

**FINDINGS AND RECOMMENDATIONS REGARDING THE PROPOSED
ISSUANCE OF AN ENDANGERED SPECIES ACT SECTION 10(a)(1)(B)
INCIDENTAL TAKE PERMIT IN ASSOCIATION WITH KAUAI ISLAND
UTILITY COOPERATIVE SHORT-TERM SEABIRD HABITAT
CONSERVATION PLAN FOR OPERATIONS, MAINTENANCE, AND LIMITED
NEW FACILITIES, KAUAI COUNTY, HAWAII**

I. DESCRIPTION OF THE PROPOSED ACTION

The U.S. Fish and Wildlife Service (Service) proposes to issue an Incidental Take Permit (ITP) to Kauai Island Utility Cooperative (KIUC) under the authority of section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (ESA). The ITP would be valid until such time as the long-term Kauai island-wide seabird Habitat Conservation Plan (HCP) being developed by the Hawaii Division of Forestry and Wildlife is approved, KIUC obtains their own long-term HCP, or up to 5 years from the time of issuance, whichever is shorter. Section 10(a)(1)(B) of the ESA allows the Service to issue an ITP to a non-Federal entity for incidental take of federally listed species, provided certain criteria are met. "Incidental take" is defined as take that is, "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Incidental Take Permit issuance criteria are prescribed in Title 50 Code of Federal Regulations (CFR) 17.22(b), 50 CFR 17.32(b)(2), and section 10(a)(1)(B) of the ESA. KIUC is requesting an ITP for incidental take that may occur as a result of the continued existence, operation and maintenance of all existing KIUC facilities, and the installation, operation and maintenance of certain limited future KIUC facilities.

KIUC has applied to the Service for an ITP that authorizes incidental take of the endangered Hawaiian petrel (*Pterodroma sandwichensis*), threatened Newell's (Townsend's) shearwater (*Puffinus auricularis newelli*), and the band-rumped storm-petrel (*Oceanodroma castro*), a candidate for listing under the ESA should it become listed during the term of the ITP (collectively these species are hereafter referred to as the "Covered Species"). Fledglings of the Covered Species can be attracted to, and/or disoriented by artificial lights while making their first flights to sea. Birds that become disoriented by lights can exhaust themselves by flying around the lighted areas before eventually landing, and can also collide with obstacles such as power lines, utility poles, buildings, and other tall structures. Adult seabirds also sometimes collide with utility lines that stretch across their flight paths between the nesting colonies and the ocean. KIUC has instituted operational controls to avoid take of the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) in connection with vegetation management that it must carry out to keep its system operational. If KIUC's application meets the ITP issuance criteria under section 10(a)(2)(B) of the ESA, the Service will issue an ITP for the above listed species and for the band-rumped storm-petrel should it become listed during the term of the ITP.

KIUC owns and operates a variety of electric utility installations on the island of Kauai. These include fossil-fuel-fired generating stations at Port Allen and Lihue, the upper and

lower Waiahi hydroelectric stations in the Wailua watershed, seven electrical substations and five switchyards located throughout the island, over 160 miles of electrical transmission lines, approximately 560 miles of 12.5 kilovolt (kV) electrical distribution lines, and approximately 425 miles of secondary lines (120/240 volts) that carry power from step-down transformers that are part of the distribution network to individual homes and businesses. Approximately 17,500 poles of various heights support electrical distribution and transmission lines. KIUC also owns and operates approximately 3,500 streetlights on behalf of the County of Kauai that are all shielded to prevent light from escaping upwards. While these represent most of the streetlights on the island, a number of public facilities and private developments also own and operate streetlights that are not under KIUC's control.

In accordance with the requirements of the ESA, KIUC has developed and proposes to fund and implement the Short-term Seabird HCP to avoid, minimize, and mitigate the effects of take of the Covered Species caused by KIUC activities for up to a five-year period. The Service has determined that KIUC's Short-term Seabird HCP qualifies for an environmental assessment (EA) under the National Environmental Policy Act (NEPA), as provided by the Department of Interior Manual (516 DM2, Appendix 1 and 516 DM 6, Appendix 1). An EA has been prepared by the Service for this proposed action. The Service's analysis and findings as to whether the HCP meets the ITP issuance criteria described in section 10(a)(2)(B) of the ESA are presented below.

Under the HCP, KIUC plans to avoid and minimize the impacts of take of the Covered Species caused by its facilities and operations through the continued use of only lights that are shielded to prevent upward-directed light, reconfiguring electrical line segments that have been identified as posing a high risk for collisions by the Covered Species, and implementing operational procedures that reduce the use of lights during all operations and maintenance activities (detailed in Section 5.4 of the Short-term Seabird HCP). Under the HCP, KIUC will regularly evaluate new data from the Save Our Shearwater (SOS) Program and any anecdotal information it may receive to identify any specific individual KIUC streetlights that appear to have caused the downing of more than one seabird within one fallout season. KIUC will then evaluate the feasibility of implementing different streetlight technologies or practices at that location, and implement any such feasible technologies or practices that appear likely to reduce adverse effects on the Covered Species.

While the HCP was being reviewed for purposes of a permit decision, KIUC entered into a plea agreement with the U.S. Department of Justice (DOJ) regarding KIUC's past violations of the ESA and the Migratory Bird Treaty Act. The plea agreement included, among other terms, a commitment to implement a subset of the minimization measures included in the Short-term Seabird HCP.

Under the HCP, KIUC plans to offset the impacts of take of the Covered Species by mitigation (detailed in Section 5.6 of the Short-term Seabird HCP) and adaptive management. The mitigation program includes: (1) fully funding implementation of the

SOS Program as described in the latest Operations Manual (Appendix C of Short-term Seabird HCP); (2) funding Covered Species colony management and predator control at two seabird nesting colonies (within the Limahuli Valley and the Hono o Na Pali Natural Area Reserve) according to protocols developed by State of Hawaii seabird biologists; (3) updating estimates of at-sea Covered Species populations that have not been updated since the 1990's; (4) funding a 2-year auditory survey to locate additional Covered Species breeding colonies that could be managed as part of future mitigation activities under the HCP; (5) funding development and implementation of an underline monitoring program aimed at better understanding the amount of take of Covered Species caused by overhead utility structures; and (6) should the ITP still be in effect during the fourth and fifth years, funding Covered Species colony management and predator control in the Wainiha Valley or another similar suitable location.

As part of KIUC's plea agreement, it agreed to establish an escrow account of \$50,000 to be used for the next 18 months to mitigate for the take of any protected seabirds by KIUC's power lines or lights. For each bird that the United States believes a preponderance of evidence shows it was taken by a KIUC power line or light and not successfully rehabilitated by SOS, KIUC must transfer \$10,000 to the National Fish and Wildlife Foundation (NFWF) for use in mitigating the impacts of taking seabirds on Kauai. Under the plea agreement, KIUC has also agreed to replenish the escrow account as it is used, up to a total of \$200,000.

Conservation of the Covered Species is dependent on: (1) reducing light attraction and collision risk; (2) increasing reproductive success and reducing predation at nesting colonies; (3) increasing the quantity and quality of nesting habitat; (4) increasing the likelihood that birds processed through the SOS Program will recruit into the adult breeding population; (5) a better understanding of each species' population trend; and (6) a better understanding of the magnitude of take-related impacts caused by light attraction and collisions with power lines and other man-made structures. The minimization and mitigation program in the Short-term Seabird HCP described above addresses each of these factors for the five-year term of the proposed ITP. However, as discussed below, long-term implementation of such measures is needed to conserve these species.

In a Biological and Conference Opinion (BiOp) dated March 8, 2011 (reference #2011-F-0113), the Service analyzed the effects of issuing the ITP on the Covered Species for the 5-year permit period. The BiOp concluded that activities conducted in compliance with the Short-term Seabird HCP are not likely to jeopardize the continued existence of the Newell's shearwater, Hawaiian petrel, or the band-rumped storm-petrel. Implementation of the Short-term Seabird HCP's conservation strategy is expected to reduce adverse impacts and result in net conservation benefits for each of the Covered Species relative to baseline conditions. The incidental take authorization provided by the ITP would be effective upon issuance of the permit.

Documents relied upon in the preparation of this statement of findings and recommendations include the final KIUC Short-term Seabird HCP (Planning Solutions

Inc. et al. 2010), the associated final Environmental Assessment (Service 2011a), and the Service's Biological and Conference Opinion (Service 2011b). All of these documents are incorporated by reference as described in 40 CFR §1508.13.

