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LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

DEPT. COMM. NO. 30

October 25, 2017

The Honorable Ronald D. Kouchi,
President
and Members of the Senate
Twenty-Ninth State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki, Speaker
and Members of the House of
Representatives
Twenty-Ninth State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Status Of The Issuance Of Incidental Take Licenses For Endangered, Threatened, Proposed, And Candidate Species And The Condition Of The Endangered Species Trust Fund For The Period July 1, 2016 – June 30, 2017 report, as required by Section 195D-26, Hawaii Revised Statutes (HRS). In accordance with Section 93-16, HRS, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at http://dlnr.hawaii.gov/reports/.

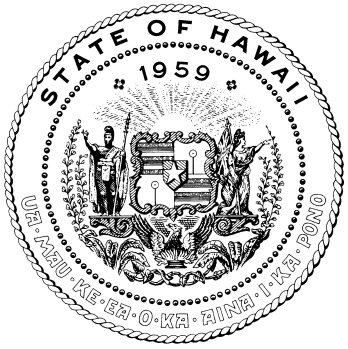
Sincerely,

SUZANNE D. CASE
Chairperson

Enclosure

**REPORT TO THE TWENTY-NINTH LEGISLATURE**
**STATE OF HAWAII**
**2018 REGULAR SESSION**

# STATUS OF THE ISSUANCE OF INCIDENTAL TAKE LICENSES FOR ENDANGERED, THREATENED, PROPOSED, AND CANDIDATE SPECIES AND THE CONDITION OF THE ENDANGERED SPECIES TRUST FUND FOR THE PERIOD JULY 1, 2016 – JUNE 30, 2017




Prepared by

THE STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE

In response to Section 195D-26, Hawaii Revised Statutes

Honolulu, Hawaii
October 2017

# STATUS OF THE ISSUANCE OF INCIDENTAL TAKE LICENSES FOR ENDANGERED, THREATENED, PROPOSED, AND CANDIDATE SPECIES AND THE CONDITION OF THE ENDANGERED SPECIES TRUST FUND FOR THE PERIOD JULY 1, 2016 – JUNE 30, 2017

## PURPOSE

Act 380, Session Laws of Hawai‘i (SLH) 1997, amended the State Endangered Species Law, Chapter 195D, Hawai‘i Revised Statutes (HRS), to provide for the preparation and implementation of habitat conservation plans (HCPs) and safe harbor agreements (SHAs) and to provide additional incentives for private landowners to recover and protect threatened and endangered species on their lands. Specifically, Section 195D-26, HRS, requires that an annual report be prepared by the Department of Land and Natural Resources (DLNR) on:

- The effectiveness of HCPs and SHAs issued under Chapter 195D, HRS, and the status of all species for which incidental take licenses have been issued;
- Description of the condition of the Endangered Species Trust Fund (ESTF) established under Section 195D-31, HRS; and
- Recommendations to further the purposes of Chapter 195D, HRS.

Incidental Take Licenses (ITLs) are issued in conjunction with an approved HCP or SHA for the legal take[1] of threatened or endangered species, if such take is incidental to an otherwise lawful activity. Habitat Conservation Plans and SHAs are important management tools in the State of Hawai‘i by accomplishing the following:

- Resolves conflicts between endangered species protection and legitimate use of natural resources;
- Contributes to endangered species recovery efforts through partnerships and proactive planning; and
- Provides essential ecological information for Hawai‘i’s resource managers by requiring a strong monitoring component in all HCPs.

This annual report is submitted to fulfill the reporting requirement for Fiscal Year (FY) 2017 and provides detailed information for 10 HCPs and five SHAs approved under the ITL program. The report is organized by HCP project type, provides an overview of SHAs, describes the condition of the ESTF, and concludes with recommendations to further the purposes of Chapter195D, HRS.

[1] “Take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect endangered or threatened species of aquatic life or wildlife, or to cut, collect, uproot, destroy, injure, or possess endangered or threatened species of aquatic life or land plants, or to attempt to engage in any such conduct (§195D-2, HRS).

Contents

**SUMMARY OF INCIDENTAL TAKE STATUS FOR ENDANGERED WILDLIFE SPECIES COVERED BY HABITAT CONSERVATION PLANS**

General locations for the HCPs are shown in Figure 1.

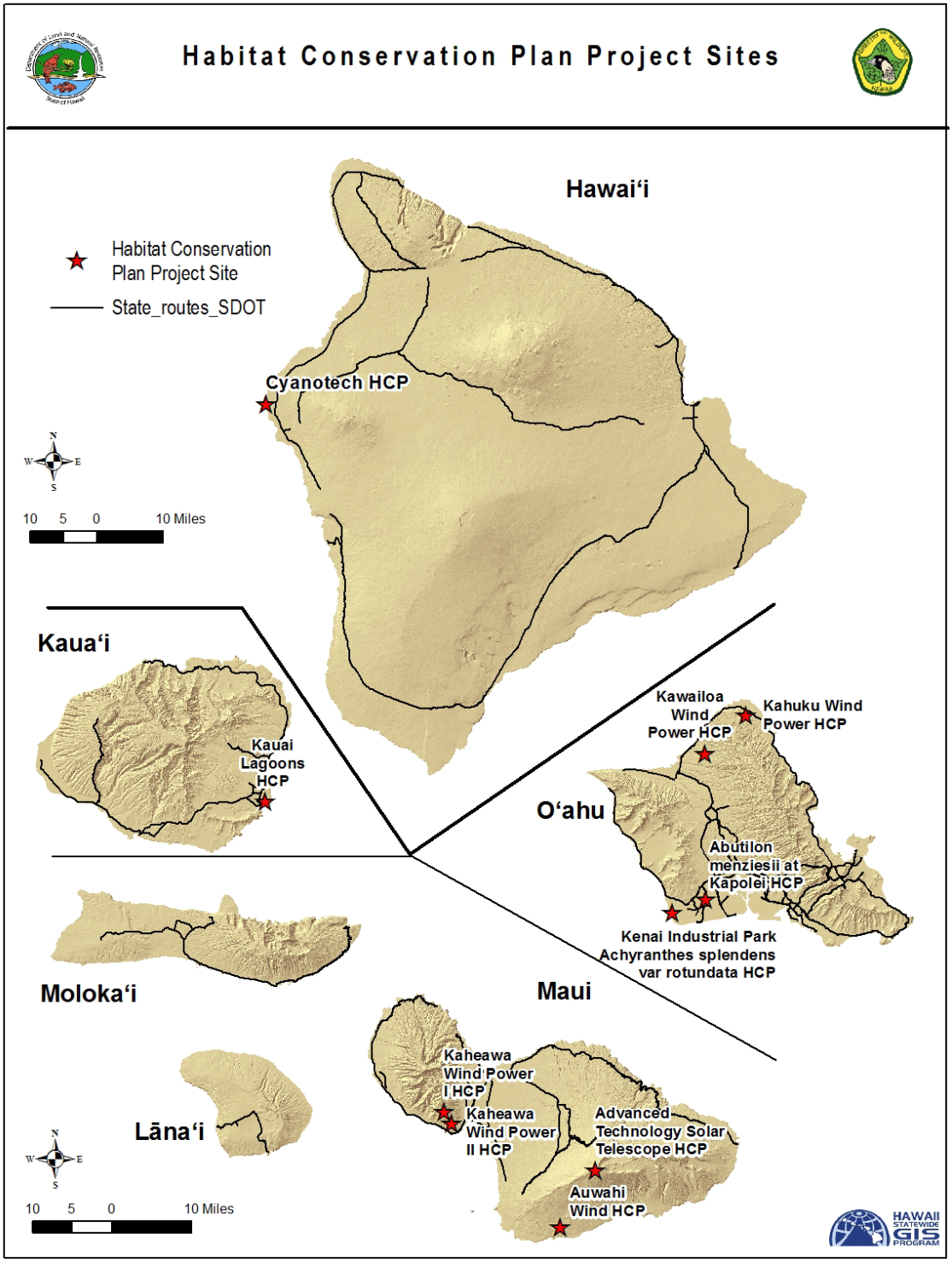



Figure 1. Habitat Conservation Plan Locations

In FY 2017 there were a total of 19 documented fatalities (takes) of covered species permitted under the 10 Habitat Conservation Plans (HCPs) with associated Incidental Take Licenses (ITLs) issued. Of the 19 fatalities, there were 10 Hawaiian hoary bats, three Hawaiian ducks, two Nēnē, two Hawaiian moorhens, one Hawaiian coot, and one Newell's Shearwater. Mitigation for all take of covered species is ongoing and involves projects throughout Hawai'i.

A summary of permit status combining take of all Covered Species of wildlife since ITLs were issued is depicted in Figure 2. This summary shows that for all HCPs combined the total estimated take of Hawaiian hoary bats using an 80% upper confidence is nearing and in some individual cases exceeding the permitted take level. Estimated take of each of the other species is well below the permitted take level.

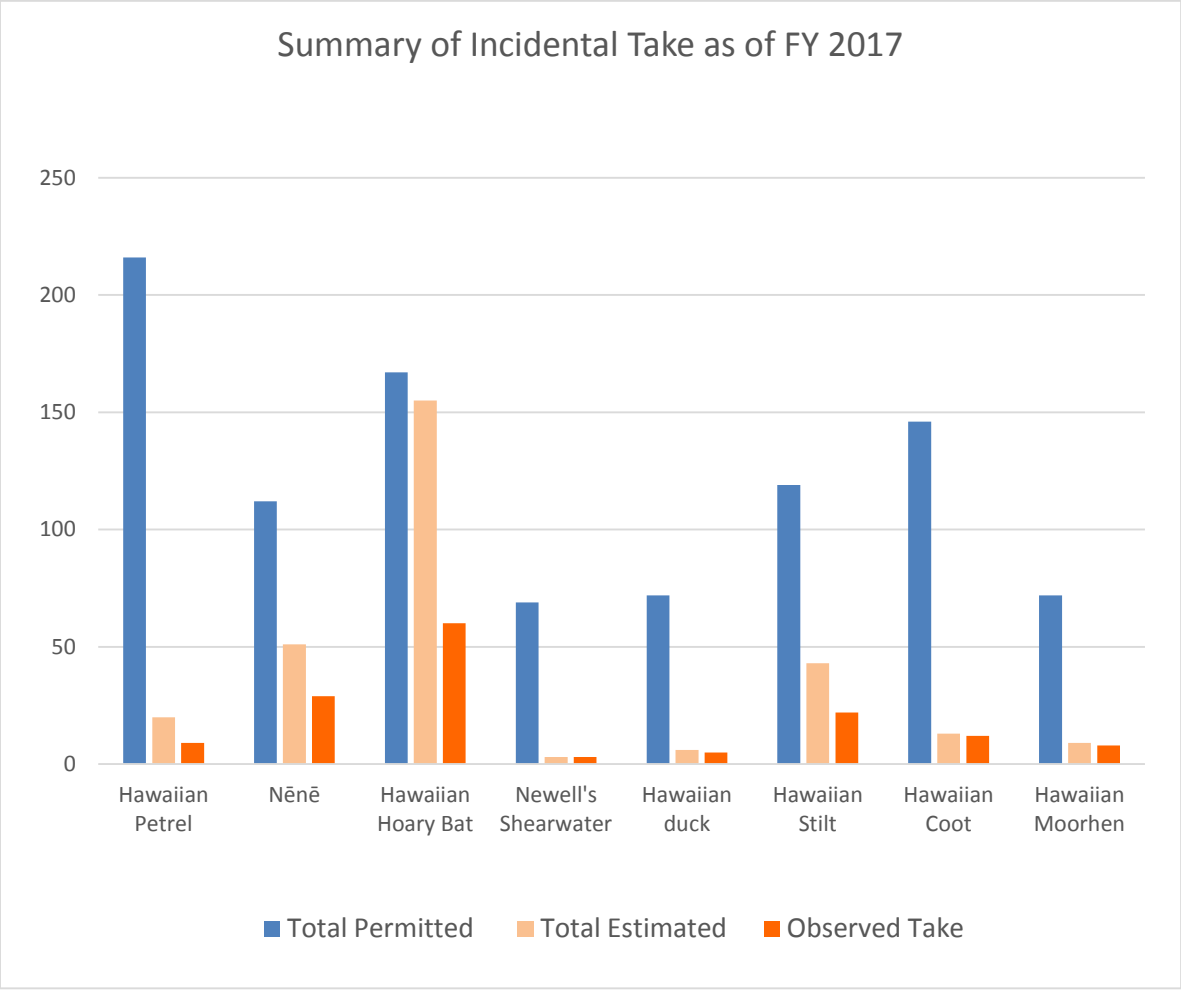



Figure 2. Total permitted take, observed take, and estimated take (includes indirect take and, where applicable, modeled unobserved take at the 80% upper confidence level) of HCP-covered wildlife species for all approved HCPs as of June 30, 2017.

## SUMMARY OF HABITAT CONSERVATION PLANS AND ASSOCIATED INCIDENTAL TAKE LICENSES BY PROJECT TYPE

### *Wind Energy Facilities and Structures*

### Kaheawa Pastures Wind Energy Generation Facility (KWP I) Habitat Conservation Plan, Maui, Hawai'i. Approved 2006.

*Kaheawa Wind Power project in West Maui above Ma'alaea.*

ITL Licensee: Kaheawa Wind Power, LLC
(Note that Terraform Power now owns KWP, LLC. Terraform Power is a Yieldco subsidiary of SunEdison, Inc.)

Project: Twenty wind turbine generators (WTGs) with a total 30-megawatt (MW) energy generating capacity.

ITL Duration: January 30, 2006 – January 30, 2026

Take Authorization Over 20-year Term:

Table 1. Take Authorization for KWP I.

| Common Name | Scientific Name | Baseline Limit (Tier 1)[1] | Higher Limit (Tier 2)[1] |
|---|---|---|---|
| 'Ua'u or Hawaiian Petrel | *Pterodroma sandwichensis* | 25 | 38 |
| 'A'o or Newell's Shearwater | *Puffinus auricularis newelli* | 4 | 8 |
| Nēnē or Hawaiian Goose | *Branta sandvicensis* | 60 | n/a |
| 'Ōpe'ape'a or Hawaiian Hoary Bat | *Lasiurus cinereus semotus* | 20 | 50[a] |

[1]Take authorization is delineated by Baseline and Higher Limits (Tiers). Upon reaching Higher Limits additional mitigation measures or funding are triggered to ensure that mitigation keeps pace with take.
[a]This higher limit for the Hawaiian Hoary Bat was approved by minor amendment in 2016.

