

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife (DOFAW)
Honolulu, Hawaii 96813

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Endangered Species Recovery Committee
State of Hawaii
Honolulu, Hawaii

Committee Members:

SUBJECT: Request for comments from the Endangered Species Recovery Committee on the Kaua'i Seabird Habitat Conservation Program (KSHCP) mitigation approach. Briefing from the KSHCP Staff/Interagency Coordination Team: Project update and current mitigation approach.

BACKGROUND

The Hawai'i Department of Land and Natural Resources Division of Forestry and Wildlife (DLNR-DOFAW), in partnership with the U.S. Fish and Wildlife Service (USFWS), has been developing the Kaua'i Seabird Habitat Conservation Program (KSHCP) since 2003, an island-wide program to address incidental take of threatened and endangered seabirds on Kaua'i due to light attraction and utility line collision.

The Island of Kaua'i is home to the Hawaiian petrel (*Pterodroma sandwichensis*, federal and state-listed endangered), Newell's shearwater (*Puffinus newelli*, federal state-listed threatened), and Band-rumped storm petrel (*Oceanodroma castro*, state-listed endangered). Threats to the persistence and recovery of these species include: reduced survival and nest success due to non-native predators, degradation of nesting habitats by feral ungulates and invasive plants, incidental take due to attraction to artificial lights and utility line collisions. Additionally, longer-term changes due to global climate change and changes in prey availability may pose significant impacts to these species. Most of the world's remaining Newell's shearwater population, perhaps 90%, breeds on Kaua'i (Ainley et al. 1995).

The development of the KSHCP faces unique challenges due to the ongoing levels of island-wide take, biological life history characteristics of long-lived and slow-reproducing seabirds threatened by invasive species, and an enormous degree of uncertainty inherent in the implementation of landscape-scale conservation actions.

In 2011, the Kaua'i Island Utility Cooperative (KIUC) Short-term Habitat Conservation Plan (STHCP) was approved by the USFWS. The STHCP conservation measures, which have now been implemented for more than three years, were designed to provide a better understanding of seabird interactions with utility lines, assess the status and location of remote seabird colonies, and evaluate both the effects of predation and the effectiveness of conducting conservation actions at breeding colonies (Planning Solutions Inc. 2011). This information is crucial in order

to develop a biologically effective approach for the longer duration KSHCP. Through the STHCP, KIUC has funded extensive searches for remote seabird colonies conducted by DOFAW's Kauai Endangered Seabird Recovery Project (KESRP), monitoring active predator control programs on National Tropical Botanical Garden (NTBG) land in Upper Limahuli Preserve and State land in Hono o Na Pali Natural Area Reserve (NAR), and seabird colony monitoring in both locations.

Implementation of the STHCP conservation measures has produced new highly relevant information, such as:

- Over fifteen new seabird colonies (a combination of Newell's shearwaters and Hawaiian petrels) have been identified.
- Planning teams have reached out and continue to work with private landowners to identify and develop potential mitigation sites.
- Phase 1 of a fencing feasibility assessment was completed to determine which known seabird colonies have suitable topography for predator proof fence enclosures (Young & VanderWerf, in prep).
- Increased knowledge on the impact of specific predators on various life stages of seabirds (e.g., feral pigs predating on nesting adults and chicks, Polynesian versus black rat foraging behaviors, etc.)

The STHCP has also funded an extensive evaluation by KESRP of the frequency and location of seabird interactions with power lines, referred to as the Underline Monitoring Program (UMP). Initial efforts were focused on traditional ground search techniques to find dead or injured seabirds beneath and adjacent to power lines. However, KESRP concluded that such an approach was both impractical and ineffective. As part of the UMP, an innovative new methodology was developed for monitoring line collisions remotely using song meters, which were deployed selectively in areas with known or suspected high rates of collisions in 2013 (Travers et al., 2014). Based on information learned in 2013, the 2014 UMP effort involves a wider distribution of song meters across the island, and continued validation of the methodology and resulting data. KESRP will produce a comprehensive evaluation of power line effects on seabirds across the island in early 2015. In the meantime, USFWS modeling of the initial 2013 data indicates that rates of collisions are far higher than previously estimated (Laut et al., in prep). While results from this extrapolation remain in draft form, all modeling results indicate a significantly higher KIUC take than previously anticipated.

There are still many information gaps and uncertainties as to how this translates to a long-term take permit under the KSHCP, due largely to the ability for KIUC to potentially minimize their take in the near future. Furthermore, UMP data from 2014 will need to be analyzed and KESRP staff are currently working on a parallel extrapolation model to estimate island-wide collisions. Also, there is great potential to use the information generated via the UMP to minimize line collisions in areas with the highest risk to seabirds. KIUC is currently completing a Minimization Potential Assessment for the high impact Powerline Trail area (KIUC, in prep). The efficacy of

other potential line collision minimization techniques (e.g., use of lasers or focused lighting to provide a visual barrier to minimize seabird collisions) is currently being evaluated by KIUC and KESRP.

At this time, it appears based on population modeling (Griesemer & Holmes 2011; USFWS PVA model, in prep) and information produced by research conducted under the STHCP to date that it is highly unlikely that the KSHCP can be implemented in such a way that mitigation at a rate greater than one to one (“replacement”) for all Newell’s shearwater take will be achieved within a long-term permit period. Stated simply, there are not enough potential mitigation actions or available colonies for this approach to work. Furthermore, the mitigation deficit increases with each year’s take, compounded by the six-year breeding age delay of these species, results in the management actions inability to offset with a net benefit or mitigate in a typical one to one replacement.