II. ANALYSIS OF EFFECTS

The effects of the proposed action on the Covered Species are fully analyzed in the HCP and the Service's BiOp. A summary of the analysis is provided below.

The effects of the proposed ITP action on the Covered Species are those caused by ongoing operations and maintenance of KIUC facilities, the additional facilities and facility modifications that KIUC proposes to initiate during the term of the ITP, and the mitigation/monitoring activities included in the Short-term Seabird HCP. Cumulatively, the additional facilities are not expected to result in an increase in the amount of incidental take of the Covered Species beyond the level caused by existing facilities due to implementation of the avoidance and minimization measures set forth in the HCP. Overall, the adverse effects of KIUC's operations, maintenance and facilities on the Covered Species are expected to decrease as KIUC implements more minimization measures to reduce light attraction and collision risk. Those adverse effects will also be mitigated by the colony management measures contained in the HCP that are expected to reduce adult mortality and increase reproductive success of the Covered Species. The effects of the proposed ITP on each Covered Species is discussed below.

Newell's Shearwater

Newell's shearwater was listed as a threatened species in 1975 due to loss and degradation of available nesting habitat (40 FR 44149-44151; September 25, 1975). Newell's shearwater was once abundant on all of the main Hawaiian islands. The most recent population estimate (from 1995) is roughly 84,000 birds (Spear et al. 1995). Population modeling suggests this species is declining at a rate of 30 to 60 percent over a 10-year period (Ainley et al. 2001). Approximately 90 percent of the remaining breeding population of Newell's shearwater is located on the island of Kauai (Ainley et al. 1997b). Recent ornithological radar surveys, combined with returns of downed birds from the SOS Program, show an apparent decline in the Kauai Newell's shearwater population of 75 percent between 1993 and 2008 (Holmes pers. comm. 2010). Alaska Biological Research, Inc. (ABR) (1995) found that the leading cause of the population decline is predation by introduced mammals, but a combination of factors that include increasing urbanization and the accompanying artificial lights and power lines, and loss of suitable nesting habitat due to non-native ungulates and invasive plants also play a role. Hurricanes have caused significant changes in the vegetation of the island, and the two most recent, Iwa (1982) and Iniki (1992) had direct and indirect impacts on the three Covered Species. Hurricane Iwa likely resulted in few direct deaths because it hit the Island very late in the nesting season. Hurricane Iniki on the other hand, likely did directly kill a number of birds, since it's landfall coincided with the height of the nesting season. At one known Newell's shearwater colony, most of the native forest was

destroyed by Iniki, which allowed more aggressive alien plant species to almost completely overrun the colony site, resulting in its abandonment. Changes in the ocean could also contribute to the observed seabird population fluctuations but the nature of these oceanic changes and the way in which they actually affect the Covered Species are unknown. Ainley et al. (2001) estimated that as much as 10 percent of Newell's shearwater fledglings die as a result of light attraction and that the mortality of sub-adults and adults due to line collisions also depresses population growth.

Based on SOS Program data collected on Kauai since 1979, Newell's shearwater is the most affected of the Covered Species by the facilities and operations proposed to be covered under the ITP. The take levels of Newell's shearwater under the proposed ITP (125 mortalities and 55 non-lethal injuries in the form of harm) are based on an analysis of utility-related impacts to the Covered Species conducted in the early 1990's by ABR (1995) and Ainley et al. (1995). They modeled data collected by the SOS Program between 1980 and 1993 and field data collected in 1993 and 1994 using corrective indices to account for various perceived shortcomings in the SOS Program data. These take levels were adjusted to account for changes in utility operations and maintenance that occurred since then to estimate the anticipated take impacts due to existing KIUC operations and facilities. The Service considers these estimates of take to be as accurate as can be made at this time. They are conservative because the estimates did not account for actions KIUC implemented (i.e., shielding all existing streetlights) to reduce take of the Covered Species by reducing both light attraction and collision risk that cannot currently be measured.

The ongoing take of Covered Species caused by KIUC facilities and operations is expected to decline as KIUC implements more minimization measures under the HCP because the power line segments KIUC has committed to modify include most of those identified by Ainley et al. (1995) as having the highest collision risk. However, quantification of these decreases will require long-term monitoring before they can be quantified. Accounting for the effects of the minimization measures KIUC will implement, the small amount of take of Newell's shearwater associated with the limited number of new facilities anticipated during the term of the proposed five-year ITP is not expected to increase the total annual take of the Covered Species beyond the levels proposed under the ITP. As noted above, long-term monitoring is needed to confirm this finding.

The survival rate of Newell's shearwaters that are retrieved, evaluated, rehabilitated (when required), and released by the SOS Program cannot currently be quantified. All retrieved birds receive an initial health assessment and if they do not meet certain criteria for immediate release, they are transported to a facility where they receive an extensive physical evaluation documenting their relative health (as measured by parameters such as size, weight, level of hydration and nourishment, blood analysis, etc.) and must meet certain criteria before being released from rehabilitation. Over 90 percent of the birds retrieved through the SOS Program are released back to the wild and have at least an additional chance at survival that would not otherwise occur. The SOS Program's protocols for

effectively dealing with retrieved birds have been improved during recent years. These improvements are expected to increase the survival rates of retrieved birds because fewer birds will be released without being as healthy as possible.

The colony management proposed under the Short-term Seabird HCP will address the primary threats to the Covered Species by decreasing the number of predators in their nesting areas, and is expected to reduce predation on adults and chicks by cats and rats, and increase reproductive success. Habitat improvements, such as invasive plant species control, will increase habitat availability for future nesting opportunities. The seabirds within each of the nesting colonies receiving management under the proposed HCP will be monitored once management actions begin. However, the increases in survival rates and reproductive success that are expected due the colony management efforts will require long-term monitoring of the number of breeding adults and their nesting success before they can be quantified. The number of nesting pairs of Newell's shearwater within the colonies being managed under the Short-term Seabird HCP is unknown at this time, but the acreage of native habitat within the two areas that will receive management within the first 3 years of the ITP (approximately 2,635 acres) is estimated to be 7 percent of the intact native habitat in the northern portion of Kauai, where over 90 percent of the Newell's shearwater are believed to be breeding. The third colony site, where management actions would be implemented during the fourth and fifth years of the ITP (in addition to the two colonies that will be managed beginning in the first year), is expected to be up to 6,000 acres in size and constitute up to 15 percent of the native habitat in the northern portion of Kauai.

The absence of current population estimates of the Covered Species makes it difficult to assess the effects of KIUC facilities and operations on their populations. Among other benefits, the completion of an analysis under the HCP of the most recent National Oceanic and Atmospheric Administration (NOAA) research vessel data on Covered Species abundance at sea to update the Spear et al. (1995) population estimates for Newell's shearwater and the Hawaiian petrel for the eastern and central tropical Pacific waters of the Hawaiian Archipelago will provide managers the data to relate population densities and trends to environmental parameters. The analyses will also provide updated measures of absolute population numbers that will allow natural resource managers to better characterize large-scale avian population changes that must be understood to make rational management decisions about the Covered Species. Updated population estimates for the Covered Species are critical for confirming assumptions made about the population trends that have occurred since the population estimates conducted in 1995 (Spear et al. 1995).

Implementation of auditory surveys to detect additional nesting colonies of the Covered Species is expected to identify more opportunities where beneficial management measures can be conducted. The surveys will be conducted using protocols developed by the State of Hawaii's Kauai Endangered Species Recovery Program (KESRP) that have been effective in identifying previously unknown nesting areas. The identification of such colonies is critical to the long-term recovery of the Covered Species because the number and extent of the colonies where management can currently be implemented is limited to the colonies where actions will be implemented under KIUC's Short-term Seabird HCP and they are not

expected to be sufficient to compensate for both KIUC's impacts to the Covered Species and those from other light sources on the island that will be addressed under the island-wide seabird HCP under development.

The underline monitoring program that will be developed and implemented by the State of Hawaii using funds from KIUC during the term of the ITP will be used to develop updated estimates of the impacts due to KIUC facilities and operations. Given the financial constraints of the monitoring program, only a subset of KIUC facilities will be monitored during the term of ITP. However, the Service expects that the statistical power of different monitoring approaches (and respective costs) will be used in the development of a long-term monitoring plan for the island-wide seabird HCP or a long-term KIUC HCP. Any new lights or new connections KIUC installs within the northern, darker portion of the island (west of the intersection of Highway 56 and Kumu Road) during the term of the ITP will be included in the underline monitoring program.