Status of ITL: Table 2 provides a listing of the HCP covered species fatalities during the reporting period.

Table 2. Documented fatalities of HCP covered species and species of concern at KWP I during the reporting period.

| Common Name | Total Take |
|---|---|
| Nēnē | 2 |
| Hawaiian hoary bat | 2 |
| Pueo | 3 |

Beginning in April 2015 the downed wildlife search area was reduced relative to the previous ten years and now consists of graded roads and WTG pads found within a 70-meter radius circle centered on each turbine. Beginning in October 2015 canine-assisted searching was implemented, with visual searching as a secondary method.

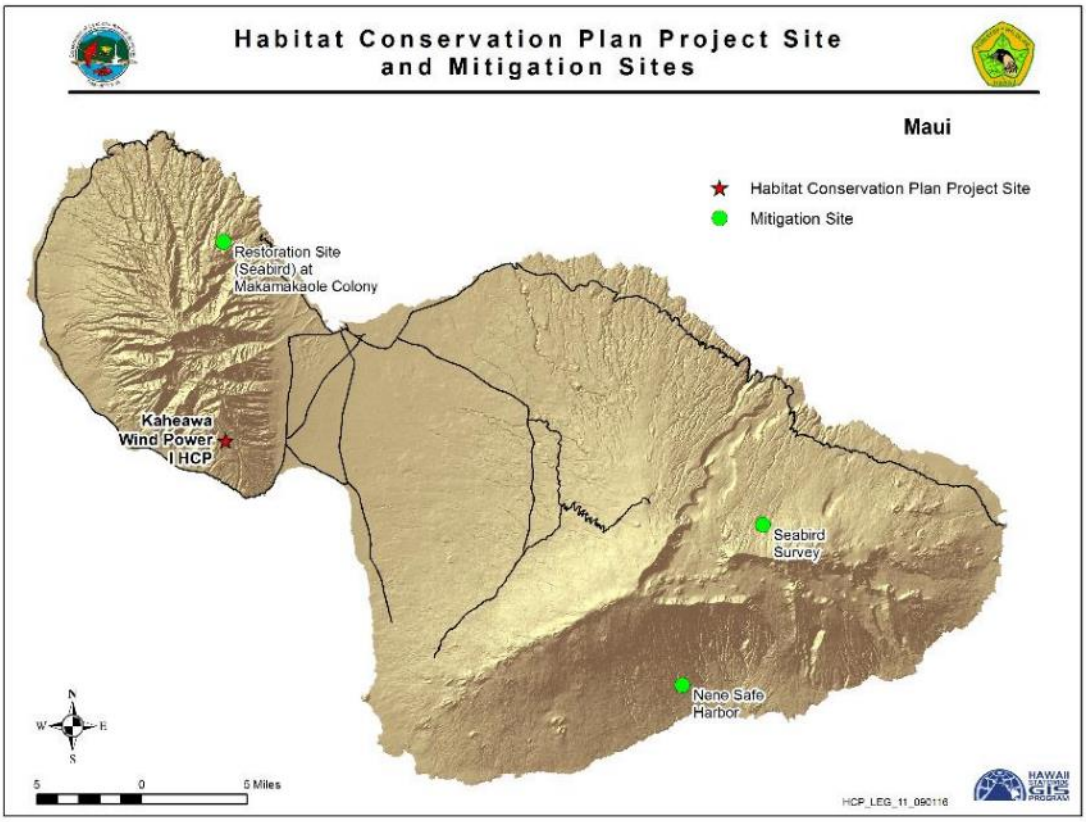



Figure 3. Location of Kaheawa Wind Power I HCP

Table 3 provides an estimate of the overall total adjusted take that has occurred since KWP I ITL issuance. In addition to the total estimated take, accrued lost productivity from mortality of individuals due to the lag in mitigation are also evaluated and mitigated for, but are not counted against permitted take levels. Accrued lost productivity for Hawaiian Petrel (HAPE) and Nēnē are 0 and 8.8 individuals, respectively. Three fatalities of Hawaiian short-eared owls (Pueo) were documented at KWP I, although it is not listed as endangered there.

Table 3. Total observed fatalities and estimated total take since ITL issuance under the KWP I ITL as of June 30, 2017.

| Common Name | Total Observed Take | Estimated Unobserved Take[1] | Indirect Take using HCP multipliers | Total Estimated Take |
|---|---|---|---|---|
| Hawaiian Petrel | 7 | 6 | 3 | 16 |
| Nēnē | 23 | 12 | 2 | 37 |
| Hawaiian Hoary Bat | 9 | 17 | 5 | 31 |

[1] Based on the 80% credible maximum using the following model: Dalthorp, D., M. M. P. Huso, and D. Dail. 2017. Evidence of absence (v 2.0) software user guide: U.S. Geological Survey Data Series 1055.

Mitigation Status:

The minor modification to authorize bat take to the 'Higher' level of take as described in the HCP and the associated mitigation proposal was approved October 19, 2015 and January 20, 2016 by the United States Fish and Wildlife Service (USFWS) and the Division of Forestry and Wildlife (DOFAW), respectively. Nēnē baseline mitigation continued in FY 2017 at the Haleakala Ranch pen. Hawaiian Hoary Bat baseline mitigation is complete and Tier 2 mitigation began in May 2017.

*Hawaiian Petrel & Newell's Shearwater.*
Mitigation for the two seabird species (Hawaiian Petrel and Newell's Shearwater) is being implemented in conjunction with Kaheawa Wind Power II. The primary mitigation entails management of two constructed (approximately four acres) predator-free fenced enclosures (one for each species), provisioned with artificial burrows and social attraction, at the Makamaka'ole site in West Maui.

Seabird baseline mitigation for KWPI continues at the Makamaka'ole Seabird Enclosures and currently focuses on trapping and monitoring for potential predators, maintenance of enclosure fences, erosion control and monitoring seabird activity within the Makamaka'ole Stream drainage area and near artificial burrows within the enclosures. Sound files for the acoustic attraction system were updated in July, 2016 with a mixture of both Hawaiian petrels and Newell's shearwater. Bird activity in FY 2017 was recorded beginning May 11, 2017 with a Newell's Shearwater entering burrow A43 in enclosure A. There are now two burrows inside of enclosure A. On May 21, 2017 game cameras captured a Bulwer's petrel entering burrow 22B in enclosure B. On June 25, 2017, two Newell's Shearwaters were captured by game cameras together in burrow 22B.

Barn owl control contracted to DOFAW began at night in March 2017. As of FY 2017 no owls have been removed. Out-planting of native plans within the mitigation area included 110 'Uki, 140 'ōhi'a, 40 naupaka, and 100 manono plants.

Alternative seabird mitigation site surveys began in East Maui in FY 2015 and were completed in FY 2016. Additional HAPE mitigation intended to reduce the loss of productivity accruing from HAPE take not yet mitigated for has been arranged with the USFWS and Pulama Lanai and funds provided to a dedicated account with the National Fish and Wildlife Foundation (NFWF).

*Nene*. Nēnē baseline mitigation continued in FY 2017 at the Haleakala Ranch pen. Nēnē fledgling production in 2017 has not yet been determined.

*Hawaiian Hoary Bat.* The minor modification to authorize additional bat take and the associated mitigation proposal was approved October 19, 2015 and January 20, 2016 by the USFWS and DOFAW, respectively. LACI baseline mitigation is complete and Tier 2 mitigation that will account for take of 15 of the higher take amount of 30 bats began May 2017 and is comprised of LACI ecological research to better inform future bat habitat restoration and conservation. Mitigation for the remaining 12.4 bats still needs to be planned and funded.

## Kaheawa Wind Power II Wind Energy Generation Facility (KWP II) Habitat Conservation Plan, Maui, Hawai'i. Approved 2012.

ITL Licensee: Kaheawa Wind Power, LLC
(Note that Terraform Power now owns KWP II, LLC. Terraform Power is a yieldco subsidiary of SunEdison, Inc.)

Project: Fourteen WTGs with a total 21 MW energy generating capacity. Project is adjacent and downslope of KWP I.

ITL Duration: January 5, 2012 – January 30, 2032


*Kaheawa Wind Power II project in West Maui above Ma'alaea.*

Take Authorization Over 20-year Term:

Table 5. Take Authorization for KWP II.

| Common Name | Scientific Name | Level of Take[1] | 5-year Limit | 20-year Limit |
|---|---|---|---|---|
| 'Ua'u or Hawaiian Petrel | *Pterodroma sandwichensis* | Tier 1 | 8 adults/ juveniles & 4 chicks/eggs | 19 adults/ juveniles & 9 chicks/eggs |
| | | Tier 2 | 16 adults/ juveniles & 8 chicks/eggs | 29 adults/ juveniles & 14 chicks/eggs |
| 'A'o or Newell's Shearwater | *Puffinus auricularis newelli* | Tier 1 | 2 adults/ juveniles & 2 chicks/eggs | 2 adults/ juveniles & 2 chicks/eggs |
| | | Tier 2 | 5 adults/ juveniles & 3 chicks/eggs | 5 adults/ juveniles & 3 chicks/eggs |
| Nēnē or Hawaiian Goose | *Branta sandvicensis* | Tier 1 | 8 adults/ juveniles & 1 fledgling | 18 adults/ juveniles & 3 fledglings |
| | | Tier 2 | 12 adults/ juveniles & 3 fledgling | 27 adults/ juveniles & 3 fledgling |
| 'Ōpe'ape'a or Hawaiian Hoary Bat[2] | *Lasiurus cinereus semotus* | Tier 1 | 7 individuals | 7 individuals |
| | | Tier 2 | 11 individuals | 11 individuals |

[1] Take authorization is delineated by Tiers. Upon reaching higher Tiers additional mitigation measures or funding are triggered to ensure that mitigation keeps pace with take.
[2] Minor amendment to clarify permitted bat take processed on November 26, 2014.

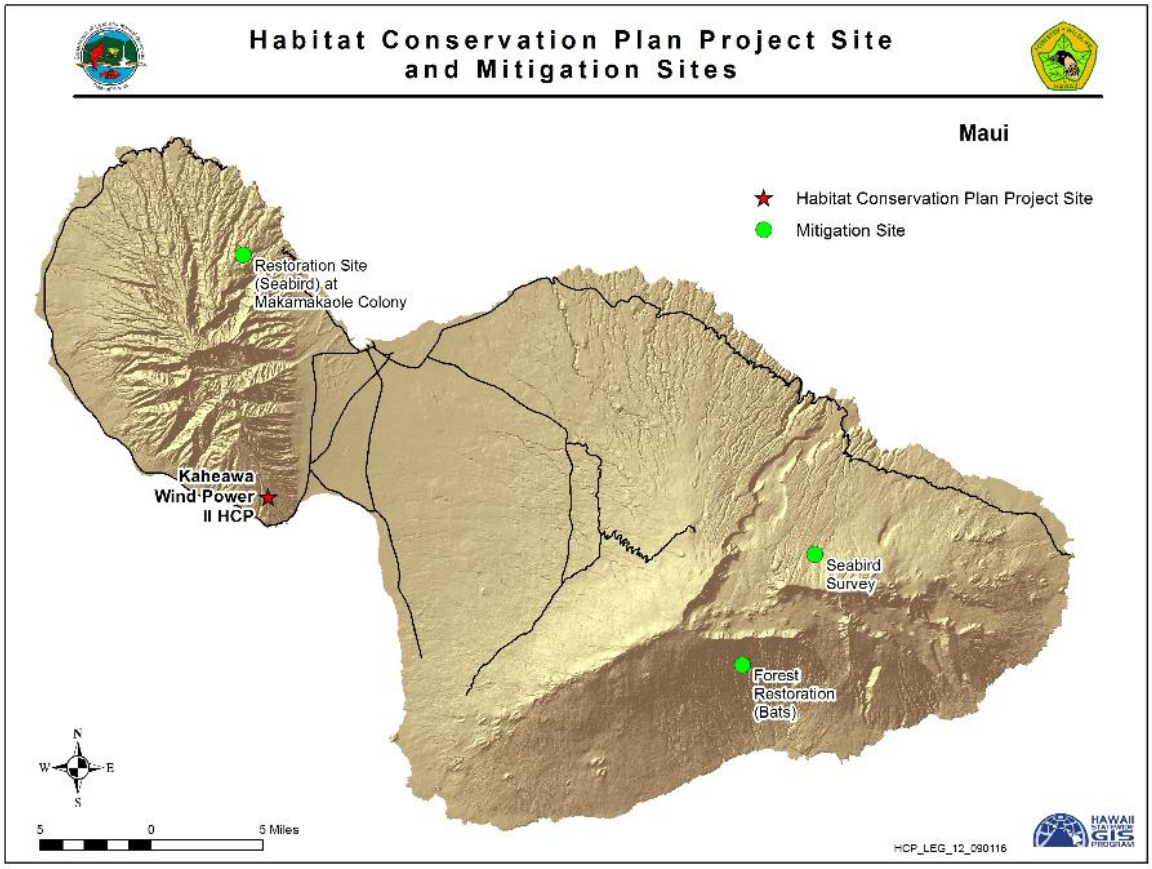



Figure 4. Location of Kaheawa Wind Power II HCP

Status of ITL: There were no fatalities of an HCP covered species at Kaheawa Wind Power II during FY 2017. There were no documented fatalities of species listed as threatened or endangered in Hawaii at the Kaheawa Wind Power II facility during the FY 2017 reporting period.

The incidental take authorized includes both observed and unobserved take, including indirect take that occurs when an adult individual is taken during its respective breeding season. Table 7 provides an estimate of the overall total adjusted take that has occurred since KWP II ITL issuance. In addition to the total estimated take, accrued lost productivity from mortality of individuals due to the lag in mitigation are also evaluated and mitigated for, but are not counted against permitted take levels. Accrued lost productivity for Nēnē is 2.3 individuals.

Beginning in July 2015 the search plot areas were reduced in size relative to the size of plots searched prior to July 2015. The reduced search area includes only roads and graded WTG pads found within a circle of radius 70m radius centered on each WTG. Canine-assisted searching in FY 2017 was the primary search method accounting for 625, or 86.9% of the downed wildlife monitoring searches.

