control weeds throughout the entire preserve; (5) and control weeds along a 15-ft. (5-m) buffer along all roads including Hina Lani Street and Ane Keohokālole Highway. These conservation measures must be required and should be included in your FEIS.

The DEIS states on page 3-57, "Three individual endangered plants (two hala pepe and one 'aiea) found outside the Dryland Forest Preserve will be buffered by setbacks and enclosures (fence/wall). Kaloko Makai will develop a 50-ft. radius buffer around the two hala pepe and one 'aiea and any structure. The plants will be incorporated into landscaping within the 50-ft. buffers." The 50-ft. buffer around the two hala pepe and one 'aiea is insufficient because it does not meet the recovery goals and criteria for these species identified in the recovery plans for hala pepe (Big Island II: Addendum to the Recovery Plan for the Big Island Plant Cluster) and 'aiea (Recovery Plan for the Big Island Plant Cluster).

On page 3-57, ko'oko'olau is identified as a candidate plant species. Ko'oko'olau is considered as a proposed endangered plant species as identified in the proposed rule published October 17, 2012 (77 FR 63927) (Service 2012). We recommend you revise the status of ko'oko'olau in your Final EIS accordingly. Your comment letter to the Service states that "it is anticipated that the project will be developed in such a manner as to avoid any 'take' of *Bidens micrantha* ssp. *ctenophylla*, which is currently proposed for listing as an endangered species. Applicant will incorporate avoidance measure to the extent possible. Because no incidental take license will be needed, Applicant no longer anticipates entering into a Habitat Conservation Plan as previously suggested in the DEIS". We do not believe you can avoid take of ko'oko'olau in the high quality dry forest habitat on the lava flow North of Hina Lani Street and West of Ane Keohokālole Highway (see attached map for high quality habitat). This is due to the widespread distribution of the species in the high quality habitat and the persistent seed bank of this species in this area. Therefore, we recommend that you consider as an alternative (1) to set aside and not develop the high quality habitat or (2) address the impacts to ko'oko'olau in a Habitat Conservation Plan.

Prior to the mass grading of Phase I of the development, we recommend you develop a set of special construction contract conditions to avoid and minimize impacts to listed plant species and the Preserve. These conditions may include: (1) surveying and locating the Preserve boundaries and flagging them with colored ribbons, spaced every 50 feet; (2) surveying and locating the limits of work and flagging it with different colored ribbons and ground painting, every 25 ft.; (3) installing orange construction fencing to create a 20-foot wide buffer zone outside the Preserve boundary, where practicable; and (4) contacting the State Division of Forestry and Wildlife (DOFAW) to inspect the aforementioned work before proceeding further.

### **Increased wildfire threat**

The DEIS state that “building setbacks will be developed to keep housing at an appropriate distance from the Dryland Forest Preserve”. We recommend that at least a 20-ft. non-vegetated fire break zone be constructed outside of the Forest Preserve to prevent fires from the surrounding residence and commercial areas. The fire break should be kept clear of all vegetation and maintained with regularly scheduled maintenance performed annually. These measures should be adequate to ensure wildfires do not burn listed plant species and proposed critical habitat in the Kaloko Makai development. These measures are presented in your FEIS.

### **Groundwater resources and wastewater treatment**

The applicant is proposing to withdraw groundwater on-site to meet all of the water demand for the project, and to dispose of all wastewater on-site. Increased groundwater withdrawals in this coastal area has the potential to negatively impact the integrity of the coastal ecosystem and the species that depend on it, including endemic, rare, and Federally-protected species unique to Hawaii.

The shrimp species *Metabetaeus lohena* (candidate) and *Palaemonella burnsi* (candidate), a damselfly *Megalagrion xanthomelas* (candidate), and the Hawaiian stilt (*Himantopus mexicanus knudseni*) and the Hawaiian coot (*Fulica alai*), both endangered species (collectively known as waterbirds), depend on these aquatic ecosystems and may potentially be adversely impacted by increases in salinity. The Service has designated Aimakapa and Kaloko fishponds, located within KAHO, as core wetlands required for the recovery of waterbirds (Service 2011). Saltwater intrusion and reduced groundwater discharge may adversely affect the integrity of coastal wetland habitat for waterbirds, and ultimately the long-term recovery of these species (Service 2011). The protection of groundwater discharges into the fishponds of KAHO is therefore critical for the survival and recovery of waterbirds. A change in the salinity of anchialine pools at KAHO may alter the species composition. Many of the species that are unique to anchialine pools are declining and may be considered for federal listing as threatened or endangered within the next several years. As a result, we recommend that pumping from and injection into the basal aquifer upslope of KAHO be excluded as alternatives for water supply and disposal to protect aquatic ecosystems.

Based on the project details provided for the proposed on-site wastewater treatment facility, our information suggests that your project may result in standing water or creation of open water, thus attracting Hawaiian waterbirds to the site. In particular, the Hawaiian stilt is known to nest in sub-optimal locations (e.g., any ponding water) if water is present. Hawaiian waterbirds

attracted to sub-optimal habitat may suffer adverse impacts, such as predation and reduced reproductive success, and thus the project may create an attractive nuisance. Therefore, we recommend you work with our office during project planning so that we may assist you in developing measures to avoid impacts to listed species (e.g., fencing, vegetation control, predator management).