Overall, implementation of the Short-term Seabird HCP is expected to decrease the amount of take of the Newell's shearwater caused by KIUC facilities and operations by reducing light attraction and collision risk, and to compensate for take impacts during the five-year term of the ITP by: increasing reproductive success and reducing predation at nesting colonies; increasing the quantity and quality of nesting habitat; and increasing the likelihood that birds processed through the SOS Program will recruit into the adult breeding population. Implementation of the HCP is also likely to facilitate a better understanding of each species' population trend, and a better understanding of the magnitude of take-related impacts caused by light attraction and collisions with powerlines and other man-made structures.

Hawaiian Petrel

The Hawaiian petrel was listed in 1967 as an endangered species (32 FR 4001; March 11, 1967). This species was once common in the main Hawaiian Islands prior to the arrival of humans, but now mostly exists in small populations, with the exception of the main breeding colony located in Haleakala National Park, East Maui. Predation by alien mammals and downing due to urban lighting are considered the primary threats to the recovery of this species (Service 1983).

Spear et al. (1995) estimated from at-sea densities that the world population of Hawaiian petrels was 19,000 with at least 5,000 pairs nesting on Kauai and 1,600 pairs nesting on Maui (Ainley et al. 1997a). On Kauai, the largest number of Hawaiian petrels was observed on the north shore (Ainley et al. 1995). ABR (1995) estimated that 1,400 to 7,000 Hawaiian petrels visited Kauai during observations recorded in 1993, and estimated a Kauai population of approximately 2,400 breeding pairs.

During the first 30 years of the SOS Program, 293 Hawaiian Petrels were retrieved, for an average of 9.8 birds a year, which is less than one percent of the number of Newell's shearwaters retrieved during the same period. KIUC estimated that take by harm of

Hawaiian petrels caused by KIUC facilities and/or operations to is no more than 10 percent of the island-wide take estimate, and requested coverage for two mortalities or injuries annually. The Service considers this estimate to be as accurate as can be made at this time, and if incorrect, it is conservative because that estimate did not consider actions KIUC has already implemented (i.e., shielding all existing streetlights) to reduce both light attraction and collision risk for the Hawaiian petrel that cannot currently be measured. The Service recognizes the uncertainty in the take estimate and only data collected through the underline monitoring program will help resolve this issue. Moreover, if the authorized take level is exceeded, that excess would be a violation of the ESA and subject to prosecution. The HCP would need to be amended in order to increase the take authorization. Implementation of the avoidance and minimization measures in the HCP (described above and detailed in Section 5.4 of the Short-term Seabird HCP) are likely to reduce the risk of Hawaiian petrel collisions with transmission lines or other manmade structures because the power line segments KIUC has committed to modify include most of those identified by Ainley et al. (1995) as having the highest collision risk. However, quantification of that reduction in risk will require long-term monitoring.

Implementation of the SOS Program and colony management actions under the HCP are likely to benefit the status of the Hawaiian petrel because any Hawaiian petrels retrieved and released via the SOS Program will be evaluated and rehabilitated as necessary, and the number of predators within their nesting areas will be reduced.

Under the HCP, the analysis of the most recent NOAA research vessel data on Covered Species to update the Spear et al. (1995) population estimates for the Hawaiian Petrel in the eastern and central tropical Pacific waters of the Hawaiian Archipelago will provide managers with data to relate population densities and trends to environmental parameters. The analyses will also provide updated estimates of Covered Species population sizes that will allow natural resource managers to better characterize large-scale avian population changes that must be understood to make rational management decisions about the species. Updated population estimates are critical for confirming assumptions made about the population trends that have occurred since the population estimates conducted in 1995 (Spear et al. 1995).

The auditory surveys for additional nesting colonies to be conducted are expected to identify more opportunities where beneficial management measures can be implemented for Hawaiian petrel as well as the other Covered Species. As discussed above, these surveys are based on reliable methods that should be able to detect additional colonies, if they exist. The identification of such colonies is critical to the long-term recovery of the Covered Species because the number and extent of the colonies where management can currently be implemented is limited and is not expected to be sufficient to compensate for both KIUC's impacts to the Covered Species and those from other light sources on the island that will be addressed under the island-wide seabird HCP under development.

The underline monitoring program that will be developed and implemented by the State of Hawaii using funds from KIUC during the term of the ITP will be used to develop updated estimates of the impacts to Covered Species caused by KIUC facilities and operations. Analytical methods will be used to assess the statistical power of different monitoring approaches (and respective costs) that will be used in the development of a long-term monitoring plan for the island-wide seabird HCP or a long-term KIUC HCP.

Band-rumped Storm-petrel

The band-rumped storm-petrel probably was common on all of the main Hawaiian Islands when aboriginal Polynesians arrived about 1,500 years ago (Berger 1972, Pyle 1984, Harrison et al. 1990). Evidence of nesting populations of the band-rumped storm-petrel in the Hawaiian Islands is based on auditory detection of adult birds during breeding season surveys and by retrieval of fledglings in the fall. Kauai likely has the largest population of the band-rumped storm-petrel in the Hawaiian Islands (Harrison et al. 1990). Wood et al. (2002) estimated there were 171 to 221 nesting pairs of the band-rumped storm-petrel on Kauai.

As with Newell's shearwater and the Hawaiian petrel, the band-rumped storm-petrel is susceptible to light attraction and collisions. A total of 24 band-rumped storm-petrels were collected during the first 30 years of the SOS Program on Kauai. The take by harm (mortality or injury) of the band-rumped storm-petrel that would be authorized under the ITP is two annually. The Service considers this estimate to be as accurate as can be made at this time, and if incorrect, it is conservative because that estimate did not consider actions KIUC has already implemented (i.e., shielding all existing streetlights) to reduce both light attraction and collision risk for the band-rumped storm-petrel that cannot currently be measured.

Implementation of the avoidance and minimization measures in the HCP (described above and detailed in Section 5.4 of the Short-term Seabird HCP) are likely to reduce the risk of the band-rumped storm-petrel collisions with transmission lines or other manmade structures because the power line segments KIUC has committed to modify include most of those identified by Ainley et al. (1995) as having the highest collision risk. However, quantification of that reduction in risk will require long-term monitoring.

Implementation of the SOS Program and colony management actions under the HCP are likely to benefit the status of the band-rumped storm-petrel because any band-rumped storm-petrels retrieved and released via the SOS Program will be evaluated and rehabilitated as necessary, and the number of predators within their nesting areas will be reduced.

The auditory surveys for additional nesting colonies to be conducted under the HCP are expected to identify more opportunities where beneficial management measures can be implemented for the band-rumped storm-petrel as well as the other Covered Species. As discussed above, these surveys are based on reliable methods that should be able to detect

additional colonies, if they exist. The identification of such colonies is critical to the long-term recovery of the Covered Species because the number and extent of the colonies where management can currently be implemented is limited and is not expected to be sufficient to compensate for both KIUC's impacts to the Covered Species and those from other light sources on the island that will be addressed under the island-wide seabird HCP under development.

The underline monitoring program that will be developed and implemented by the State of Hawaii using funds from KIUC during the term of the ITP will be used to develop updated estimates of the impacts to Covered Species caused by KIUC facilities and operations. Analytical methods will be used to assess the statistical power of different monitoring approaches (and respective costs) that will be used in the development of a long-term monitoring plan for the island-wide seabird HCP or a long-term KIUC HCP.

III. PUBLIC COMMENT

The Service has determined that the KIUC Short-term Seabird HCP qualifies for an EA under the NEPA, as provided by the Department of Interior Manual (516 DM2, Appendix 1 and 516 DM 6, Appendix 1). The draft Short-term Seabird HCP and the EA were made available for public review through publication of a Notice of Availability in the *Federal Register* on October 13, 2010 (75 FR 197). Publication of the notice initiated a 45-day comment period. The notice and supporting documents were mailed to agencies and private organizations with interest in the proposed action. The State of Hawaii conducted a public review period on an earlier draft of the HCP as part of their review process, and KIUC revised the HCP in response to the comments received prior to the Service's public review process.