Table 6. Total observed fatalities and estimated total take since ITL issuance covered under the KWP II ITL as of June 30, 2017.

| Common Name | Total Observed Take | Estimated Unobserved Take[1] | Indirect Take using HCP multipliers | Total Estimated Take |
|---|---|---|---|---|
| Nēnē | 4 | 6 | 1 | 11 |
| Hawaiian Hoary Bat | 3 | 9 | 1 | 13 |

[1] Based on the 80% credible maximum using the following model: Dalthorp, D., M. M. P. Huso, and D. Dail. 2017. Evidence of absence (v 2.0) software user guide: U.S. Geological Survey Data Series 1055

The total estimated take of 14 bats (with 80% statistical certainty) exceeds both the Tier 1 and Tier 2 permitted take levels for bats. KWP II is currently in discussions with DOFAW and USFWS, and has submitted an application and amended HCP to the agencies for review and approval. The amendment went before the Endangered Species Recovery Committee (ESRC) in September 2015 for initial review and input, and will be released for public comment in FY 2018.

Mitigation Status:

*Hawaiian Petrel and Newell's Shearwater.* Mitigation for the two seabird species (Hawaiian Petrel and Newell's Shearwater) is being implemented in conjunction with Kaheawa Wind Power I. The primary mitigation entails management of two constructed (approximately four acres) predator-free fenced enclosures (one for each species), provisioned with artificial burrows and social attraction, at the Makamaka'ole site in West Maui.

*Enclosures A & B at the Makamaka´ole seabird mitigation site, West Maui.*

Seabird baseline mitigation for KWPII continues at the Makamaka'ole Seabird Enclosures and currently focuses on trapping and monitoring for potential predators, maintenance of enclosure fences, erosion control and monitoring seabird activity within the Makamaka'ole Stream drainage area and near artificial burrows within the enclosures. Sound files for the acoustic attraction system were updated in July, 2016 with a mixture of both Hawaiian petrels and Newell's shearwater. Bird activity in FY 2017 was recorded beginning May 11, 2017 with a Newell's Shearwater entering burrow A43 in enclosure A. There are now two burrows inside of enclosure A. On May 21, 2017 game cameras captured a Bulwer's petrel entering burrow 22B in enclosure B. On June 25, 2017, two Newell's Shearwaters were captured by game cameras together in burrow 22B.

Alternative seabird mitigation site surveys began in East Maui adjacent to Haleakalā National Park in FY 2015 and were completed in FY 2016. These studies deployed Wildlife Acoustics SM2BAT+ ™ acoustic detectors at 60 locations in approximately 8,000 hectares between 3,000-8,000 foot altitudes.

*Nēnē.* Nēnē mitigation contracted to DOFAW for Tier 1 estimated take has been funded for two years and began March 2017 as nesting area predator control on Maui.

In accordance with the KWP II HCP, systematic visual observations of Nēnē were made at KWP II during FY 2017. Data collection of Nēnē activity at KWP II will continue for the life of the project through the Wildlife Education Observation Program (WEOP). In FY 2017, WEOP trainings were given to 17 individuals who were on-site regularly for two days or more. A total of 207 Nēnē observations were reported.

*Hawaiian Hoary Bat*. In accordance with the KWP II HCP, baseline mitigation for the Hawaiian Hoary Bat was to consist of implementation of bat habitat improvement measures on at least 338 acres. With funding provided by the ITL holder, DOFAW developed a mitigation plan for a 340 acre project area in the Kahikinui Forest Reserve (FR). Approximately 2.8 miles of fence apron was installed in July 2014 by DOFAW as part of an ungulate-proof fence to protect the Nakula Natural Area Reserve (NAR) and the Kahikinui FR from ungulates. Inspection and maintenance of this fence is ongoing.

Mitigation for Tier 1 and Tier 2 estimated bat take has been completely funded and is ongoing habitat management at Kahikinui State Forest Reserve. Mitigation for higher estimated take has been contracted as bat ecological research intended to better inform future bat habitat restoration and conservation and will begin in FY 2018 quarter 1.

*Pueo.* Although the Pueo is not a listed species on Maui, KWP II included Pueo in their HCP and provided mitigation compensation in the form of $25,000 paid to DOFAW in FY 2013 to be directed toward Pueo research efforts on O‘ahu. DOFAW has funded a Pueo research project in 2017 on O‘ahu that is in progress using money provided by KWP II in addition to other projects on O‘ahu.

## Kahuku Wind Power Habitat Conservation Plan, Oʻahu, Hawaiʻi. Approved 2010.

ITL Licensee: Kahuku Wind Power, LLC
(Note that Terraform Power now owns Kahuku, LLC. Terraform Power is a yieldco subsidiary of SunEdison, Inc.)

Project: Twelve WTGs with a total 30-MW energy generating capacity.

ITL Duration: June 7, 2010 – June 7, 2030

*Kahuku facility on the North Shore of O'ahu.*

Take Authorization Over 20-year Term:

Table 8. Take Authorization for Kahuku Wind HCP.

| Common Name | Scientific Name | Level of Take[1] | Annual Take Limit[2] | 5-year Take Limit[3] | 20-year Take Limit[3] |
|---|---|---|---|---|---|
| ʻUaʻu or Hawaiian Petrel | *Pterodroma sandwichensis* | Baseline | 4 | 8 adults/ juveniles | 8 adults/ juveniles |
| | | Higher | 8 | 12 adults/ juveniles | 12 adults/ juveniles |
| ʻAʻo or Newell's Shearwater | *Puffinus auricularis newelli* | Baseline | 3 | 9 adults/ juveniles | 12 adults/ juveniles |
| | | Higher | 6 | 12 adults/ juveniles | 18 adults/ juveniles |
| Koloa Maoli or Hawaiian Duck | *Anas wyvilliana* | Baseline | 4 | 12 adults/ juveniles | 16 adults/ juveniles |
| | | Higher | 8 | 16 adults/ juveniles | 24 adults/ juveniles |
| Aeʻo or Hawaiian Stilt | *Himantopus mexicanus knudseni* | Baseline | 3 | 9 adults/ juveniles | 12 adults/ juveniles |
| | | Higher | 6 | 12 adults/ juveniles | 18 adults/ juveniles |
| ʻAlae Keʻokeʻo or Hawaiian Coot | *Fulica alai* | Baseline | 3 | 9 adults/ juveniles | 12 adults/ juveniles |
| | | Higher | 6 | 12 adults/ juveniles | 18 adults/ juveniles |
| ʻAlae ʻUla or Hawaiian Moorhen | *Gallinula chloropus sandvicensis* | Baseline | 4 | 10 adults/ juveniles | 14 adults/ juveniles |
| | | Higher | 7 | 14 adults/ juveniles | 20 adults/ juveniles |
| ʻŌpeʻapeʻa or Hawaiian Hoary Bat[4] | *Lasiurus cinereus semotus* | Baseline | 7 | 14 individuals | 16 individuals |
| | | Higher | 14 | 16 individuals | 25 individuals |
| Pueo or Hawaiian Owl | *Asio flammeus sandwichensis* | Baseline | 4 | 12 adults | 16 adults |
| | | Higher | 8 | 16 adults | 24 adults |

[1] Take authorization is delineated by Baseline and Higher Limits (Tiers). Upon reaching Higher Limits additional mitigation measures or funding are triggered to ensure that mitigation keeps pace with take.

[2] Exceeding the Annual Take Limit (including observed and unobserved take) will require one or more of the following: adaptive management, increased mitigation, or a major ITL amendment.

[3] "5-Year" and "20-year" take limits are cumulative for the respective period of years.

[4] Minor amendment to clarify permitted bat take processed on November 26, 2014.

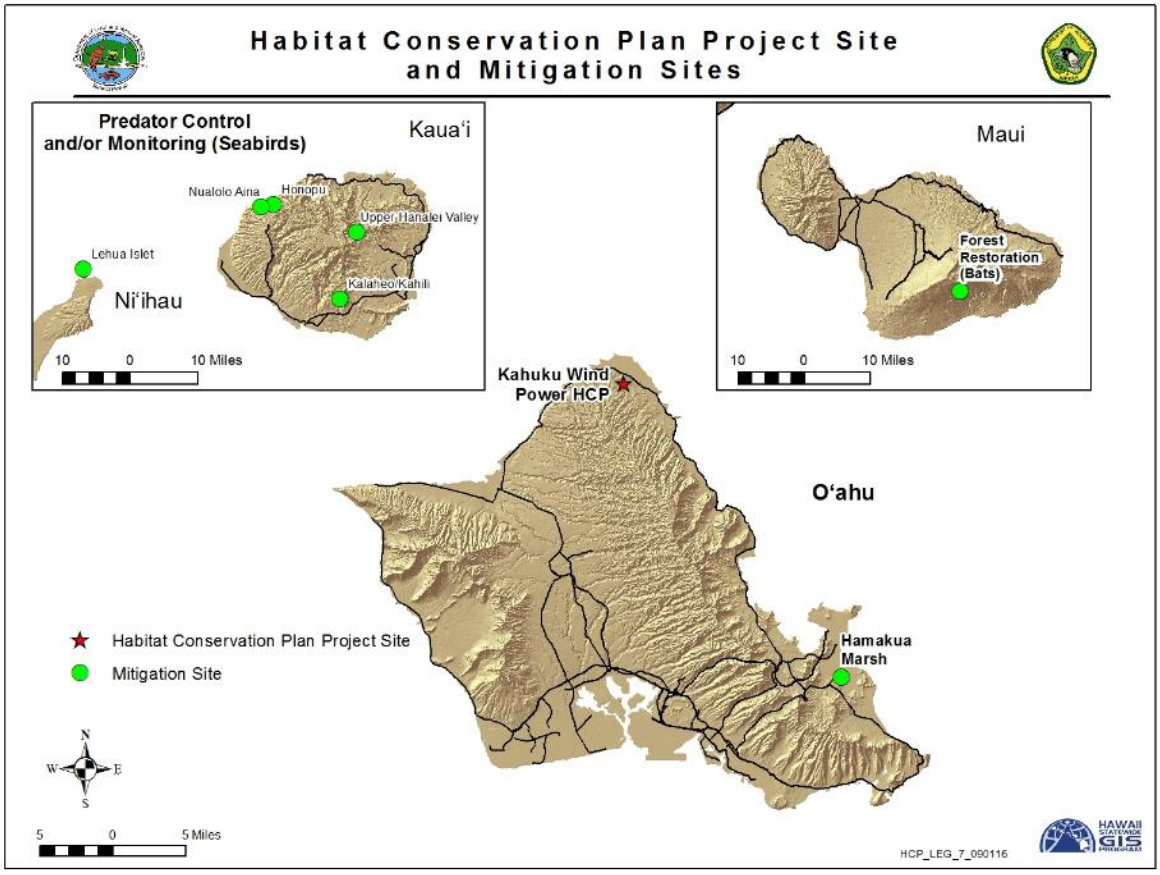



Figure 5. Location of Kahuku HCP

Status of ITL: There were no fatalities of an HCP covered species at Kahuku Wind Power during FY 2017. There were no documented fatalities of species listed as threatened or endangered in Hawaii at the Kahuku Wind Power facility during the FY 2017 reporting period.

Table 9 provides an estimate of the overall total adjusted take that has occurred since Kahuku Wind ITL issuance.

Table 9. Total observed fatalities and estimated total take since ITL issuance under the Kahuku Wind Power ITL as of June 30, 2017.

| Common Name | Total Observed Take | Estimated Unobserved Take[1] | Indirect Take using HCP multipliers | Total Estimated Take |
|---|---|---|---|---|
| Hawaiian Hoary Bat | 4 | 4 | 3 | 11 |

[1] Based on the 80% credible maximum using the following model: Dalthorp, D., M. M. P. Huso, and D. Dail. 2017. Evidence of absence (v 2.0) software user guide: U.S. Geological Survey Data Series 1055.

Mitigation Status:

*Hawaiian Petrel & Newell's Shearwater.* In accordance with the Kahuku Wind HCP, the seabird mitigation plan for Newell's Shearwater and Hawaiian Petrel requires the ITL holder to fund seabird colony-based protection and management measures on the island of Kauaʻi. Staff from the DOFAW Kauaʻi Endangered Seabird Recovery Project (KESRP) identified six sites to implement Barn Owl control as a form of seabird colony protection. DOFAW began to implement barn owl predator control work in the fourth quarter of FY 2015 on Kauaʻi, Lehua, and Niʻihau at chosen seabird colonies. Work was completed in the second quarter of FY 2017.

The ITL holder funded the Kauaʻi Endangered Seabird Recovery Project to deploy and then analyze data from Wildlife Acoustics SM2TM Song-meters at multiple locations in Kauaʻi's remote mountains to survey for Newell's shearwater and Hawaiian Petrel nesting colonies. These were deployed in August 2013, April 2014, and April 2015 via helicopter and were retrieved in October 2013, August 2014, and August 2015, respectively. A report analyzing the results were submitted by Conservation Metrics, Inc. in FY 2016.

*Hawaiian Stilt, Hawaiian Coot, Hawaiian Moorhen, and Hawaiian Duck.* Baseline mitigation for the four waterbird species covered under the ITL consisted of payments to DOFAW to conduct predator control and wetland restoration at Hamakua Marsh, part of the State's Kawainui-Hamakua Marsh Complex, for four years from FY 2012-2015. Total Coot, Moorhen and Stilt fledgling production from FY 2012 through FY 2015 was 13, 141 and 24, respectively.

*ʻAlae ʻUla or Hawaiian Moorhen swimming at Hamakua Marsh*

*Hawaiian Hoary Bat.* In accordance with the Kahuku Wind HCP, baseline bat mitigation consisted of a $150,000 payment to DOFAW (procured on May 31, 2012) for preserving or enhancing foraging and/or roosting habitat by constructing an ungulate-proof fence around a roughly 280 acre section of the State Kahikinui Forest Reserve and State Nakula Natural Area Reserve. In FY 2015, approximately 2,500 meters of fence were installed to enclose the unit. Ungulates were then removed, a planting area prepared, and over 28,000 plants, including Koa, ʻAʻaliʻi, Māmane, ʻŌhiʻa, ʻIliahi, and Pilo were installed. The Kahuku mitigation funds were pooled with other funding sources to contribute to collaborative, concentrated management in the region. The annual report for work completed in FY 2017 has not yet been made available.

In accordance with the avoidance and minimization measures described in the HCP, curtailment of all turbines up to a wind speed of five meters per second is being implemented between sunset and sunrise from April through November.