Mitigation target: Population Stabilization

In light of the aforementioned new data regarding estimates of line collisions, the KSHCP interagency team is proposing a new approach to mitigation for authorized seabird take under the KSHCP. The new approach would focus efforts on stabilizing the population of the Newell’s shearwater on the Island of Kaua‘i by implementing landscape-level conservation actions to protect known breeding colonies. This approach would be based on updated USFWS recovery goals and objectives as well as population viability analyses (Laut et al., in prep).

Although this approach is presents significant challenges, it achieves the original intent for the development of the KSHCP, including:

- Provides a mechanism for take coverage for both light attraction and utility line collisions;
- Expected to meet State endangered species regulations and issuance criteria; and
- Achieves significant, landscape-scale benefits for the species, resulting in population stabilization and increasing long-term population trends.

As part of the process of developing this approach, the KSHCP staff and Interagency Coordination Team have been mapping out potential conservation strategies to protect known seabird colonies via predator control efforts.

Highlights of these scenarios include:

1. Large scale predator proof fence enclosures in several areas where seabird colonies have been identified and land owners are willing and supportive (e.g. Upper Limahuli Preserve on NTB land).
2. Small scale predator proof enclosures to protect known seabird burrows and/or encourage nesting in “safe zones” via social attraction.

3. Predator control crews working in non-fenced areas to target site specific predators, i.e. remove barn owls, strategic feral cat and rat trapping, etc.

Conservation efforts on DOFAW lands would be focused in the Hono o Nā Pali NAR, where ungulate fencing is already underway, and multiple concentrations of seabird nesting colonies have been found. Further site development will occur as the plan moves forward towards implementation and in initial phases of the plan.

To move forward with completing the KSHCP and initiating the vital on-the-ground conservation actions to protect the declining endangered seabirds of Kaua‘i, the regulatory agencies need to commit to an approach. The approach proposed above is expected to meet the requirements of both permitting agencies and holds promise for implementation as quickly as possible.

ANALYSIS

Pursuant to HRS Chapter 195D-4(g)(8), a temporary license as part of a habitat conservation plan may be issued to allow take, that would otherwise be prohibited, if the take is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity if the cumulative impact of the activity, which is permitted and facilitated by the license, provides net environmental benefits. Furthermore, HRS Chapter 195D-30 states that all habitat conservation plans, safe harbor agreements, incidental take licenses, and subsequent actions authorized under those plans, agreements, and licenses shall be designed to result in an overall net gain in the recovery of Hawai‘i's threatened and endangered species.

In order for the State to issue an incidental take license (ITL) for an HCP, there must proof of “net benefit” to the species as defined by HRS Chapter 195D. The HCP must describe how it will “protect, maintain, restore or enhance identified ecosystems, natural communities or habitat types”, as well as increasing likelihood of recovery. In the case of the KSHCP, the Endangered Species Act (ESA) threatened Newell’s shearwater is in significant decline, estimated to have declined by 75% in the past two decades (Holmes et al. 2009).

The rapid decline of the Newell’s shearwater population described above is expected even in the absence of the activities and take associated with light attraction or the presence of utility lines due to heavy predation pressures on the population. Because, as stated above, the population of Newell’s shearwater is likely to decline even if all lights and utility lines were not present, the species will benefit with the development of the KSHCP. Hence, the KSHPC will provide a net benefit to the population with an extensive program to reduce and eliminate predators at the breeding colonies. Directly removing cats, rats and pigs minimizes predation of adults, chicks and eggs. Where predator proof fences are built, and full scale predator eradication is possible, there is additional benefit associated with protection of habitat and maintaining native vegetation. Many of these areas that are home to the Newell’s shearwater are also home to rare and endangered plants (e.g., *Labordia lydgatei*, and *Phyllostegia renovans*).

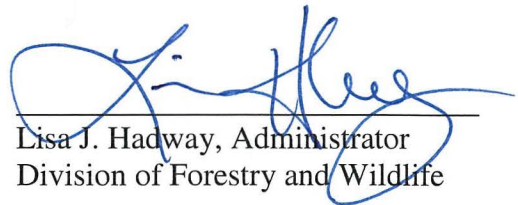
There are many unique aspects to this complex HCP. The take levels are extremely high, and the take is ongoing. Federal and State agencies are working with Kaua‘i businesses and facilities to

avoid and minimize ongoing take as much as possible. However, the need for electricity and lights on the island of Kaua'i will require incidental take authorization now and into the future. Novel approaches will need to be employed to ensure Hawai'i's threatened and endangered species can thrive. The mitigation associated with the KSHCP is ambitious, large scale, and will benefit 50-100% of the known colonies of the Newell's shearwater on Kaua'i.

RECOMMENDATION

That the ESRC provide comments on the mitigation target of population stabilization currently being developed under the KSHCP in comparison to mitigation at a rate greater than a one -to -one (1:1) ratio. The mitigation approach being proposed under the KSHCP seeks to reverse the projected downward population trend of Newell's shearwater in Kaua'i.

Respectfully Submitted,



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