The Service received six comment letters in response to the notice for the proposed action during the public comment period. An additional comment letter was received after the public review period closed but these comments were considered. Two letters were from non-profit environmental organizations, two were from seabird biologists, two were from private citizens, and one from the State Department of Health. Because some similar topics were submitted by multiple commenters, all substantive comments related to the Short-term Seabird HCP or EA have been summarized in tabular format by topic rather than by commenter:

Table 1. Service responses to public comments by topic.

| # | Comment/Topic | Submitted By* | Response |
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| General HCP Comments | | | |
| 1 | The HCP fails to minimize and mitigate the impacts of take to maximum extent practicable. | EJ, RP | All ESA section 10(a)(1)(B) permit issuance criteria, including minimizing and mitigating the impacts of take to the maximum extent practicable, were analyzed in the Service's Biological Opinion and Findings and Recommendations document, and were |

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| | | | determined to satisfy all criteria. During the period of the proposed permit, KIUC is implementing all minimization and mitigation alternatives currently possible to implement within the 5-year term. |
| HCP Biological Background Comments | | | |
| 2 | The HCP states that hurricane Iniki and pigs caused the extirpation of the seabird colony at Kaluahonu in the south portion of Kauai, but does not justify this assumption. Ainley et al. (1995) reported that colony had disappeared by 1992. | DA | KIUC's biological consultant conducted surveys of the colony in 2003 (after hurricane Iniki) and compared the vegetation there to the description provided by Telfer prior to the hurricane and concluded the vegetation changes led to the abandonment of the colony. We agree that this conclusion is not based on experimental data, and that proximity to development may have been a factor in the colony's extirpation, but this does not change our conclusion that colony management efforts should be expended at other colonies rather than Kaluahonu. Ainley et al. (1995) did not state that the Kaluahonu colony had disappeared, but rather had become "much less active" during the field work conducted in 1993, which was after Iniki had occurred (September 1992). |
| 3 | Figures in the HCP show nesting colonies and habitat, but do not provide the source for the polygons. | DA | The nesting colony and habitat polygons presented in the figures were provided by the State of Hawaii and came from State Division of Forestry and Wildlife staff (Tom Telfer) field notes collected during the 1980's. We acknowledge that changes in the distribution of colonies and habitat have changed since then, and updated maps are being developed. |
| 4 | The HCP quotes Simons (1995) as saying the Hawaiian petrel is a nocturnal feeder, but does not state what Simons based the conclusion on. | DA | Simons (1985) analyzed samples from food regurgitated from 20 adult Hawaiian petrels, finding that squid were the dominant prey item, and concluded that because Hawaiian petrels are not known to be deep divers and nightly vertical migration to the surface is characteristic of squid (and other food items found in the samples), this suggests that the birds are feeding at night. |
| 5 | The HCP states that Hawaiian petrels excavate burrows beneath dense vegetation, and that they nest in valleys, but does not provide the source for those statements. | DA | Studies of the Hawaiian petrel (e.g., Simons 1985) have found that they often nest in burrows or burrow-like structures, and that up to 95 percent of those examined showed signs of being excavated. The HCP acknowledges that nest Hawaiian petrel nest site characteristics are highly variable and on Kauai they appear to favor steep slopes covered in uluhe (<i>Dicranopteris spp.</i>) fern. |
| 6 | The HCP describes some colonies as "relictual," but does not define this term. | DA | The HCP defines relictual as those colonies that occur in a part of a species' range where the species is mostly absent. The statement |

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| | | | was used to provide context to the status of the species. |
| 7 | The HCP states that Hawaiian petrel burrows can be widely dispersed or dense, but does not describe these terms adequately. | DA | The terms “widely dispersed” and “dense” were not intended to provide a quantitative description of burrow density, but rather a qualitative statement indicating that the density of petrel burrows varies widely. |
| 8 | The HCP states that biologists conclude adult Newell’s shearwaters leave the nesting colony before or during fledging, without providing a source for that information. | DA | Comment noted. A more accurate statement would be that the chronology of Newell’s shearwater fledging behavior was unknown prior to the use of nest monitoring equipment. This statement also appears in the draft EA and will be corrected in the final EA. |
| 9 | The HCP states there is little empirical data to confirm the population size of Newell’s shearwater estimated by Ainley et al. (2001) is valid, yet does not describe data that are needed. | DA | The data cited supports the percent decline in population size described in Ainley et al. (2001), but does not provide data on the current population size. An analysis of the at-sea seabird survey data will provide such an updated estimate. |
| 10 | Spear et al. (1995) reported that the at-sea population estimate of Newell’s shearwater could have been an overestimate. If that’s the case, the apparent decline of the shearwater could be overestimated. The decline in SOS retrievals should not be attributed to the declining population alone; the effects of the significant minimization measures implemented may also be playing a role. | PSG | The evidence for the apparent decline comes from both SOS retrievals and radar passage rates from locations around the island so the decline appears to be occurring regardless of the total population size. We agree that the declining SOS retrievals may be in part due to minimization efforts. |
| 11 | The HCP describes potential non-terrestrial factors influencing Newell’s shearwater, which is mostly irrelevant and misleading since they do not come close to the severity of the effects of urbanization. | DA | Although the effects of non-terrestrial factors on Newell’s shearwater have not been studied, describing the potential effects of such factors is appropriate for a thorough description and understanding of the factors that may threaten the species. |
| 12 | The HCP described an “apparent” population decline in Newell’s shearwater despite providing sufficient evidence of a decline. | DA | The use of the word “apparent” was intended to reflect the fact that no direct measures of the current population size are available and the evidence of declines come from indirect measures such as radar survey passage rates and SOS retrievals, both of which are influenced by other factors besides population size. |
| 13 | The take estimate for Newell’s shearwater includes the loss of chicks due to the death of adults during spring and summer, yet Ainley et al. (1995) reported that all adult mortality occurred in the | DA | Because Newell’s shearwater lay eggs during the first 2 weeks of June (Ainley et al. 1997b) and adults were reported by Ainley et al. (1995) to have been found dead along roads on Kauai in June, July and August, the inclusion of indirect take of chicks due to the |

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| | spring when they would not be raising chicks. | | loss of such adults was done to address the worst case scenario where each breeding aged adult that collides with a KIUC power line did have a egg or chick in a nesting colony. Newell's shearwater chicks require parental care from both adults until very near fledging, therefore, it is expected that one chick is indirectly taken for each breeding adult killed due to power line collisions and this indirect take is included in the analysis of take anticipated and authorized under the proposed ITP. |
| 14 | The HCP cites vertical radar study results stating that the vast majority of seabirds flying to and from the ocean flew higher than the height of KIUC lines, without citing weather conditions or whether the authors contend that the pattern holds during poor weather conditions. | DA | As with all radar surveys, these surveys were conducted in clear weather and the authors did not speculate on the flight behavior of birds during poor weather. |
| 15 | The description of threats to species did not discuss the tuna industry yet it is mentioned in the 5-year Workplan. | DA | The potential impact of changes in tuna abundance and distribution was included in the non-terrestrial threats section of the Newell's shearwater species description. |
| 16 | The HCP confuses valleys with ridgelines and it is the ridgelines and not the valleys that are the prime breeding habitat. | DA | The HCP acknowledges that nest characteristics are highly variable and on Kauai they appear to favor steep slopes covered in uluhe (<i>Dicranopteris spp.</i>) fern. Auditory surveys have identified valleys where birds are heard calling, but very few ground searches have been conducted beyond the accessible ridgelines so the distribution of nests is largely unknown. |
| 17 | The HCP states that invasive plants and animals have impacted Newell's shearwater and Hawaiian petrel on Kauai, but there is no evidence that invasive plants have had an impact. | DA | Comment noted. The abandonment of the Kaluahonu colony by nesting seabirds and the vegetation shift from native to non-native may or may not be related. See our response to comment #2 above. |
| HCP Minimization Comments | | | |
| 18 | KIUC should increase emphasis on the use of tree plantings as a means of reducing light attraction, ensure vegetation persistence, and conduct field studies to establish how seabirds respond to tree barriers. | RP, EJ | KIUC has agreed to seek easements from private landowners who own trees that are shielding some power line segments near Kealia Beach in order ensure their existence (Table 5.2 of HCP). We will be providing KIUC with a list of approved tree species to plant in other areas where they may be effective in reducing light attraction. Such segments will be included as part of the underline monitoring program developed and implemented during the term of the HCP. |
| 19 | The HCP states that lines with vegetation that is within 5 feet of | DA, EJ | KIUC agrees and will only pursue the use of vegetation as a means of reducing collision |