*Pueo.* Obligations for Pueo mitigation were complete prior to FY 2016. These included payments of $50,000 for Pueo research on O‘ahu aimed at determining population status and management priorities. Pueo research began in FY 2017 but data and reports are not available at this time. Funding of $25,000 was also provided to the Hawaii Wildlife Center.

**Kawailoa Wind Power Habitat Conservation Plan, O‘ahu, Hawai‘i. Approved 2012.**

ITL Licensee: Kawailoa Wind Power, LLC
(Note that DESRI IV, LLC now owns Kawailoa Wind Power, LLC; it is an investment fund managed by D.E. Shaw Renewable Investments, LLC)

Project: Thirty WTGs with a total 69 MW energy generating capacity.

ITL Duration: January 6, 2012 – January 6, 2032

*Kawailoa Wind Power, O‘ahu*

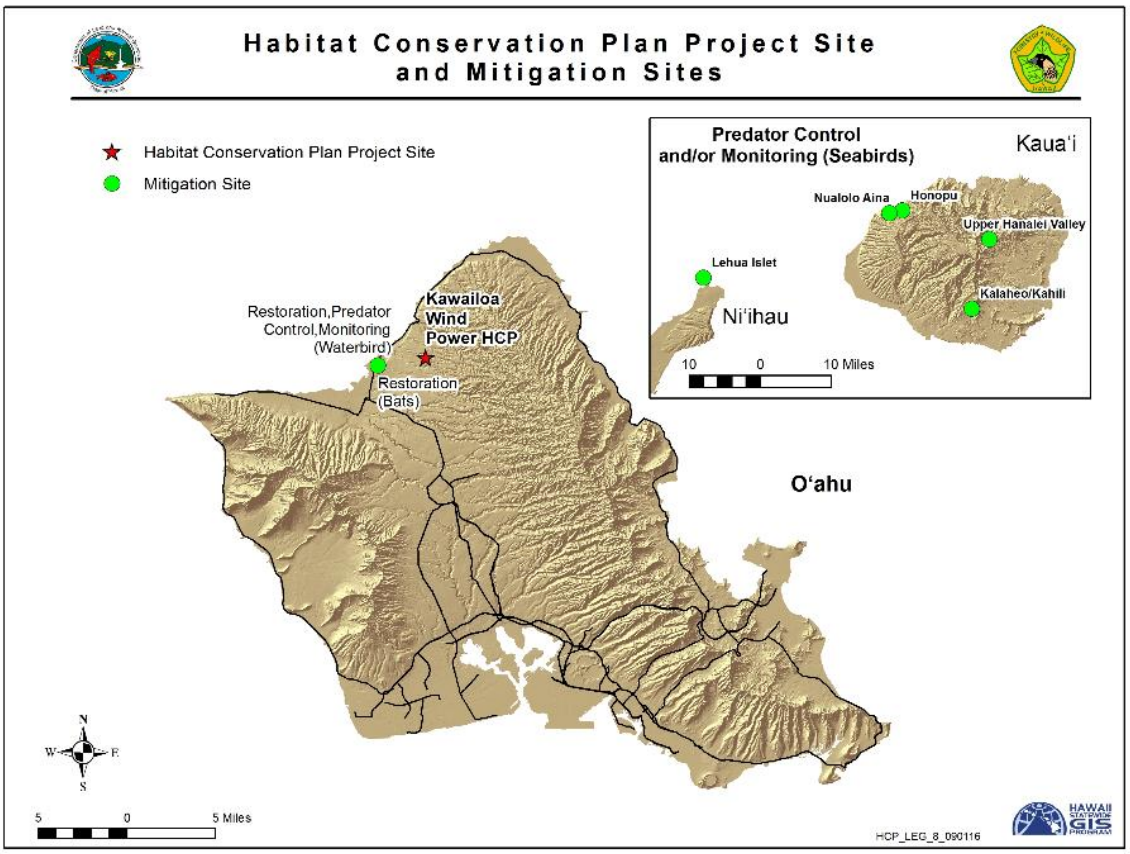



Figure 6. Location of Kawailoa HCP

Take Authorization Over 20-year Term:

Table 11. Take Authorization for Kawailoa Wind HCP.

| Common Name | Scientific Name | Level of Take[1] | 5-year Take Limit[2] | 20-year Take Limit |
|---|---|---|---|---|
| ʻAʻo or Newell's Shearwater | *Puffinus auricularis newelli* | Tier 1 | 3 adults/ juveniles & 2 chicks/eggs | 3 adults/ juveniles & 2 chicks/eggs |
| | | Tier 2 | 6 adults/ juveniles & 3 chicks/eggs | 6 adults/ juveniles & 3 chicks/eggs |
| Koloa Maoli or Hawaiian Duck | *Anas wyvilliana* | Tier 1 | 4 adults/ juveniles & 4 ducklings | 4 adults/ juveniles & 4 ducklings |
| | | Tier 2 | 6 adults/ juveniles & 6 ducklings | 6 adults/ juveniles & 6 ducklings |
| Aeʻo or Hawaiian Stilt | *Himantopus mexicanus knudseni* | Tier 1 | 6 adults/ juveniles & 3 fledglings | 8 adults/ juveniles & 4 fledglings |
| | | Tier 2 | 8 adults/ juveniles & 4 fledglings | 12 adults/ juveniles & 6 fledglings |
| ʻAlae Keʻokeʻo or Hawaiian Coot | *Fulica alai* | Tier 1 | 6 adults/ juveniles & 3 fledglings | 8 adults/ juveniles & 4 fledglings |
| | | Tier 2 | 8 adults/ juveniles & 4 fledglings | 12 adults/ juveniles & 6 fledglings |
| ʻAlae ʻUla or Hawaiian Moorhen | *Gallinula chloropus sandvicensis* | Tier 1 | 6 adults/ juveniles & 3 fledglings | 8 adults/ juveniles & 4 fledglings |
| | | Tier 2 | 8 adults/ juveniles & 4 fledglings | 8 adults/ juveniles & 4 fledglings |
| ʻŌpeʻapeʻa or Hawaiian Hoary Bat[3] | *Lasiurus cinereus semotus* | Tier 1 | 20 individuals | 20 individuals |
| | | Tier 2 | 40 individuals | 40 individuals |
| | | Tier 3 | 60 individuals | 60 individuals |
| Pueo or Hawaiian Owl | *Asio flammeus sandwichensis* | Tier 1 | 4 adults & 4 owlets | 4 adults & 4 owlets |
| | | Tier 2 | 6 adults & 6 owlets | 6 adults & 6 owlets |

[1]Take authorization is delineated by Baseline and Higher Limits (Tiers). Upon reaching Higher Limits additional mitigation measures or funding are triggered to ensure that mitigation keeps pace with take.

[2]Exceeding the 5-year Take Limit (including observed and unobserved take) will require one or more of the following: adaptive management, increased mitigation, or a major ITL amendment.

[3] Minor amendment to clarify permitted bat take processed on November 26, 2014.

Status of ITL: Table 12 provides a listing of HCP covered species fatalities at the Kawailoa Wind Power facility during FY 2017.

Table 12. Documented fatalities of HCP covered species and species of concern at Kawailoa Wind Power during the reporting period.

| Common Name | Total Take |
|---|---|
| Hawaiian Hoary Bat | 2 |

Table 13 provides an estimate of the overall total adjusted take that has occurred since Kawailoa Wind ITL issuance.

Table 13. Total observed fatalities and estimated total take since ITL issuance under the Kawailoa Wind Power ITL as of June 30, 2017.

| Common Name | Total Observed Take | Estimated Unobserved Take[1] | Indirect Take using HCP multipliers | Total Estimated Take |
|---|---|---|---|---|
| Hawaiian Hoary Bat | 28 | 25 | 6 | 59 |

[1] Based on the 80% credible maximum using the following model: Dalthorp, D., M. M. P. Huso, and D. Dail. 2017. Evidence of absence (v 2.0) software user guide: U.S. Geological Survey Data Series 1055.

With completion of three years of intensive monitoring in November 2015 and concurrence from the USFWS and DOFAW, fatality-monitoring plots were reduced in size on November 1, 2015 to 35m radius circular plots. These plots are centered on the wind turbine generators (WTGs) and searched twice per week.

The total estimated take of 58 bats (with 80% statistical certainty and indirect take) exceeds both the Tier 1 and Tier 2 permitted take for bats. The ITL holder submitted a letter of intent to the agencies on July 10, 2014 stating that they would be seeking an amendment to their license, and have been in consultation with the agencies since that time. It is expected that the amendment will be submitted for review in FY 2018.

Mitigation Status:

*Newell's Shearwater.* Tier 1 seabird mitigation was completed in FY 2015. Baseline mitigation for Newell's Shearwater as described in the HCP consists of (1) providing funding for adapting a resetting trap for use in Hawai'i, (2) field testing traps at a suitable location where predators are known to occur, and (3) supporting a one-year pilot study to provide localized predator control in an area where Newell's Shearwater are known to be breeding. Components (1) and (2) were completed and reported on in FY 2013. In FY 2014, a scope of work was developed and an MOU between SunEdison and DOFAW was signed to deploy song meters at six known Newell's colonies on Kaua'i. Seabird colony activity assessment on Kaua'i was completed for the breeding season in the first quarter of FY 2015, and a summary report was delivered in the third quarter. This assessment is part of a predator control project co-funded by Kahuku Wind Power and completes the seabird mitigation as described in the HCP for Kawailoa.

*Hawaiian Duck, Hawaiian Stilt, Hawaiian Moorhen, & Hawaiian Coot.* The ʻUkoʻa Wetland mitigation program for Tier 1 mitigation continued for waterbirds through FY 2017 including invasive vegetation removal and control, fence maintenance, predator control, monitoring predator presence, bat lane construction, insect assessments, and waterbird surveys. In FY 2016 USFWS and DOFAW provided written confirmation permitting adaptive management for the original bat and waterbird mitigation proposed at ʻUkoʻa Wetland. This included the following: (1) reduction from 40 acres of vegetation removal to assumed open water areas, (2) omitting replanting of natives with assumption of natural recruitment after invasive plant species are removed, (3) omitting mosquitofish removal component, and (4) tying success criteria for bats to completion of all other management and monitoring components instead of increased bat activity. In FY 2017, a total of 220 predators were removed from ʻUkoʻa Wetland including 103 pigs, 96 mongoose, 2 cats, 18 rats, and 1 mouse.

*Water hyacinth within removal area before removal work was initiated (Top), and after removal was complete (Bottom).*

*Hawaiian Hoary Bat.* The ʻUkoʻa Wetland mitigation program for Tier 1 mitigation continued for bats through FY 2017. Tier 1 bat mitigation in FY 2017 included invasive vegetation removal/control, predator control, fence monitoring and maintenance, bat lane construction, and insect assessments. Because the upper credible limit falls within Tier 3, Kawailoa Wind has contracted three studies as Tier 2/3 bat mitigation. USGS has been contracted for two studies: Modeling Foraging Habitat Suitability of the Hawaiian Hoary Bat, and Hawaiian Hoary Bat Conservation Genetics, and WEST will carry out island wide acoustic surveys on Oahu. The total funding for the three studies is over $1.6 million.

*Female Hawaiian Hoary Bat caught at ´U´koa Wetland, Oahu.*

Kawailoa has proposed funding $2,750,000 towards the creation of Helemano Wilderness Area as Tier 4 mitigation for 55 bats. This mitigation would be funded prior to approval of the amendments for the HCP and ITL/ITP, and paid to the Trust for Public Lands in the first half of FY 2018.

*Pueo.* A contribution of $12,500 was made to the Hawaiʻi Wildlife Center for Pueo rehabilitation in FY 2012. An additional $12,500 was provided to DOFAW to complete the mitigation obligation in the second quarter of FY 2017. This funding, in combination with funding from other wind projects, was utilized by DOFAW to hire a pueo researcher for the Pueo Project which will investigate the population size, distribution, and habitat use of pueo throughout Oʻahu. The Pueo Project's biologist will begin Oʻahu-wide surveys in August 2017.

**Auwahi Wind Energy Habitat Conservation Plan, Maui, Hawai'i. Approved 2012.**

*Auwahi Wind Power, Maui*

ITL Licensee: Auwahi Wind Energy, LLC; Sempra U.S. Gas & Power

Project: Eight WTGs with a total 21-MW energy generating capacity.

ITL Duration: February 9, 2012 – February 9, 2037

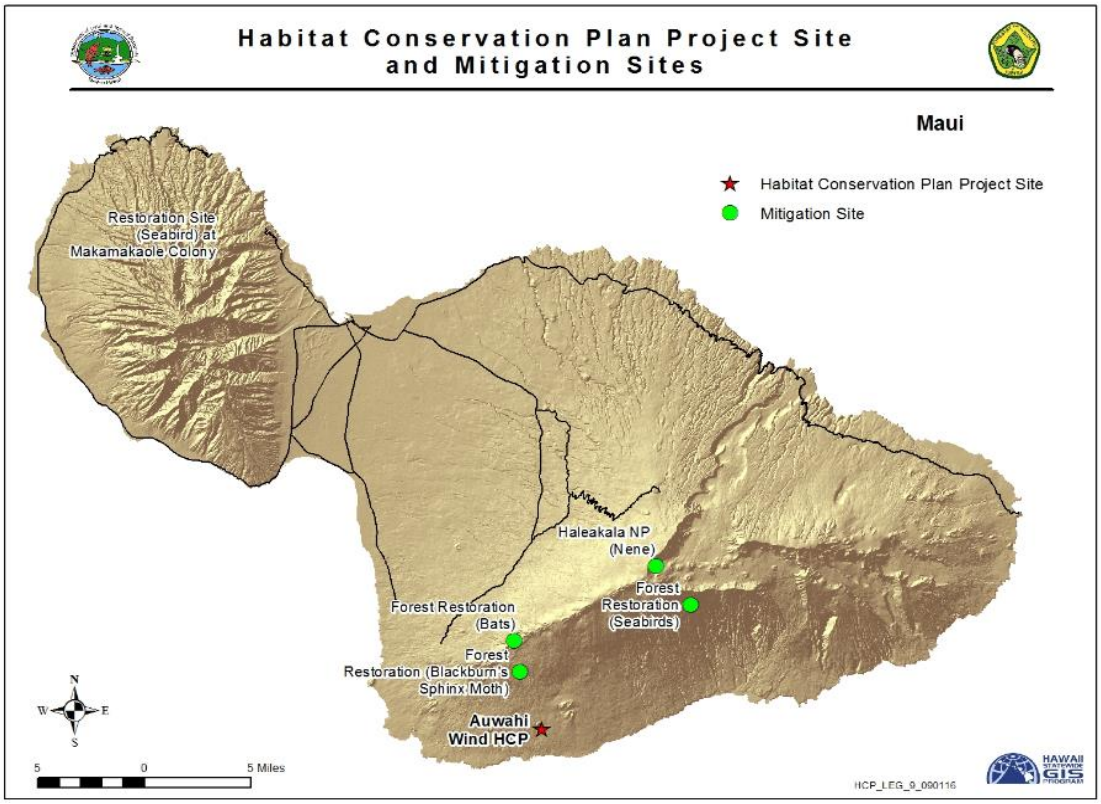



Figure 7. Location of Auwahi HCP

## Take Authorization Over 25-year Term:

Table 15. Take Authorization for Auwahi Wind HCP.

| Common Name | Scientific Name | Level of Take | 25-year Limit[8] |
|---|---|---|---|
| ʻUaʻu or Hawaiian Petrel | *Pterodroma sandwichensis* | Tier 1 | 19 adults/ immatures & 7 chicks/eggs |
| | | Tier 2 | 32 adults/ immatures & 12 chicks/eggs |
| | | Tier 3 | 64 adults/ immatures & 23 chicks/eggs |
| Nēnē or Hawaiian Goose | *Branta sandvicensis* | Length of permit | 5 adults/ immatures |
| ʻŌpeʻapeʻa or Hawaiian Hoary Bat[1] | *Lasiurus cinereus semotus* | Tier 1 | 6 individuals |
| | | Tier 2 | 11 individuals |
| | | Tier 3 | 21 individuals |
| Blackburn's Sphinx Moth | *Manduca blackburni* | Not applicable | 28-acres permanently disturbed habitat is an index of take |

[1] Take authorization for bats are converted to adult bats based on HCP and clarified by email from J. Charier of USFWS to Marie VanZandt of Auwahi on March 2, 2015.