**Invasive species**

Hawaii's native ecosystems are heavily impacted by exotic invasive plants. Whenever possible we recommend using native plants for landscaping purposes and as stated in the DEIS, "landscaping will incorporate native species and appropriate vegetation for the area." We commend your efforts to incorporate native plants into your landscaping.

If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with the ESA compliance. If the proposed project is funded, authorized, or permitted by a Federal agency, then that agency should consult with us pursuant to section 7(a)(2) of the ESA. If no Federal agency is involved with the proposed project, the applicant should apply for an incidental take permit under section 10(a)(1)(B) of the ESA. A section 10 permit application must include a habitat conservation plan that identifies the effects of the action on listed species and their habitats, and defines measures to minimize and mitigate those adverse effects.

We appreciate the opportunity to participate in the environmental review process for this project. If you have questions regarding these comments, please contact Chelsie Javar-Salas, Plant Biologist, (phone: 808-792-9400, email: Chelsie\_Javar@fws.gov).

Sincerely,



Jess Newton  
Island Team Manager  
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cc:

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Maggie Sporck, Hawaii Division of Forestry and Wildlife  
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Lyman Perry, Hawaii Division of Forestry and Wildlife

Enclosures (1)

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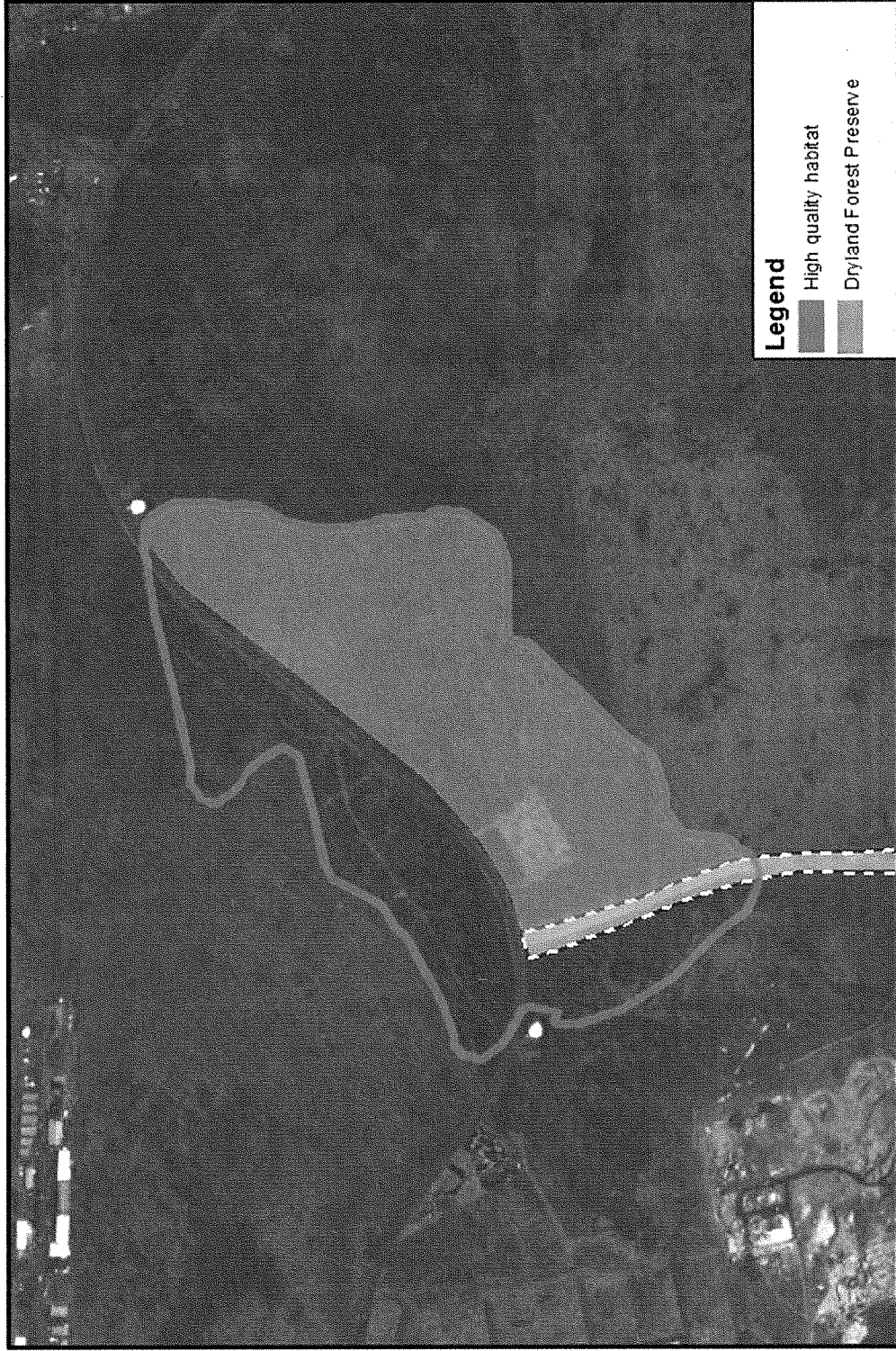
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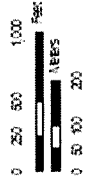


**U.S. Fish & Wildlife Service**  
**Pacific Islands Fish and Wildlife Office**  
 Honolulu County, Hawaii

*Surveys - Hawai'i Island*



**Legend**  
 High quality habitat  
 Dryland Forest Preserve



PRODUCED BY THE DIVISION OF  
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 MAP DATE 8/10/2010



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