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| | the line height will reduce collision risk by seabirds, but this has not been demonstrated and such vegetation may not result in reducing collision risk if it is above the height of the lines. Research should be conducted to assess the relationship between vegetation, lines, and flight behavior. | | risk in places where the vegetation can reach above line height. Such segments will be included as part of the underline monitoring program developed and implemented during the term of the HCP. |
| 20 | KIUC should consider using motion detectors or activity triggers to turn off streetlights and other lights when not needed (and conduct an evaluation of the use of LED lights). | RP, EJ | KIUC has agreed to conduct an analysis of the feasibility of utilizing lighting technologies that might further reduce the impacts due to their lights (Section 5.5.1 of HCP). |
| 21 | KIUC should conduct a light audit with the goal of eliminating all unnecessary lights. | RP, PSG | KIUC has agreed to regularly evaluate new SOS data, and any anecdotal information it may receive, to identify any specific individual KIUC streetlights that appear to have caused the downing of more than one seabird within one fallout season. Upon identifying any such streetlight(s), KIUC will evaluate the feasibility of implementing different streetlight technologies or practices at that location, and implement any such feasible technologies or practices that appear likely to reduce effects on the Covered Species. |
| 22 | KIUC should develop a plan to encourage KIUC customers to eliminate unnecessary lights through the use of incentives. | RP | KIUC does not have the authority to control the use of lights by its ratepayers. KIUC does conduct outreach regarding the elimination of unnecessary lights and shielding of the necessary lights to all of its ratepayers through both flyers sent along with utility bills each fall. KIUC also places articles about the issue in their bi-monthly membership magazine and makes presentations at a variety of community events and schools. Details regarding the outreach efforts KIUC conducted during 2005 through 2008 are included in Appendix E of the HCP. |
| 23 | The HCP states that KIUC's minimization efforts includes shielding lights to eliminate upward projecting lights that could disorient birds, yet shielding does not eliminate such light. | RP | Comment noted. We acknowledge that shielded lights still produce illumination visible to seabirds, but shielding is the only currently available approach to reducing upward projecting lights, yet still provide roadway lighting. The HCP acknowledges that shielding is only partially successful in reducing light attraction. |
| 24 | The HCP describes KIUC's efforts to increase the visibility of power lines through the use of marker balls which confers no demonstrable benefit, therefore, | RP | KIUC is no longer pursuing the use of marker balls, but will continue to investigate the potential for new technologies that may increase line visibility. |

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| | such efforts should be discontinued. | | |
| 25 | KIUC should prioritize minimization efforts based on risk of collisions as determined by Ainley et al. (1995) or underline monitoring. | RP | KIUC is implementing a prioritization process based on the risks of collisions reported Ainley et al. (1995) (Section 5.4.2.4 of the HCP) and future prioritization will include the results of the underline monitoring program developed and implemented during the term of the HCP. |
| 26 | KIUC provides no justification for rejecting all reconfiguration options for the Kealia Segment (D3). | EJ | KIUC has provided additional information regarding their selection of options for this segment and will be pursuing the use of vegetation to reduce risk of collisions in this segment. |
| HCP Take Estimation Comments | | | |
| 27 | The HCP states that the requested take levels are higher than the take expected to occur, but does not justify this assumption. | DA | The anticipated take levels for Newell's shearwater used for the ITP are based on Ainley et al. (1995) estimates, after being adjusted to account for the population changes that are believed to have occurred since those estimates were made. The Service considers these estimates to be as accurate as can be made at this time, and if incorrect, they are conservative because KIUC has implemented actions (i.e., shielding all existing streetlights) that were expected to reduce both light attraction and collision risk after these estimates were made. Further, KIUC will be reconfiguring and/or planting shielding vegetation at up to a third of the power line segments categorized as posing a high or very high risk for seabird collision during the term of the ITP. |
| 28 | The reasoning behind the statement in the HCP regarding Ainley et al. (1995) conclusion that birds found on the ground equate with fall-out due to attraction by lights, is not clear. Fallout also occurs in less lit areas (North Shore) because that is where the remaining Newell's shearwater are located. | DA | Comment noted. We did not rely on this assumption in our analysis. |
| 29 | The HCP states that the take estimate for Newell's shearwater is an overestimate, citing several reasons, including that not all birds found are down due to light attraction and that the majority of birds detected during vertical radar surveys flew above KIUC facilities. The take estimate should be recalculated after accounting for these errors. | DA | While these statements are within the HCP, we did not rely on them in our analysis. We understand that flight behavior observed in clear weather is not likely to be the same as in inclement weather, and that birds are known to fly lower in overcast conditions. |
| 30 | The fact that reductions in the | DA | We do acknowledge that the declines in fallout |

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| | population size of Newell's shearwater could be responsible for the reductions in fallout rather than the mitigation implemented, is not recognized, and a model should be developed to test such predictions. | | are either partially or totally a result of a declining population, but also acknowledge the possibility that the shielding of over 3,000 streetlights could also have reduced the level of light attraction the smaller population size is exposed to. A Newell's shearwater population model is being developed as part of the development of the Kauai island-wide seabird HCP being developed by the State of Hawaii and will be used to test various assumptions and predictions related to seabird management and recovery efforts. |
| 31 | The HCP fails to address telephone, cable, and other utility lines affixed to KIUC poles. | EJ | KIUC has not requested incidental take coverage for any impacts attributed to non-KIUC lines and therefore the proposed HCP does not address them. Further, KIUC cannot be compelled to request such coverage. |
| 32 | The HCP fails to assess take associated with maintenance activities and provides no way for to analyze the likely impact of such actions. | EJ | The identification of which poles, lights and/or new connections will be replaced or installed during the term of the HCP is not possible. KIUC has now included a limit on such actions in the HCP. We categorized activities as to their potential to cause take of the Covered Species in order to analyze the cumulative impacts accordingly. |
| 33 | KIUC's assumption that their lines are only responsible for 90 percent of utility line collisions and that other utility lines are responsible for the rest is arbitrary and not based on evidence. | EJ | <p>We agree that there is no evidence supporting or disproving the assumption that KIUC facilities are responsible for 90 percent of the line collisions and that lines owned by other entities are responsible for the remaining 10 percent. In the absence of such data, KIUC selected 90 percent as their best estimate and based their take request upon that estimate.</p> <p>The Service recognizes the uncertainty in the take estimates and used the most appropriate approaches to develop them. Only data collected through the underline monitoring program will help resolve this issue. The effects of all ongoing impacts were included in the Service's jeopardy analysis so it would not be affected by any inaccuracy in the 90 percent estimate. KIUC has committed to minimize the risk of take caused by their facilities and operations as much as possible within the permit term, and all actions to offset impacts available for implementation within the term of the permit will be funded by KIUC. Therefore, while any underestimation in the percentage of line collisions due to KIUC-owned lines could mean the authorized take level could be exceeded, it would not increase either the minimization or mitigation measures implemented. Moreover, if the</p> |

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| | | | authorized take level is exceeded, that excess would be a violation of the ESA and subject to prosecution. The HCP would need to be amended in order to increase the take authorization. |
| 34 | KIUC's assumption that their facilities are only responsible for 10 percent of Hawaiian petrel take occurring on Kauai is baseless. | EJ | <p>We agree that there is no evidence supporting or disproving the assumption that KIUC facilities are responsible for 10 percent of the take of Hawaiian petrel and that other entities are responsible for the remaining 90 percent. In the absence of such data, KIUC selected 10 percent as their best estimate based on the estimated take due to their remaining light attraction after shielding all of their lights, and based their take request upon that estimate.</p> <p>The Service recognized the uncertainty in the take estimates but concurred with the approaches used to develop them for the several reasons. Only data collected through the underline monitoring program will help resolve this issue. The effects of all ongoing impacts were included in the Service's jeopardy analysis so it would not be affected by any inaccuracy in the 10 percent estimate. KIUC has committed to minimize the risk of take caused by their facilities and operations as much as possible within the permit term, and all actions to offset impacts available for implementation within the term of the permit will be funded by KIUC. Therefore, while any underestimation in the percentage of the take of Hawaiian petrel due to KIUC could mean the authorized take level could be exceeded, it would not increase either the minimization or mitigation measures implemented. Moreover, if the authorized take level for Hawaiian petrel is exceeded, that excess would be a violation of the ESA and subject to prosecution. The HCP would need to be amended in order to increase the take authorization.</p> |
| HCP Mitigation Comments | | | |
| 35 | The effectiveness of the Save Our Shearwater (SOS) Program has not been demonstrated and should not be considered minimization or mitigation. | DA, EJ, RP | We believe that the SOS Program, as provided for in the updated SOS Manual, provides a substantial conservation benefit to the Covered Species. It serves to both minimize the impacts of KIUC facilities (to the extent the program retrieves and successfully releases birds downed as a result of KIUC facilities), and mitigate the unavoidable impacts of KIUC's facilities (to the extent that it retrieves and successfully releases birds downed for reasons unrelated to KIUC facilities). |