Status of ITL: Table 16 provides a listing of HCP covered species fatalities at the Auwahi Wind Energy facility during FY 2017.

Table 16. Documented fatalities of HCP covered species and species of concern at Auwahi during the reporting period.

| Common Name | Scientific Name | FY16 Fatalities |
|---|---|---|
| Hawaiian Hoary Bat | *Lasiurus cinereus semotus* | 6 |

Table 17 provides an estimate of the overall total adjusted take that has occurred since Auwahi Wind ITL issuance.

Table 17. Total observed fatalities since ITL issuance and estimated total adjusted take covered under the Auwahi Wind Energy ITL as of June 30, 2017.

| Common Name | Total Observed Take | Estimated Unobserved Take[1] | Indirect Take | Total Adjusted Take |
|---|---|---|---|---|
| Hawaiian Hoary Bat | 13 | 20 | 3 | 36 |
| Hawaiian Petrel | 1 | 1 | 1 | 3 |

[1] Based on the 80% credible maximum using the following model: Dalthorp, D., M. M. P. Huso, and D. Dail. 2017. Evidence of absence (v 2.0) software user guide: U.S. Geological Survey Data Series 1055.

Mitigation Status:

*Hawaiian Petrel.* Mitigation for take of Hawaiian Petrels in FY 2017 consisted of continued petrel burrow monitoring at Kahikinui Forest Reserve to obtain an estimate of the number of active petrel burrows and reproductive (fledging) success. As in previous years, all monitoring protocols followed methods used by the National Park Service. New burrows located were marked, mapped, and added to the monitoring dataset. In the most recent breeding season, 68 petrel burrows were being monitored, 25 of which showed signs of consistent activity. Eight burrows successfully fledged a chick.

Auwahi Wind worked with Island Conservation and Tetra Tech to develop a predator control strategy for Kahikinui based on site-specific conditions and Island Conservation's expertise. The predator control strategy will allow predator control to be adaptively managed over time. Auwahi Wind deployed tracking tunnels to assess rat and mongoose activity across the entire management area, and then set 126 traps which were checked and baited every two weeks for a total of 36 weeks. Trapping resulted in the removal of 61 predators, including cats, mice, and rats.

*Nēnē.* Auwahi Wind provided a one-time payment of $25,000 to the Haleakala National Park on April 17, 2012, to cover mitigation expenses for the Hawaiian Goose.

*Hawaiian Hoary Bat.* Tier 1 mitigation for the Hawaiian Hoary Bat consists of the restoration of approximately 130 acres of pastureland in the Waihou Mitigation Area (the Pu'u Makua parcel) to create roosting and foraging habitat for the Hawaiian Hoary Bat. Restoration of this area includes a completed perimeter fence, the removal of ungulates and invasive plant species, and the ongoing reforestation of native species (19 acres planted in FY 2015).

For Tier 2 mitigation, Auwahi worked with Frank Bonaccorso of the US Geological Survey (USGS) to develop a research project combining radio telemetry and acoustic monitoring to track the success of mitigation efforts at Waihou, as well as to provide more information on the ecology of the Hawaiian Hoary Bat as part of their Tier 2 mitigation requirements. Implementation of the plan began in March 2015 with the deployment of six acoustic detectors. Monitoring will continue for one year.

Results from a Tier 3 bat mitigation study conducted by USGS were reported for the Pu'u Makua Restoration site within the Waihou mitigation area on 'Ulupalakua Ranch. Results reported were for bat activity using six acoustic monitoring stations and evaluation of the insect prey base and food habits. Bat activity was detected at all stations with the percent of nights with bat activity from April 2015 to September 2016 ranging from 10 to 66 percent. Activity did not vary substantially over the seasons and core use areas could not be discerned. Three bats, all adult males, were captured in mist nets adjacent to a game pond and two were radio-tagged. However, the site terrain and radio interference was not conducive for radio-tracking and data collected was not useful. Over 30 species and morpho-species of Lepidopterans (moths) were identified from traps. Additional sampling of vegetation identified a variety of additional moths and beetles. Due to the lack of success with radio telemetry, adaptive management is shifting the project toward insect prey base and food habitat assessment objectives and additional acoustic monitoring.

Auwahi has seen a higher than expected take of Hawaiian Hoary Bats since the start of operations. For take of this listed species, Auwahi submitted a draft amendment of the ITL to DOFAW and USFWS for evaluation on March 22, 2017.

*Blackburn's Sphinx Moth.* Baseline mitigation for Blackburn's Sphinx Moth consisted of a payment of $144,000 to the Leeward Haleakala Watershed Restoration Partnership (LHWRP) on April 17, 2012, to restore dryland forest by planting the equivalent of six acres of native endangered ʻAiea (*Nothocestrum latifolium*) throughout the Auwahi Forest Restoration Project. ʻAiea is known to serve as a host plant for the endangered Blackburn's Sphinx Moth. In FY 2016 41 ʻAiea were planted, bringing the total to 970 planted on 11 acres since project initiation and furthering the effort to reach the goal of 1,500. During FY 2017 319 tree tobacco (*Nicotiana glauca*) plants, a non-native invasive host plant for the moth, were removed from the Project with most plants less than three feet tall. In FY 2017, no eggs or larvae were detected during visual surveys of tree tobacco.

### *Transportation Projects*

**Relocation of Abutilon menziesii Habitat Conservation Plan, Kapolei, Oʻahu. Approved 2004.**

ITL Licensee: Hawaiʻi Department of Transportation

Project: Development of 1,381-acre East Kapolei Master Plan project and construction of the North-South Road arterial highway planned to bisect the property.

ITL Duration: March 18, 2005 – July 31, 2021

*Koʻoloaʻula (Abutilon menziesii), Island of Oʻahu.*

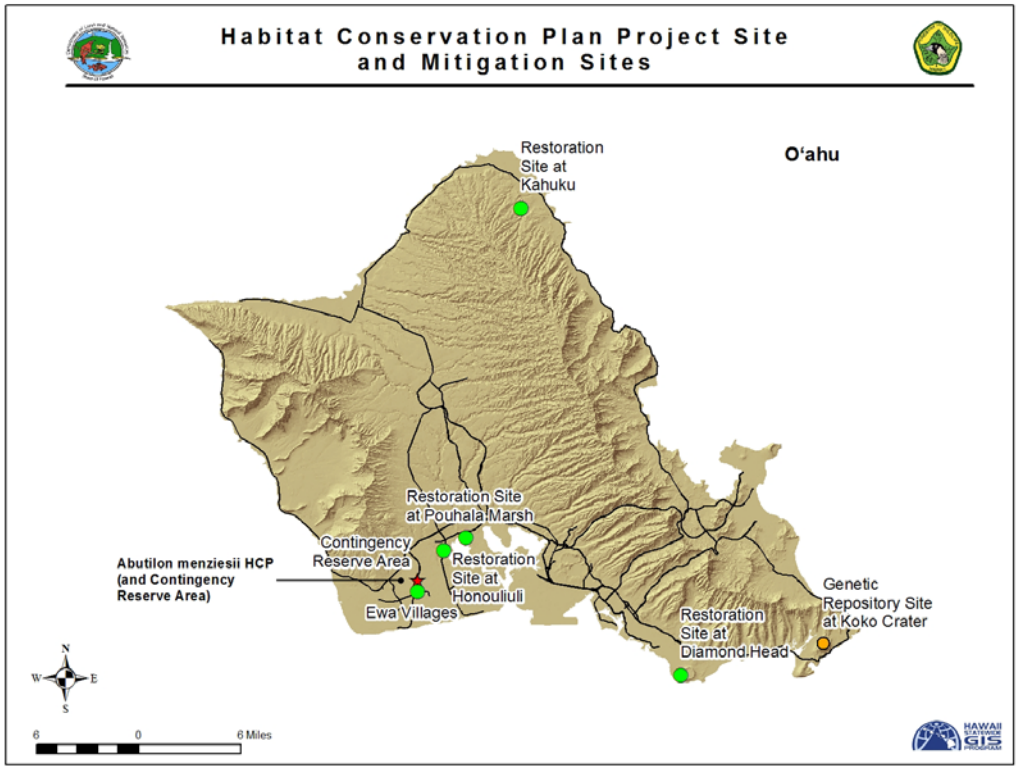



Figure 8. Location of Abutilon HCP

Take Authorization:

Table 18. Take Authorization for Abutilon HCP.

| Common Name | Scientific Name | Total Authorized Over ITL Duration |
|---|---|---|
| Koʻoloaʻula | *Abutilon menziesii* | All individual plants within the 1,381-acre project area |

Status of ITL: All plants have been moved. Five mitigation sites are being established and a genetic repository location contains plants with genetic representation of the plants moved. A contingency reserve area has been established with additional plantings to remain until success has been confirmed at the three mitigation sites.

Mitigation Status:

The goal of the HCP is to initiate and sustain a program that will result in an overall net gain in the number of endangered *Abutilon menziesii* plants on Oʻahu. The end goal is the establishment of three wild sites that are protected self-sustaining populations of *A. menziesii* from the single degraded Kapolei population. Wild populations of *A. menziesii* have been successfully established at the following sites: 1) Diamond Head State Park; 2) Honouliuli Refuge, part of the U.S. Fish and Wildlife Service's Oʻahu National Wildlife Refuge Complex; 3) Pouhala Marsh on City and County property in Waipahu; and 4) a recently established site at Kahuku on State Lands. An additional small population has been initiated at Ewa Villages Golf Course in close proximity to the project site that is now serving as a second genetic reserve in addition to the main genetic reserve site established at Koko Crater Botanical Garden, currently with 84 mature plants (76% genetic representation).

Until there is assurance that success criteria are met there is also maintained a Contingency Reserve Area within the 13,381-acre project area that currently has 68 mature (reproductive) *A. menziesii* plants. From an original founder population of 93 plants on the project site in 2002, out-planting efforts have resulted in establishment of 453 mature *A. menziesii* plants at targeted wild sites plus the plants at the genetic reserve sites and the Contingency Reserve Area. A DOFAW Horticulturist/Botanist is working to ensure successful natural regeneration of out-planted individuals. Current monitoring data indicate that a total of 119 seedlings from out-planted individuals have survived at least five years (all are at two of the wild sites). The main reason for the lack of seedling recruitment and survivorship seems to be a lack of sufficient moisture on a regular basis, which may be due to a variety of factors.

The lack of seedling establishment is preventing some HCP success criteria from being achieved. The goal in the next fiscal year is to develop a stabilization plan for the current populations and a strategy for the species for remainder of the ITL term for review by the ESRC. DOFAW will continue its existing management efforts at all sites until future plans are finalized.

Funding Source and Status: Funding to implement mitigation activities was provided to DOFAW from the Hawai‘i Department of Transportation. Table 19 provides the HCP summary of revenue and expenditures.

Table 19. Summary of Revenue and Expenditures for the *Abutilon menziesii* HCP at Kapolei.

| **Description** | |
|---|---|
| Available revenue | **$157,015*** |
| Expenditures in FY17 | $10,087 |
| Encumbrances in FY17 | $37,015 |
| **Ending balance** | **$109,913** |

*Excludes account interest with currently unknown availability

## *Other Development Projects*

### Cyanotech Aquaculture Facility Habitat Conservation Plan, Keahole Point, Hawai‘i. Approved 2003.

ITL Licensee: Cyanotech Corporation

Project: Commercial microalgae farming operation.