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| | | | <p>While the efficacy of the SOS Program cannot currently be documented quantitatively, it is certain that because the program has no dedicated funding from either the State or the Service, the program would only be implemented on a minimal level without KIUC's support (as it was between 1979 and 2004). Consequently, many of the seabirds belonging to the Covered Species that fallout would likely die, as these seabirds are largely unable to regain flight from flat ground regardless of their physical condition, and are thus subject to predation, dehydration, starvation, etc.</p> <p>The projects selected to be part of the HCP were based on action items identified in the draft Newell's shearwater and Hawaiian petrel 5-year Action Plan, which include maintaining and expanding the SOS Program.</p> |
| 36 | The HCP cites Ainley et al. (1995) as estimating that 86.6 percent of downed fledglings do not die, but does not discuss the assumption that those birds were saved by the SOS Program. Now that the population of Newell's shearwater has declined so dramatically, that assumption should not be used. | DA | Comment noted. We do not make any assumptions regarding the survival of SOS birds in our analyses. This estimate is only in regard to the percent of fallout birds that are released to the wild and not to the percent that survive to breeding age. |
| 37 | Lack of banded adults (as deemed from recoveries) indicates that SOS processed birds are not being saved. Program should consult with New Zealand Department of Conservation. | DA | The proportion of banded adults in the population cannot be sampled via the SOS Program due to the small number of adult recoveries. SOS Program staff are coordinating with rehabilitation experts and using the lessons learned from all available seabird rehabilitation projects, including those being conducted in New Zealand, to develop and improve their techniques each year. Sampling of the adult population, either on land or at sea, will be conducted as soon as appropriate techniques are tested and implemented. |
| 38 | KIUC should convene a group of independent seabird experts to ascertain why so few SOS birds survive to the same degree as birds that do not fallout. | RP | There is an interagency seabird working group that meets regularly to address such issues and they will continue to review and assess all opportunities to both determine the survival rates of SOS-processed birds and recommend modifications to the program that would increase the likelihood of survival. Additionally, the State's Endangered Species Recovery Committee reviews all draft HCPs and the programs contained therein. |
| 39 | The HCP should fund and be | DAU | The ongoing radar surveys conducted by the |

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| | directly involved in radar studies of the night flying birds. | | State of Hawaii are currently funded from other sources. Additional radar surveys that may be necessary as part of the underline monitoring program to be developed and implemented under the HCP (Section 5.6.6) will be funded by KIUC. |
| 40 | KIUC should utilize direct monitoring of seabird populations via both auditory and radar surveys. | RP | The State of Hawaii will continue its annual radar surveys at established survey points and KIUC will be funding the continuation of the auditory surveys initiated by the State. |
| 41 | All radar survey data collected should be made available to anyone requesting. | PSG | Requests should be submitted to the State of Hawaii. |
| 42 | KIUC should implement additional auditory surveys during all 5 years of the proposed HCP term, not just the 2 years proposed. | RP, DAU | We believe that the 2 years of additional auditory surveys will result in the identification of mitigation sites necessary. Funds can be reallocated as necessary, or additional funding will be sought from other sources if additional surveys are deemed necessary. |
| 43 | Analysis of at-sea population data and comparison to previous (Spear et al. 1995) analysis should not be included because the original study was referred to as "problematic" in the HCP. | DA, RP | <p>The seabird survey data collected from NOAA research vessels was, and continues to be, one of the best data sets available to estimate both population size and trends, and analyzing the most recent data and comparing to the 1995 analysis will provide updated estimates of the at-sea populations of Newell's shearwater and Hawaiian petrel.</p> <p>The statement regarding population estimation being problematic did not identify the Spear et al. (1995) specifically, but rather an issue with widely distributed species which only has a portion of the population visit land during part of the year.</p> <p>The projects selected to be part of the HCP were based on action items identified in the draft Newell's shearwater and Hawaiian petrel 5-year Action Plan, which include consolidating all historical and current information and developing population estimates derived from at-sea data.</p> |
| 44 | Does the NOAA at-sea seabird survey data to be analyzed and compared to the Spear et al. (1995) analysis come from the same area of ocean as surveyed by Spear et al.? | DA | The areas currently surveyed by the NOAA research vessels do overlap with the areas surveyed by Spear et al., with some variation that will be addressed in the analyses and comparisons. |
| 45 | There needs to be an independent analysis of the choice of mitigation sites and the HCP should ensure the identification of other sites. | RP | Given the limited number of known Covered Species nesting colonies and the access issues, the mitigation sites undergoing management under the HCP are the only locations on the island where actions can currently be |

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| | | | implemented. The interagency seabird working group is developing a ranking protocol for selecting subsequent mitigation sites. KIUC is implementing additional auditory surveys to locate additional potential mitigation sites. |
| 46 | Colony management should be implemented at more than three sites. | RP | The two sites where management actions will be implemented are the only two sites where management can immediately occur (see above response). The agencies and KIUC are working with landowners of additional potential sites to allow actions to be implemented as soon as possible. All alternatives will be reviewed and prioritized by the interagency seabird working group. |
| 47 | The cost estimate to conduct colony management within Wainiha Valley is too low. | EJ | Because landowner access has not been obtained for implementing the colony management, no detailed scope of work has been prepared for implementing management actions within Wainiha Valley. Therefore, the cost estimate for work there, or in another suitable location, in Years 4 and 5 was based on the cost estimates to implement colony management at the other mitigation sites rather than using preliminary cost estimates for management within Wainiha Valley. KIUC modified the HCP to reflect that funds currently allocated for radar surveys if the State's funding for them run out can be reallocated to colony management efforts if necessary. |
| 48 | Colony management efforts should only be implemented in areas where rat control is practicable. | DAU | Addressing rats on large landscape level projects (thousands of acres) is not currently feasible and localized control around active seabird nests is the only practical approach to reducing rat predation. This approach has been successful in increasing nesting success of other endangered birds in Hawaii (i.e., Oahu elepaio). We also expect that cat control efforts within seabird nesting colonies will result in increased nest success and adult survival. |
| 49 | Rat control is unlikely to be efficacious if biologists cannot employ aerial broadcasting of the most effective rodenticides. | PSG | Comment noted. We agree with the need to develop aerial broadcast of rodenticides as a tool for ecosystem conservation. The Service has had an ongoing commitment to this issue. We are working on a State-wide programmatic EIS that will assist in the implementation of a range of rodent control techniques, including aerial broadcast. It should be noted that at certain scales, current techniques, if implemented correctly, can provide benefits for avian species. |
| 50 | A cross-fostering program should | PSG | There are currently no suitable predator-free |

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| | be undertaken at suitable predator-free locations throughout Kauai. | | locations on Kauai available for such a program, but the creation of such areas as part of a cross-fostering program is included in planning efforts for the Kauai island-wide seabird HCP being developed. |
| EA Comments | | | |
| 51 | Decision to comply with National Environmental Policy Act (NEPA) compliance with an Environmental Assessment (EA) rather than an Environmental Impact Statement (EIS) is not appropriate. | EJ, JA | Based on review and evaluation of the information contained in the supporting references, we determined that the proposed alternative is not a major Federal action that would significantly affect the quality of the human environment, within the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969. Accordingly, the Service is not required to prepare an environmental impact statement for this action. |
| 52 | The No-Action Alternative selected is improperly defined and does not include legal consequences of KIUC not having a permit for ongoing take. | EJ | The legal consequences of KIUC's non-compliance have been resolved via plea agreement between KIUC and the U.S. Department of Justice, and the measures KIUC committed to implement have been added to the No Action Alternative. In addition, the No Action Alternative assumes that KIUC will continue to implement other measures it is currently implementing to minimize and mitigate impacts to covered species. |
| General Comments | | | |
| 53 | The Service is remiss in revising the Newell's shearwater and Hawaiian petrel Recovery Plan and for not uplisting Newell's shearwater to endangered. | DA | Comment noted. This is a separate issue from the issuance of a Section 10(a)(1)(B) permit for the KIUC Short-term Seabird HCP. |

* - Comment list

DA – D. Ainley

DAU – D. Au

EJ – EarthJustice

DOH – Hawaii Department of Health

RP – R. Podolsky

PSG – Pacific Seabird Group

JP – J. Public

IV. INCIDENTAL TAKE PERMIT CRITERIA – ANALYSIS AND FINDINGS

Section 10(a)(2)(A) of the ESA specifically mandates that “no permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the Permittee therefore submits to the Secretary a conservation plan that specifies—(i) the impact which will likely result from such taking; (ii) what steps the Permittee will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking the Permittee considered and the

reasons why such alternatives are not being utilized; and (iv) such other measures as the Secretary may require as being necessary or appropriate for the purposes of the plan.”