ITL Duration: Original Endangered Species Permit: April 2002 (short term); Subsequent ITL December 24, 2003 – March 17, 2016; Renewal application for 2016-2035 in Process

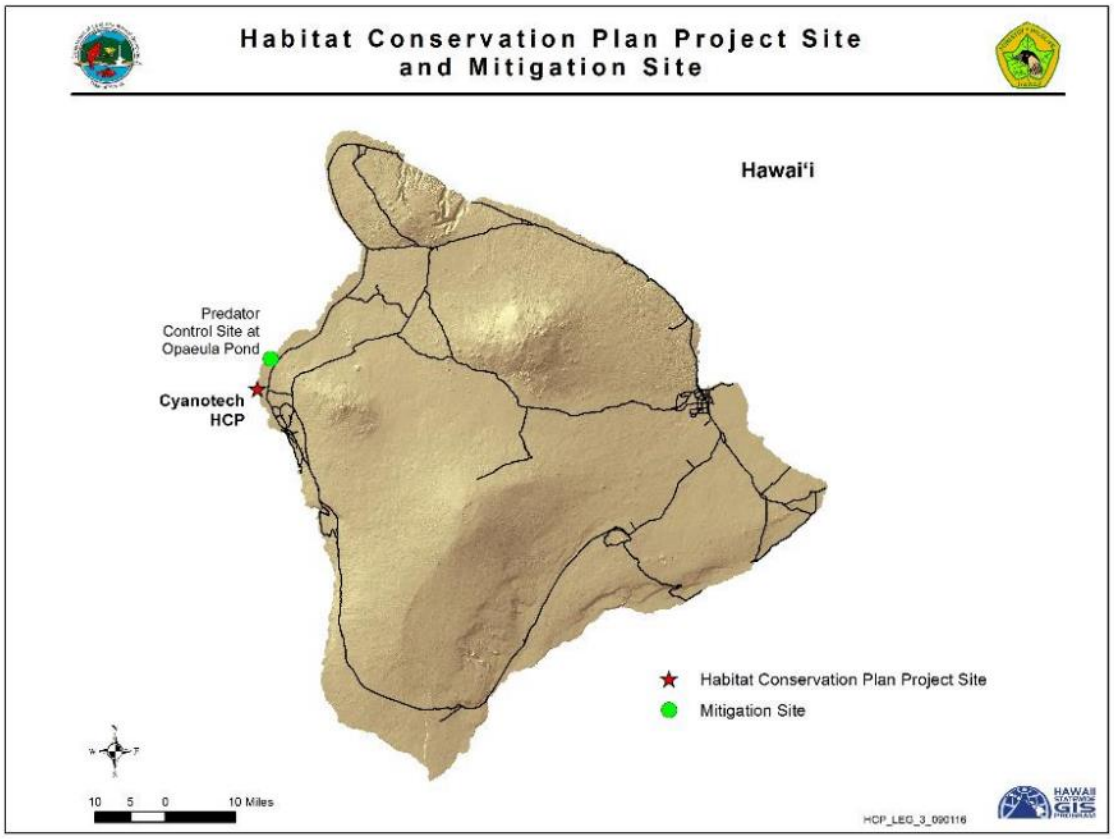



Figure 9. Location of Cyanotech HCP

Take Authorization Over 13-year Term:

Table 20. Take Authorization for Cyanotech HCP.

| **Permit Period** | **Common Name** | **Scientific Name** | **Total Authorized Over ITL Duration** |
|---|---|---|---|
| 2002-2016 | Ae'o or Hawaiian Stilt | *Himantopus mexicanus knudseni* | The greater of, 45, or the number of chicks produced to offset losses[1] |
| 2016-2035* (requested renewal ) | Ae'o or Hawaiian Stilt | *Himantopus mexicanus knudseni* | 38 (requested) |

*not yet approved

Status of ITL: There were no fatalities of an HCP covered species at Cyanotech during FY 2017. There were no documented fatalities of species listed as threatened or endangered in Hawaii at the Cyanotech facility during the FY 2017 reporting period.

In accordance with the Cyanotech HCP, surveys for incidental take are conducted once per week during the nesting season (March-August) and once per month during the non-nesting season (September-February). Monitoring for injured wildlife is conducted daily as part of normal operations of the production raceways. Monitoring documented two nests with six eggs total, four were abandoned, and two were lost after a heavy rain event. No hatchlings at the facility during the reporting period.

Table 21 provides an estimate of the overall total adjusted take that has occurred since Cyanotech ITL issuance.

Table 21. Total observed fatalities since ITL issuance and estimated total adjusted take covered under the Cyanotech ITL as of June 30, 2016.

| Common Name | Total Observed Take | Total Adjusted Take[1] |
|---|---|---|
| Hawaiian Stilt | 18 adults, 4 chicks | 43 fledglings |

[1] Total adjusted take represented as number of fledglings, based on the survival rate of 2.17 fledglings with respect to incidental take of adult as described in the 2006 Cyanotech Amendment.

Mitigation Status:

*Hawaiian Stilt.* Prior to the HCP, mitigation occurred onsite at a lake that was managed as nesting and foraging habitat for stilts. Concerns about the proximity to the airport led to the onsite mitigation site being closed in 2002, with hazing implemented to discourage further nesting. Prior to being shut down, the on-site lake resulted in 237 fledglings. 48 of those fledged in 2002 and were "credited" to the HCP for the first year of permit coverage. According to a 2006 minor amendment, Cyanotech mitigation was to be satisfied by funding and implementing predator control at an off-site location. ʻOpaeʻula (now Kapoʻikai) pond is a 3.24 hectare coastal wetland located in the North Kona district of Hawaiʻi Island and was identified as a viable location for predator control efforts. Cyanotech worked with the private landowner to fund predator control efforts at ʻOpaeʻula pond to meet mitigation obligations to satisfy the HCP.

Renewal: In June 2016, Cyanotech requested a renewal for permit and HCP, with a requested take of 38 Hawaiian Stilts for the next 19 years (2016-2035). Cyanotech is required to propose a suitable potential mitigation project within one year of approval. Cyanotech is working on an agreement with the County of Hawaii to provide predator control at the Kealakehe Wastewater Treatment Plant as part of their off-site mitigation.

Cyanotech will also continue funding the annual Kona Waterbird Survey for the duration of the requested permit term (2016-2035).

**Daniel K. Inouye Solar Telescope (formerly the Advanced Technology Solar Telescope) Construction Habitat Conservation Plan, Halekalā High Altitude Observatory Site, Maui, Hawai'i. Approved 2011.**

ITL Licensee: National Science Foundation

Project: Construction of the Daniel K. Inouye Solar Telescope (DKIST) within the 18-acre University of Hawai'i Institute for Astronomy Haleakalā High Altitude Observatory site at the summit of Haleakalā.

ITL Duration: December 1, 2011 – December 1, 2021

*DKIST Facility on Haleakalā summit.*

Take Authorization Over 10-year Term:

Table 22. Take Authorization for the DKIST HCP.

| Common Name | Scientific Name | Total Authorized Over ITL Duration |
|---|---|---|
| 'Ua'u or Hawaiian Petrel | *Pterodroma sandwichensis* | 30 fledglings and 5 adults |

Status of ITL: No petrel collisions have been recorded during monitoring from 2011 to June 30, 2017. There were no fatalities of an HCP covered species at DKIST during FY 2017. There were no documented fatalities of species listed as threatened or endangered in Hawaii at the DKIST facility during the FY 2017 reporting period.

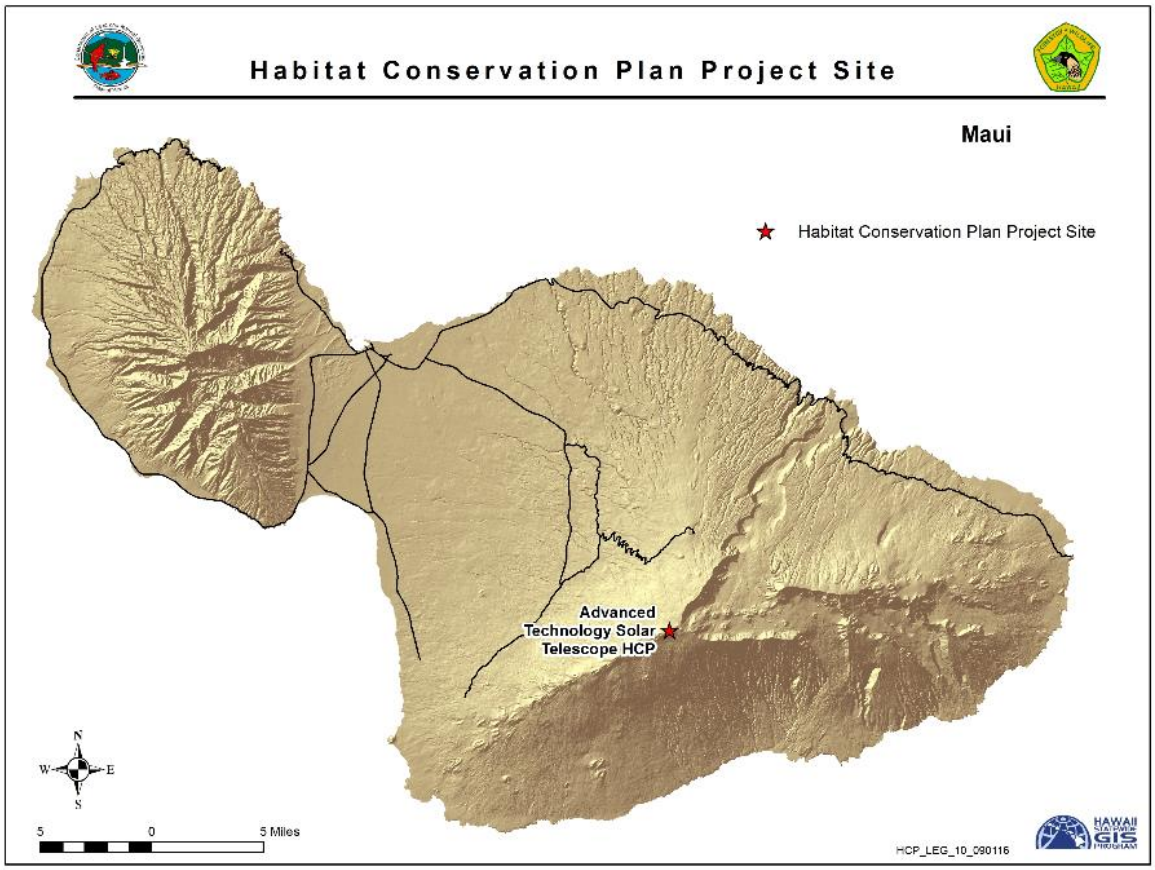



Figure 10. Location of the Daniel K. Inouye Solar Telescope HCP (formerly known as the Advanced Technology Solar Telescope HCP)

Bird-strike monitoring has occurred annually during seabird nesting season, February 1 to November 30, since 2011. In accordance with the HCP, areas around the two Federal Aviation Administration (FAA) towers, the telescope construction site, and the conservation fence are monitored. No collision events associated with the towers or conservation fence have been detected since bird-strike monitoring began in 2011. Noise and vibration monitoring is also conducted to determine if the burrows nearest the construction site are impacted by construction activities. No construction activity to date has produced vibrations meeting or exceeding the threshold of 0.12 in/sec established in the HCP, and noise levels at burrow entrances have averaged 56 dBA which is usually not above ambient wind noise levels. Most external construction was completed as of early March of 2016, and therefore, as of March 7, 2016 construction noise and vibration monitoring was not measured at the DKIST site except during large, noisy, or earth-moving operations.

Table 23. Total observed fatalities since ITL issuance and estimated total adjusted take covered under the DKIST ITL as of June 30, 2017.

| Common Name | Total Observed Take |
|---|---|
| ʻUaʻu or Hawaiian Petrel | 0 |

Mitigation Status:

*Hawaiian Petrel.* In accordance with the HCP, DKIST constructed a 4.23 km ungulate-proof fence enclosing a 313-acre Conservation Area adjacent to Haleakalā National Park. As a result of the fence construction process and the intensive monitoring activities that were being implemented during the fence construction, all ungulates left the area before the fence was completed in November 2013. Based on footage from camera traps, no ungulates have been detected within the Conservation Area since September 12th, 2013.

DKIST monitored 365 burrows, with 332 in the conservation area and 33 burrows in the control site. Only the conservation site burrows were included in calculations for reproductive success. There were 70 camera traps were installed in the Conservation Area between September 27 and November 23, 2016.

Predator control has been ongoing since September 2012 using A-24 automatic traps (targeting mongoose) and Havahart traps (targeting cats). In June 2014 the traps were rearranged to a more unified grid pattern, and supplemented with additional traps to cover the entirety of the Conservation Area. Traps are baited during Petrel season (February-November) each year. In 2016, a total of 35 hits were recorded and two roof rats, four field mice and five unidentifiable rodent carcasses. Rodenticide bait stations are utilized near buildings.

The 2017 Petrel season is ongoing. The 2016 season noted 106 active burrows in the conservation area, with 48 of those burrows successfully producing a fledgling for a 41% nesting success.

**Kauaʻi Lagoons Habitat Conservation Plan, Kauaʻi, Hawaiʻi. Approved 2012.**

ITL Licensee: Kauaʻi Lagoons, LLC
(Note that Tower Kauaʻi Lagoons, LLC is the current name of the entity now holding the license)

Project: Oceanfront resort encompassing approximately 600 acres.