Section 10(a)(2)(B) of the Act mandates that the Secretary shall issue a permit if he finds “...after opportunity for public comment, with respect to a permit application and the related conservation plan that – (i) the taking will be incidental; (ii) the Permittee will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the Permittee will assure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of survival and recovery of species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented...”

In accordance with the above requirements, the Service makes the following findings with respect to the KIUC ITP application and Short-term Seabird HCP:

1. The taking will be incidental.

The take of Covered Species within the HCP-covered area will be incidental to the otherwise lawful ongoing operations and maintenance of KIUC facilities, the additional facilities and facility modifications that KIUC proposes to initiate during the term of the ITP, and the mitigation/monitoring efforts included in the Short-term Seabird HCP.

2. The Permittee will, to the maximum extent practicable, minimize and mitigate the impacts of taking listed species.

Conservation of the Covered Species is dependent on: (1) reducing light attraction and collision risk; (2) increasing reproductive success and reducing predation at nesting colonies; (3) increasing the quantity and quality of nesting habitat; (4) increasing the likelihood that birds processed through the SOS Program will recruit into the adult breeding population; (5) a better understanding of each species’ population trend; and (6) a better understanding of the magnitude of take-related impacts caused by light attraction and collisions with powerlines and other man-made structures. The minimization and mitigation program in the Short-term Seabird HCP described above addresses each of these factors for the five-year term of the proposed ITP. However, as discussed below, long-term implementation of such measures is needed to address the long-term impacts of take caused by KIUC operations and facilities in a manner that is compatible with conservation of the Covered Species.

Overall, as discussed above under “Analysis of Effects,” implementation of the Short-term Seabird HCP is expected to decrease the amount of take of the Covered Species caused by KIUC facilities and operations by reducing light attraction and collision risk, and to compensate for take impacts during the five-year term of the ITP by: increasing reproductive success and reducing predation at nesting colonies; increasing the quantity and quality of nesting habitat; and increasing the likelihood that birds processed through

the SOS Program will recruit into the adult breeding population. Implementation of the HCP is also likely to facilitate a better understanding of each species' population trend, and a better understanding of the magnitude of take-related impacts caused by light attraction and collisions with powerlines and other man-made structures.

Given the indefinite term of KIUC's operations and facilities, a long-term ITP and HCP are necessary to address the long-term impacts of take of the listed Covered Species caused by those operations and facilities. The purpose of the short-term ITP and HCP is to initiate efforts that will ensure KIUC's operations and facilities are in compliance with the requirements of the ESA. That context is important to consider for purposes of these findings and recommendations. Equally important context to acknowledge in this situation is the fact that it is not a practical option to avoid the impacts of take by deconstructing KIUC facilities and ceasing their operations. The distribution of electricity to Kauai residents and the infrastructure associated with that distribution are ongoing actions that, in large part, pre-date the listing of the Newell's shearwater and the Hawaiian petrel. Although these types of facilities and operations are likely to continue into the future, they can be modified to minimize adverse impacts to the Covered Species, and those impacts can be mitigated in a manner that clearly considers the conservation needs of the Covered Species.

After considering the above factors and context, the Service finds that KIUC will minimize and mitigate the impacts of take of the Covered Species to the maximum extent practicable for the following reasons.

KIUC plans to avoid and minimize the impacts of take of the Covered Species due to its facilities and operations through the continued exclusive use of lights that are shielded to prevent upward-directed light, reconfiguring electrical line segments that have been identified as posing a high risk for collisions by the Covered Species, and implementing operational procedures that reduce the use of lights during all operations and maintenance activities (detailed in Section 5.4 of the Short-term Seabird HCP). KIUC will regularly evaluate new SOS data and any anecdotal information it may receive, to identify any specific individual KIUC streetlights that appear to have caused the downing of more than one seabird within one fallout season. KIUC will evaluate the feasibility of implementing different streetlight technologies or practices at that location, and implement any such feasible technologies or practices that appear likely to reduce effects on the Covered Species.

Because lights attract the Covered Species, KIUC will only conduct work during nighttime hours in emergency situations or under limited situations when non-emergency nighttime work is required during the autumn fallout season. If system conditions require non-emergency nighttime work during the autumn fallout season (September 15 through December 15), use of lighting will be restricted to between 10:00 PM and 4:00 AM, when very few of the Covered Species are flying between the ocean and inland nesting colonies (Cooper and Day 2003). In all cases when lights are necessary, all lights will be shielded and directed downward to the maximum extent practicable. KIUC workers will

be trained how to handle any downed birds and will have appropriate equipment onsite to hold and transport any retrieved downed birds to an appropriate SOS facility.

The ITP take levels for Newell's shearwater (125 mortalities and 55 non-lethal injuries) are based on Ainley et al. (1995) estimates, after being adjusted to account for population changes thought to have occurred since those estimates were made. The Service considers this take estimate to be as accurate as can be made at this time, and if incorrect, it is conservative because that estimate did not consider actions KIUC has already implemented (i.e., shielding all existing streetlights) to reduce both light attraction and collision risk, that cannot currently be measured. The take (in the form of harm causing mortality or injury) levels for the Hawaiian petrel and the band-rumped storm-petrel that would be authorized under the ITP (two birds killed or injured of each species annually) are based on the numbers recovered through the SOS Program; the Service anticipates the impacts of take of these two species caused by KIUC facilities and operations will be lower because the power line segments KIUC has committed to modify include most of those identified by Ainley et al. (1995) as having the highest collision risk. Although not accounted for in Ainley et al. (1995), Newell's shearwater chicks require parental care from both adults until very near fledging, therefore, it is expected that one chick is indirectly taken for each breeding adult killed due to power line collisions and this indirect take is included in the analysis of take anticipated and authorized under the proposed ITP.

KIUC plans to offset the anticipated impacts to covered species by mitigation (detailed in Section 5.6 of the Short-term Seabird HCP) and adaptive management. As part of the mitigation actions to be implemented, KIUC is: (1) fully funding implementation of the SOS Program as described in the latest Operations Manual (Appendix C of the Short-term Seabird HCP); (2) funding Covered Species colony management and predator control at two seabird nesting colonies in the Limahuli Valley and Hono o Na Pali Natural Area Reserve, respectively, according to protocols developed by State of Hawaii seabird biologists; (3) updating estimates of at-sea Covered Species populations that have not been updated since the 1990's; (4) funding a 2-year auditory survey to locate additional Covered Species breeding colonies that could be managed for future mitigation; (5) funding development and implementation of an under-line monitoring program aimed at better understanding the amount of take of Covered Species caused by overhead utility structures; and (6) should the ITP still be in effect during the fourth and fifth years, funding Covered Species colony management and predator control in the Wainiha Valley or another similar suitable location.

The minimization and mitigation measures proposed under the Short-term Seabird HCP clearly consider the above conservation needs of the Covered Species.

The minimization and mitigation measures proposed by KIUC were developed based on the results of nine years of analysis and negotiation between KIUC, the Service, and the State of Hawaii Division of Forestry and Wildlife (DOFAW). From 2001 to 2010, the Service provided technical and policy assistance to KIUC and its consultants in

development of the HCP. Additional review and coordination occurred with DOFAW, as well as input through the public process. These processes allowed the Service to consider baseline environmental conditions, the types of conservation necessary to avoid and/or address impacts within the planning area, and the ability of KIUC to implement prescriptions and procedures that are practicable in the context of their electrical utility operations. The monitoring plan will monitor the effectiveness of the conservation program over the life of the permit and contains provisions to adjust management activities and conservation measures to improve the effectiveness of the conservation program under the Short-term Seabird HCP.