ITL Duration: April 11, 2012 – April 11, 2042

*Kauaʻi Lagoons, Kauaʻi.*

Take Authorization Over 30-year Term:

Table 24. Take Authorization for Kauaʻi Lagoons HCP.

| Common Name | Scientific Name | Type of Take | Total Authorized Over ITL Duration |
|---|---|---|---|
| ʻAʻo or Newell's Shearwater | *Puffinus auricularis newelli* | Life of permit | 29[a] |
| Koloa Maoli or Hawaiian Duck | *Anas wyvilliana* | Mortality or Non-Lethal | 36 |
| Aeʻo or Hawaiian Stilt | *Himantopus mexicanus knudseni* | Mortality or Non-Lethal | 38 |
| ʻAlae Keʻokeʻo or Hawaiian Coot | *Fulica alai* | Mortality | 110 |
| | | Non-Lethal | 180 |
| ʻAlae ʻUla or Hawaiian Moorhen | *Gallinula chloropus sandvicensis* | Mortality | 40 |
| | | Non-Lethal | 30 |
| Nēnē or Hawaiian Goose | *Branta sandvicensis* | Mortality or Non-Lethal | 17 |
| ʻUaʻu or Hawaiian Petrel | *Pterodroma sandwichensis* | Life of Permit | 1 |
| ʻAkēʻakē or Band-rumped Storm Petrel | *Oceanodroma castro* | Life of Permit | 1 |

[a] Authorized level of take changed from 27 to 29 as processed under the September 2013 Minor Amendment

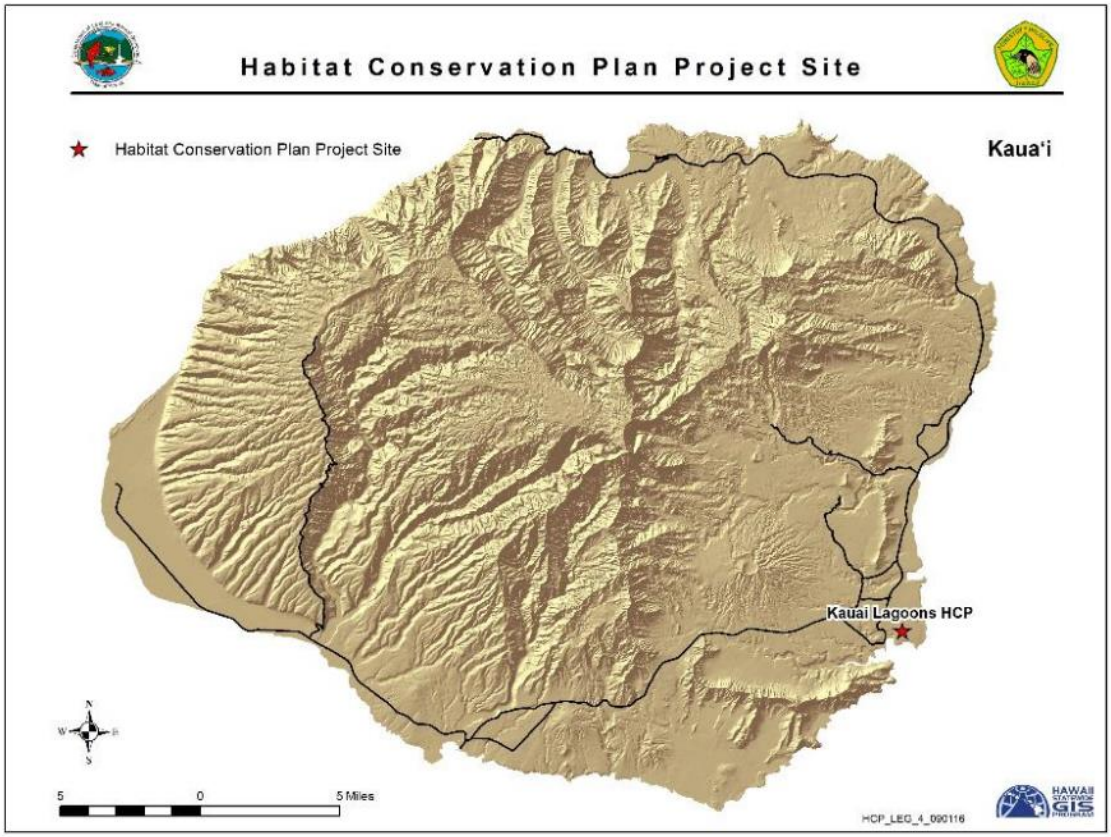



Figure 11. Location of Kauaʻi Lagoons HCP

Status of ITL: Table 25 provides a listing of all documented incidental take during the reporting period.

Table 25. Documented incidental take of Covered Species at the Kaua‘i Lagoons site during the reporting period.

| Common Name | Take Observed during FY 2017 |
|---|---|
| Hawaiian Moorhen | 2 |
| Hawaiian Coot | 1 |
| Hawaiian Duck | 3 |
| Newell’s Shearwater | 1 |

Table 26 provides the observed mortalities that have occurred since Kaua‘i Lagoons ITL issuance.

Table 26. Total observed incidental take since ITL issuance under the Kaua‘i Lagoons ITL as of June 30, 2017.

| Common Name | Total Observed Take | Total with Adjusted Take |
|---|---|---|
| Newell’s Shearwater | 3 | 3 |
| Nēnē | 2 | 3 (2.72 rounded up) |
| Hawaiian Moorhen | 8 | 9 (8.975 rounded up) |
| Hawaiian Duck | 5 | 6 (5.4 rounded up) |
| Hawaiian Stilt | 0 | 0 |
| Hawaiian Coot | 12 | 13 (12.675 rounded up) |

ITL Status:

In accordance with the Kaua‘i Lagoons HCP, the Kaua‘i Lagoons Resort (Resort) continued to implement the following minimization measures during this reporting period:

- On-site predator control;
- Comprehensive endangered species awareness training to all Resort employees, with updated modules, and retraining for all staff and contractors after the new owners took over;
- Deployment of construction monitors and biological monitors during construction operations to prevent harm to ITL covered species;
- Education program to inform golfers of the presence of endangered species and implement measures to avoid harm to such species while golfing; and
- Program to minimize light-induced attraction of seabirds to Resort facilities by installing appropriate lighting fixtures, and implementing appropriate seasonal restrictions and practices.
- Maintenance of on-site nesting areas

The total number of Nēnē at Kauaʻi Lagoons during the span of the nesting season was estimated at 14 pairs, or 28. Over the span of FY 2017, an estimated 76 Nēnē were observed. Of the 14 nests there were 39 eggs, with 32 hatchlings and 20 surviving to fledge. For the first time, there were three Hawaiian stilt nests, approximately 30 Hawaiian coot nests and approximately 50 Hawaiian moorhen nests in FY 2017.

Mitigation Status:

*Nēnē, Hawaiian Stilt, Hawaiian Coot, Hawaiian Moorhen, & Hawaiian Duck.* Baseline mitigation for waterbirds consists of providing and maintaining approximately 35 acres of lagoons on the property that are an important habitat for endangered waterbird species, including predator control trapping and wildlife monitoring. Predator control efforts during this reporting period resulted in 42 cattle egrets, 44 cats, one dog, and 3,126 chickens removed from the property. Kauaʻi Lagoons also contributed mitigation funding of $85,000 to DOFAW in May 2012 to be used to conduct predator control and/or manage Nēnē at a translocation site(s) after the completion of the State's five-year translocation project ending in 2016.

*Newell's Shearwater, Hawaiian Petrel, & Band-rumped Storm Petrel.* The Minor Amendment of 2013 increasing Newell's Shearwater take specified contribution of mitigation funding for seabird take, in the amount of $10,000 annually, to the National Fish and Wildlife Foundation account, to be held until such time as a Kauaʻi seabird island-wide HCP (currently in the planning stages) is finalized and approved.

## Relocation of Round-leaved Chaff Flower (Achyranthes splendens var. rotundata) Habitat Conservation Plan, Kenai Industrial Park, Kapolei, Oʻahu, Hawaiʻi. Approved 2014

*Achyranthes splendens* var. *rotundata*.

ITL Licensee: CIRI Land Development Company (In September 2014 CIRI Land Development Company sold the property under the ITL to AKC Leasing Corporation)

Project: Industrial development on a 0.75-acre parcel

ITL Duration: February 10, 2014 – February 9, 2024

Take Authorization Over 10-year Term:

Table 28. Take Authorization for Kenai Industrial Park.

| Common Name | Scientific Name | Total Authorized Over ITL Duration |
|---|---|---|
| Round-leaved Chaff Flower | *Achyranthes splendens* var. *rotundata* | 3 individuals and their seed bank |

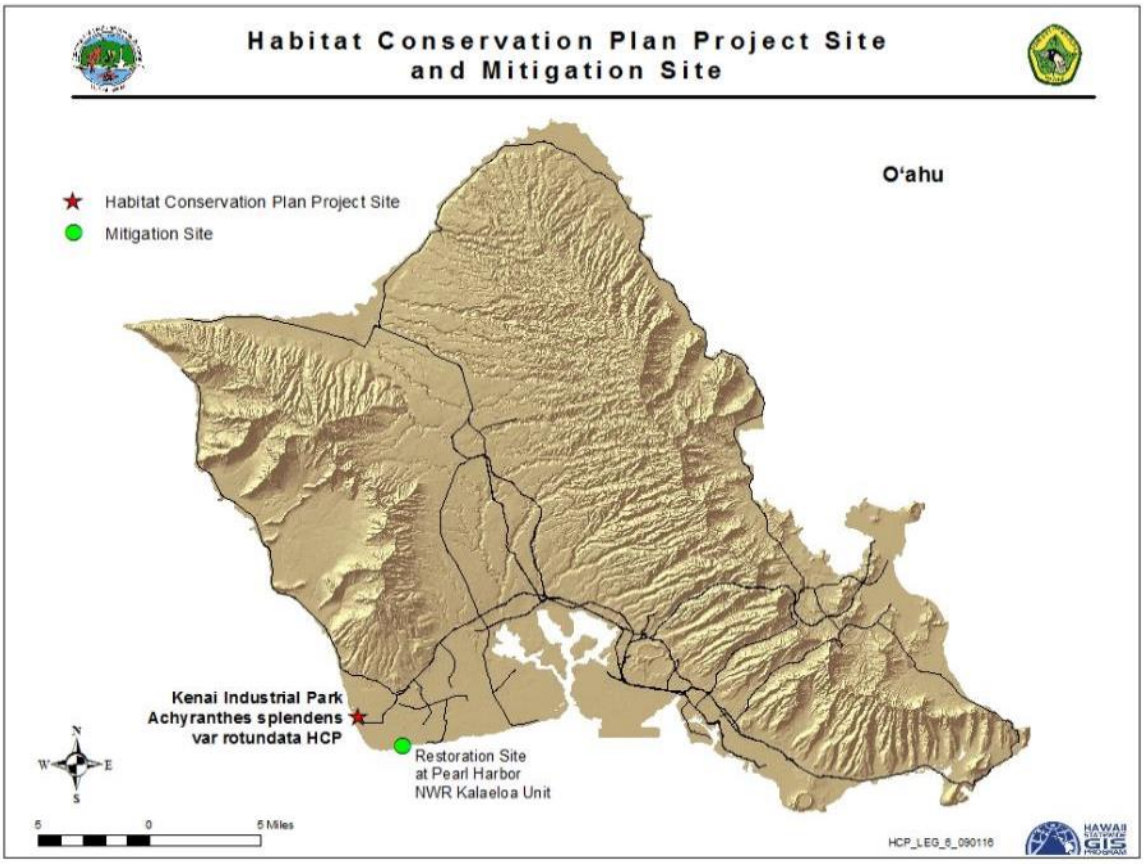



Figure 12. Location of Kenai Industrial Park HCP

Status of ITL: All plants at the site have been removed under supervision of the State botanist. Approximately 23,000 seeds were collected in 2014. Approximately 400 of the seeds collected were used to germinate plants at Hui Ku Maoli Ola native plant nursery, the remainder are in storage at the Lyon seed facilities. The seeds at Hui Ku Maoli Ola were propagated and were used for out-planting at the mitigation site.

Mitigation Status:

*Round-leaved Chaff Flower*. In accordance with the HCP, seeds were collected from the project site and were either stored or propagated for future out-planting at the mitigation site located at the Kalaeloa Unit of the Pearl Harbor National Wildlife Refuge.

*Plot 1 out-plants on 4/25/17*

A total of 159 plants were installed in four plots within the Kalaeloa Unit in November and December 2014. Each planting plot is approximately 12 × 12 meters (m) (39.5 × 39.5 feet). In addition, four individual plants of round-leaved chaff flower were planted outside of the Plots 1–4 in November 2014 and this area was designated Plot 5. As of April 25, 2017 there were 95 out-plants (60% of 159 planted) surviving, therefore the 95% survival by Year 2 criteria in the HCP has not been met. In all, 20 seedlings have reached at least six inches in height and 40% of these have already reached maturity. Other success criteria specified in the HCP for Year 2 have been met including less than 25% cover of herbaceous non-native plants and more than 25% cover of native plants.

Funding Status: In September of 2014, CIRI Land Development Company (original owner of the property under the ITL) sold the property to AKC Leasing Corporation. AKC Leasing Corporation has acknowledged and understands that ownership of the property is subject to conditions under the approved Incidental Take License Number ITL-18 and the associated HCP for Kenai Industrial Park. AKC Leasing Corporation is required to provide all funding necessary to fulfill obligations outlined in the approved HCP including funding assurances. In FY 2017, AKC Leasing Corporation used their own procurement processes to fulfill HCP obligations.

**SUMMARY OF SAFE HARBOR AGREEMENTS AND ASSOCIATED INCIDENTAL TAKE LICENSES**

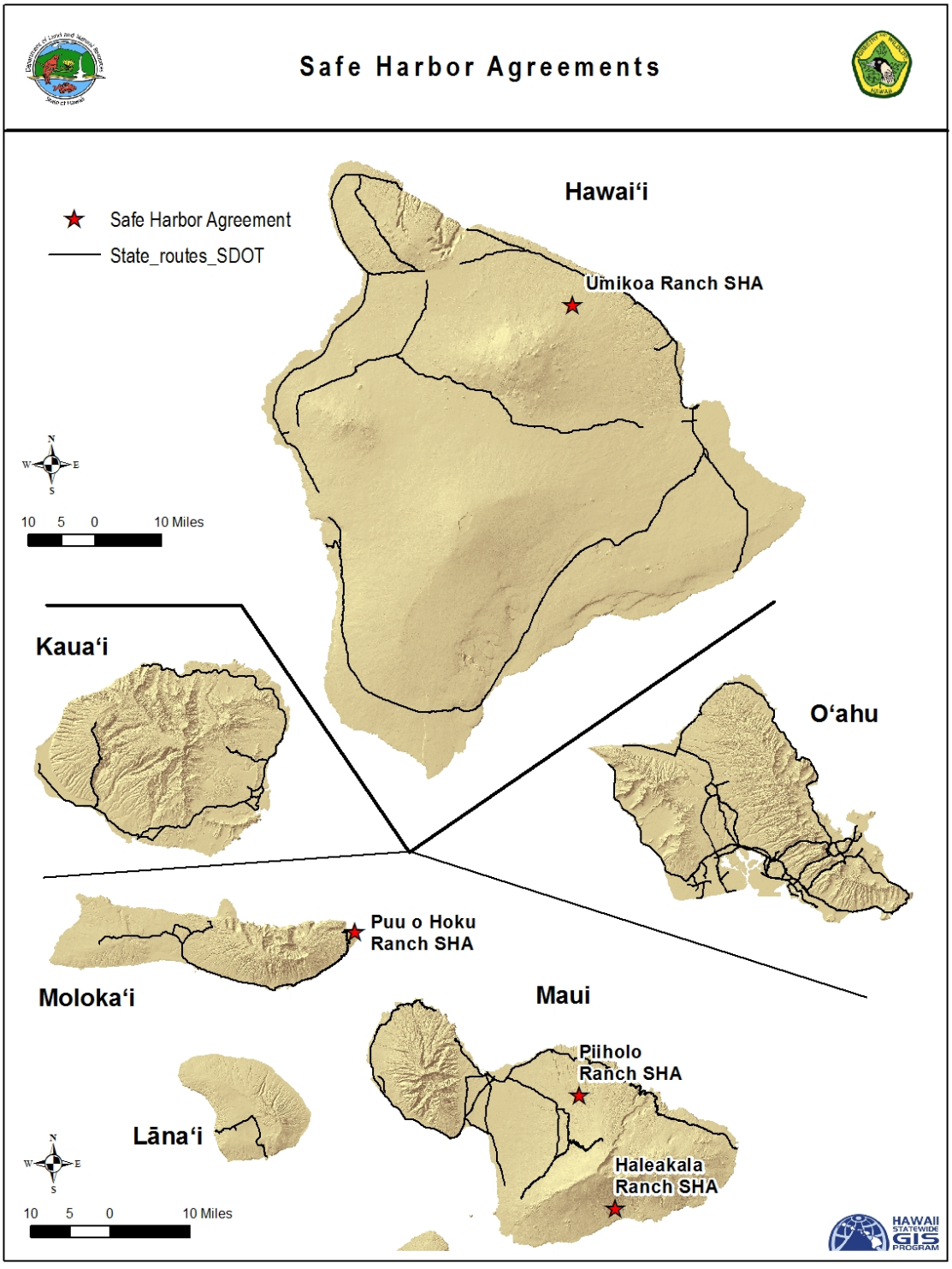



Figure 1. Location of Safe Harbor Agreements

***Safe Harbor Agreement for Pu‘u o Hōkū Ranch, Moloka‘i. Approved 2001.***

ITL Licensee: Pu‘u o Hōkū Ranch, Limited

Project: Reintroduce Nēnē (*Branta sandvicensis*) to Pu‘u o Hōkū Ranch, Moloka‘i.