Taking into account the above information, the Service finds that the actions KIUC will implement under the Short-term Seabird HCP to minimize and mitigate the impacts of take of the Covered Species caused by facilities and operations are the most that can be done within the 5-year permit term based on both KIUC's financial situation where all funds come from a small rate payer base (approximately 30,000 customers) and the practical issues related to the design, planning and construction work involved with the line reconfiguration projects to reduce Covered Species collision risk. Because the mitigation proposed under the Short-term Seabird HCP implements actions that address each of the recovery actions needed for the Covered Species, except for creating new colonies, which will take longer-term planning, the Service concludes that KIUC will be implementing as much mitigation for their take impacts as possible within the term of the ITP.

Cumulatively, the impacts of take caused by the additional KIUC facilities covered under the ITP and HCP are not expected to result in an increase in incidental take of the Covered Species beyond the level anticipated due to existing facilities after the avoidance and minimization measures in the HCP are implemented by KIUC. Overall, the adverse effects of KIUC's operations, maintenance and facilities on the Covered Species are expected to decrease during the term of the ITP because the minimization measures are likely to reduce light attraction and collision risk, and the colony management mitigation measures are likely to reduce adult mortality and increase reproductive success.

3. The Permittee will ensure adequate funding for the HCP and procedures to deal with unforeseen circumstances will be provided.

As described in the Short-term Seabird HCP, KIUC has already implemented many minimization and conservation measures and paid for these out of the Cooperative's funds. The total estimated annual cost of implementing the Short-term Seabird HCP for the 5-year term of the ITP is estimated at \$11.3 million (this also includes the costs for projects that KIUC committed to implement under its plea agreement with DOJ discussed above).

As the public utility that provides the sole electrical service on the island, KIUC receives a continual and reliable stream of income from its residential, commercial and government entity customers. As required by the Public Utilities Commission, its rates for electrical service provide sufficient revenue to cover the cost of its operations.

KIUC's Board of Directors has determined that its revenue stream is sufficient to cover the cost of implementing the Short-term Seabird HCP.

By resolution, the KIUC Board of Directors will approve the Short-term Seabird HCP and Implementing Agreement, which will bind KIUC to carrying out the terms and conditions and funding obligations of the HCP. As part of these obligations, for the duration of the HCP, KIUC will include a budget line item in its annual budget process that is sufficient to cover all Short-term Seabird HCP obligations. KIUC will document the approval of this budget line item each year in the annual report it will file. In addition, KIUC will post a bond or provide an irrevocable letter of credit in the amount of \$250,000 to further guarantee funding will be available to implement its obligations under the Short-term Seabird HCP.

Pursuant to the Service's "No Surprises" regulations [50 CFR 17.22(b)(5) and 17.32(b)(5)], the Short-term Seabird HCP includes procedures to deal with unforeseen circumstances. In the event of unforeseen circumstances affecting the Covered Species, KIUC would not be required to provide additional mitigation beyond that included in the Short-term Seabird HCP without their consent; provided that proper implementation of this HCP has occurred.

4. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The ESA's legislative history established the intent of Congress that this issuance criterion is identical to a finding of "not likely to jeopardize under section 7(a)(2) (see 50 CFR 402.02). As a result, the Service's proposed issuance of an ITP to KIUC has been the subject of a formal consultation under section 7 of the ESA. The Service's biological and conference opinions (Ref. #2011-F-0113) on this action are hereby incorporated by reference. These opinions concluded that issuance of the proposed ITP to KIUC is not likely to jeopardize the continued existence of the endangered Hawaiian petrel, the threatened Newell's shearwater, or the band-rumped storm-petrel, a candidate for listing under the ESA. This conclusion is based on the following rationale:

Survival and recovery of the Covered Species is dependent on: (1) reducing light attraction and collision risk; (2) increasing reproductive success and reducing predation at nesting colonies; (3) increasing the quantity and quality of nesting habitat; (4) increasing the likelihood that birds processed through the SOS Program will recruit into the adult breeding population; (5) a better understanding of each species' population trend; and (6) a better understanding of the magnitude of take-related impacts caused by light attraction and collisions with powerlines and other man-made structures. The minimization and mitigation program in the Short-term Seabird HCP addresses each of these factors for the five-year term of the proposed ITP.

Overall, implementation of the Short-term Seabird HCP is expected to decrease the amount of take of the Covered Species caused by KIUC facilities and operations by

reducing light attraction and collision risk, and to compensate for take impacts during the five-year term of the ITP by: increasing reproductive success and reducing predation at nesting colonies; increasing the quantity and quality of nesting habitat; and increasing the likelihood that birds processed through the SOS Program will recruit into the adult breeding population. Implementation of the HCP is also likely to facilitate a better understanding of each species' population trend, and a better understanding of the magnitude of take-related impacts caused by light attraction and collisions with powerlines and other man-made structures. For those reasons, implementation of the Short-term Seabird HCP's conservation strategy is expected to reduce adverse impacts and result in a net conservation benefit for each of the Covered Species relative to baseline conditions in a manner that clearly considers their conservation needs. The anticipated impacts to the Covered Species caused by the new facilities authorized under the ITP are expected to be less than the reduction in impacts resulting from the reconfiguration of existing power lines. No critical habitat has been designated for either the Hawaiian petrel or the Newell's shearwater, therefore, none will be affected.

5. Other measures, required by the Director of the Service as necessary or appropriate for purposes of the HCP, will be met.

The KIUC Short-term Seabird HCP incorporates all other elements determined by the Service to be necessary for approval of the HCP and issuance of the ITP.

6. The Service has received the necessary assurances that the HCP will be implemented.

By resolution, the KIUC Board of Directors will approve the Short-term Seabird HCP and Implementing Agreement, which will bind KIUC to carrying out the terms and conditions and funding obligations of the HCP. As part of these obligations, for the duration of the HCP, KIUC will include a budget line item in its annual budget process that is sufficient to cover all Short-term Seabird HCP obligations. KIUC will document the approval of this budget line item each year in the annual report it will file. In addition, KIUC will post a bond or provide an irrevocable letter of credit in the amount of \$250,000 to further guarantee funding will be available to implement its obligations under the Short-term Seabird HCP.

V. GENERAL CRITERIA AND DISQUALIFYING FACTORS

Service regulations provide that a permit shall be issued if it meets all applicable requirements unless, among other things, "the applicant has been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed, if such assessment or conviction evidences a lack of responsibility." 50 C.F.R. § 13.21(b)(1).

On December 2, 2010, the United States and KIUC filed a plea agreement with the United States District Court for the District of Hawaii. The court entered the plea

agreement on January 31, 2011. Per this agreement, KIUC entered a voluntary plea of guilty to one misdemeanor count of violating the ESA, 16 U.S.C. §§ 1538, 1540, and one misdemeanor count of violating the Migratory Bird Treaty Act, 16 U.S.C. §§ 703, 704. These counts relate to KIUC's operation of lights and power lines, the same activities for which the HCP application has been filed.

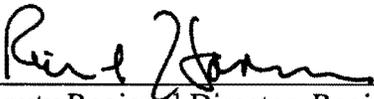
KIUC purchased the utility in 2002. Most of the lights and power lines causing incidental take were already erected prior to KIUC's acquisition. To mitigate impacts to seabirds, KIUC began voluntarily funding and otherwise supporting the island-wide SOS Program in 2003, including an annual comprehensive public awareness campaign on Kauai to increase the effectiveness of the SOS Program. KIUC also took action to shield the majority of the streetlights it operates to minimize light attraction of Covered Species.

KIUC submitted an application for a long-term ITP in 2007, but DOFAW and the Service recommended that additional information was needed before they could determine the effect of a long-term incidental take authorization on the Covered Species, and recommended that KIUC develop a short-term HCP instead. This short-term HCP has been in development since that time. In addition, the terms of the plea agreement demonstrate KIUC's willingness to try to address the problems caused by its operations, including the commitment to donate \$225,000 to the National Fish and Wildlife Foundation to benefit and increase the population of the Newell's shearwater on Kauai over and above the requirements of the HCP. For these reasons, we conclude that the plea agreement does not evidence a lack of responsibility on the part of KIUC.

VI. RECOMMENDATION ON PERMIT ISSUANCE

Based on the foregoing findings with respect to the proposed action, I recommend approval of the issuance of permit number TE234201-0 to KIUC for the incidental taking of the Covered Species in accordance with the Short-term Seabird HCP for the existence, operation and maintenance of all existing KIUC facilities, and the installation, operation and maintenance of certain limited future KIUC facilities to the extent that their take will be a violation of the ESA.

5/13/11
Date


Deputy Regional Director, Region 1
U.S. Fish and Wildlife Service

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