ITL and SHA Duration: ITL has no specific expiration and is valid unless rescinded; SHA period was from September 4, 2001 to September 3, 2008 (DOFAW is currently in discussion with Pu‘u o Hōkū Ranch to enter into a new agreement).

*Nēnē, official bird of the State of Hawai‘i, resting in the foreground.*

Take Authorization: Incidental take of Nēnē on lands owned or otherwise controlled by Pu‘u o Hōkū Ranch, Limited.

Baseline Condition: At the time of agreement execution, there was no wild Nēnē on Moloka‘i. Therefore the baseline condition is zero wild Nēnē on Pu‘u o Hōkū Ranch property.

Status of ITL and SHA: No takes of Nēnē were reported this year. This SHA allowed for reintroduction of Nēnē on Pu‘u o Hōkū Ranch property, construction of a release pen, provision of habitat for Nēnē grazing and breeding, and control of predators in the release pen and breeding areas.

Nēnē monitoring was performed on a weekly basis DOFAW personnel throughout the reporting period. Observations from surveys throughout the reporting period resulted in a total of 37 birds, as identified by their State and Federal bands, which is the estimated population size. A one-day annual Nēnē survey of eastern Molokai was conducted on July 23, 2015 which resulted in a total of 15 banded birds observed.

A total of 74 birds were translocated to the Pu‘u o Hōkū Ranch from 2002-2005. Table 1 provides survey data for the original 74 birds translocated to the Pu‘u o Hōkū Ranch. The percentage of the original 74 birds that were re-sighted is a factor of survey effort and does not account for any unknown mortality or emigration from the ranch, and may not necessarily be a measure of translocation success.

Table 1. Observations of Nēnē translocated to Puʻu o Hōkū Ranch

| Year | No. of Birds Translocated | Total Birds Translocated | No. of Known Fatalities | No. of Birds Sighted | Percentage (%) of Translocated Birds Sighted (excluding known fatalities) |
|---|---|---|---|---|---|
| 2017 | 0 | 74 | 0 | 1 | 2 |
| 2016 | 0 | 74 | 0 | 2 | 3 |
| 2015 | 0 | 74 | 0 | 4 | 5 |
| 2014 | 0 | 74 | 0 | 6 | 9 |
| 2013 | 0 | 74 | 0 | 6 | 9 |
| 2012 | 0 | 74 | 0 | 6 | 9 |
| 2011 | 0 | 74 | 0 | 7 | 11 |
| 2010 | 0 | 74 | 0 | 8 | 13 |
| 2009 | 0 | 74 | 0 | 18 | 28 |
| 2008 | 0 | 74 | 1 | 33 | 52 |
| 2007 | 0 | 74 | 0 | 38 | 58 |
| 2006 | 0 | 74 | 5 | 29 | 45 |
| 2005 | 11 | 74 | 2 | 47 | 67 |
| 2004 | 8 | 63 | 1 | 42 | 69 |
| 2003 | 41 | 55 | 1 | 54 | 100 |
| 2002 | 14 | 11 | 0 | 14 | 100 |

During the August – April nesting season a total of four nests were recorded within the open-top release pen at Puu O Hoku Ranch and no additional nests were located on the ranch or adjacent areas. Three nests were successful in producing eight goslings and seven were banded. One nest was abandoned.

Maintenance at the three-acre open-top release pen included repair of electric fence and protective iron roofing around the fence-line, and mowing the half-acre around the pen. Ranch personnel mowed a total of 400 acres within the ranch. Additionally, one and three-quarters (1.75) acres of alien vegetation was removed from the release pen by State personnel.

A total of 46 mongoose and three cats were removed around the open-top release pen at the Puʻu o Hōkū Ranch.

### ***Programmatic Safe Harbor Agreement for Nēnē on the Island of Molokaʻi, Hawaiʻi. Approved 2003.***

ITL Licensee: DOFAW to issue Certificates of Inclusion under authority of §195D-22, HRS, to landowners signing Cooperative Agreements.

Project: Encourage private landowner management activities to benefit Nēnē and provide regulatory assurances if Nēnē occupy or breed on their property.

ITL Duration: April 7, 2003 – April 6, 2053

Take Authorization: Any Nēnē or Nēnē habitat above Baseline Conditions, as defined in respective landowner Cooperative Agreements.

Baseline Condition: To be set in each landowner Cooperative Agreement.

Status of ITL and SHA: During the reporting period and to date, there are no landowners enrolled under this SHA; discussions with interested landowners are ongoing.

### *Safe Harbor Agreement for the Introduction of Nēnē to Pi'iholo Ranch, Maui. Approved 2004.*

ITL Licensee: Pi'iholo Ranch, LLC

Project: Establish a Nēnē population on Pi'iholo Ranch.

ITL Duration: The ITL is valid for 50 years from September 21, 2004 to September 20, 2054; the SHA period was from September 21, 2004 to September 20, 2014 (DOFAW is currently in discussion with Pi'iholo Ranch to enter into a new agreement).

*Pi'iholo Ranch on Maui.*

Take Authorization: Incidental take of Nēnē on lands owned or otherwise controlled by Pi'iholo Ranch, LLC.

Baseline Condition: Following Nēnē reintroduction efforts on Maui that began at Haleakalā National Park in 1962, DOFAW began establishing a population in west Maui through a reintroduction program at Hana'ula in 1995. However, prior to the development of the SHA, there had been no known Nēnē sightings at Pi'iholo Ranch premises by DOFAW staff or Ranch personnel. Therefore the baseline condition was determined to be zero.

Status of ITL and SHA: No take of Nēnē was reported this year: The activities under the SHA were construction of a Nēnē release pen, predator control activities around Nēnē nesting and breeding sites, and out-planting native plant species known to be Nēnē food sources. Under the SHA Pi'iholo Ranch was to maintain or improve approximately 600 acres of Nēnē habitat for a period of 10 years.

Nēnē monitoring recorded 21 birds, all banded, on the Ranch throughout the reporting period, of which four were from the original released birds. The population estimate resulted in a population estimate for the Ranch is 23 birds.

Of the 48 birds translocated to the Ranch from 2005-2008 a total of 10 were sighted on Pi‘iholo Ranch during the reporting period.

Table 2 provides survey data for the original 48 birds released to the Ranch. The percentage of the original 48 birds that were re-sighted is a factor of survey effort and does not account for any unknown mortality or emigration from the ranch, and may not necessarily be a measure of release success.

Table 2. Observations of Nēnē translocated to Pi‘iholo Ranch

| Year | No. of Birds Translocated | Total Birds Translocated | No. of Known Fatalities | No. of Birds Sighted | Percentage (%) of Translocated Birds Sighted (excluding known fatalities) |
|---|---|---|---|---|---|
| 2017 | 0 | 48 | 0 | 4 | 9 |
| 2016 | 0 | 48 | 0 | 9 | 20 |
| 2015 | 0 | 48 | 0 | 10 | 23 |
| 2014 | 0 | 48 | 0 | 10 | 23 |
| 2013 | 0 | 48 | 0 | 11 | 25 |
| 2012 | 0 | 48 | 0 | 11 | 25 |
| 2011 | 0 | 48 | 1 | 16 | 36 |
| 2010 | 0 | 48 | 0 | 23 | 51 |
| 2009 | 0 | 48 | 1 | 26 | 58 |
| 2008 | 10 | 48 | 0 | 30 | 65 |
| 2007 | 25 | 38 | 2 | 26 | 72 |
| 2006 | 8 | 13 | 0 | 12 | 92 |
| 2005 | 5 | 5 | 0 | 5 | 100 |

During the breeding season 10 nests were observed within the Pi‘iholo Ranch open-top release pen. One nest was successful this year and produced one fledgling. Two nests were abandoned and two were depredated. No fledglings successfully fledged this season.

The open-top pen’s fence-line was continuously checked and maintained throughout the year. The fence was repaired and grass mowed at the open-top release pen.

Predator control efforts resulted in a total of eight mongoose and four mice trapped and removed around the open-top release pen at Pi‘iholo Ranch.

***Safe Harbor Agreement for the Reintroduction of Nēnē to Haleakalā Ranch, Island of Maui. Approved 2012.***

ITL Licensee: Haleakalā Ranch Company

Project: Establish a Nēnē population on Haleakalā Ranch, Maui.

ITL Duration: The ITL is valid for 50 years from May 22, 2012 to May 21, 2062; the SHA was never finalized (DOFAW is currently in discussion with Haleakala Ranch to enter into an agreement).

Take Authorization: Incidental take of Nēnē on lands owned or otherwise controlled by Haleakalā Ranch.

Baseline Condition: There had been no Nēnē sightings at Haleakalā Ranch by DOFAW staff or ranch personnel, prior to execution of the SHA. Therefore the baseline condition was determined to be zero.

Status of ITL and SHA: No take of Nēnē at Haleakalā Ranch was reported this year: Although a signed Haleakalā Ranch SHA is not yet in place, DOFAW in cooperation with Haleakalā Ranch has constructed a two-acre Nēnē release pen, conducts predator control activities around Nēnē nesting and breeding sites; and maintains access roads leading to the Nēnē release pen.

DOFAW conducted regular monitoring during the reporting period at Haleakalā Ranch. A total of 44 banded birds were recorded this season at the pen, of which nine were Kauai translocated birds. During the August 24, 2016 annual island wide survey, seven Nēnē were observed at Haleakala Ranch's open-top release pen. The estimated population for Haleakala Ranch is 46 nene.

A total of 53 birds were translocated to Haleakalā Ranch between 2011 – 2016. A total of 55 banded birds were sighted at Haleakala Ranch during the reporting period. On August 11, 2015, a Maui Island-wide Nene Survey was conducted, where twelve (12) banded Nēnē were counted at Haleakala Ranch. Data obtained from yearly sightings produced an estimated population of 61 birds for Haleakala Ranch.

Table 3 provides survey data for the original 53 birds translocated to the Ranch. Seven Nēnē (four adults and three goslings) from Kauaʻi and one injured bird from Molokaʻi were translocated to Haleakalā Ranch during this reporting period. The percentage of the original 53 birds that were re-sighted is a factor of survey effort and does not account for any unknown mortality or emigration from the ranch, and may not necessarily be a measure of release success.

A total of ten (10) other birds were captured in Central Maui and relocated to Haleakala Ranch pens.

Table 3. Observations of Nēnē translocated to Haleakala Ranch

| Year | No. of Birds Translocated | Total Birds Translocated | No. of Known Fatalities | No. of Birds Sighted | Percentage (%) of Translocated Birds Sighted (excluding known fatalities) |
|---|---|---|---|---|---|
| 2017 | 0 | 53 | 0 | 19 | 40 |
| 2016 | 8 | 53 | 0 | 28 | 60 |
| 2015 | 8 | 45 | 1 | 25 | 64 |
| 2014 | 0 | 37 | 2 | 23 | 84 |
| 2013 | 7 | 37 | 1 | 31 | 91 |
| 2012 | 20 | 30 | 2 | 30 | 100 |
| 2011 | 10 | 10 | 0 | 10 | 100 |

Six nests were found in the open-top release pens this season. All six nests were successful and produced 14 fledglings that successfully fledged the pen, of which 12 were banded prior to leaving the pen.

The fence-line and electric fence were checked and repaired as needed. The water unit was checked and maintained. The release pen and areas surrounding were kept mowed. Alien vegetation was removed from the pen.

Predator control efforts resulted in a total of three mongoose and one rat removed around the open-top release pen.

### *Safe Harbor Agreement for the Koloa Maoli or Hawaiian Duck (Anas wyvilliana) and the Nēnē or Hawaiian Goose (Branta sandvicensis) on Umikoa Ranch, Island of Hawai'i. Approved 2001.*

ITL Licensee: Umikoa Ranch

Project: Establish a Koloa and Nēnē population on privately owned lands of Umikoa Ranch in the Hamakua District of Hawai'i Island.

*Koloa Maoli or Hawaiian Duck, endemic to the Hawaiian Islands.*

ITL Duration: The ITL is valid from December 5, 2001 to December 4, 2100; the SHA period is from December 5, 2001 to December 4, 2021.

Take Authorization: Incidental take of Nēnē and Koloa, including their progeny, on lands owned or otherwise controlled by Umikoa Ranch, provided that such take is above established baseline conditions.

Baseline Condition: The Baseline Conditions for Koloa and Nēnē were determined from monthly biological surveys conducted between January and October 2000. During this time there were five existing ponds ranging from 0.12 to 0.30 acres, providing approximately one acre of open water habitat, in addition to five acres of adjacent upland habitat. Surveys indicated that the Umikoa wetland area was frequented by a single pair of wild Koloa. Therefore, the baseline for Koloa was determined to be two individuals, one acre of open water habitat, and five acres of adjacent upland habitat. The baseline for Nēnē was determined to be zero.

Status of ITL: Umikoa Ranch is maintaining fencing around ten ponds, consisting primarily of open water, and surrounding riparian and associated upland habitat totaling a minimum of 50 acres.

No Koloa or Nēnē were reported using the ponds in the reporting period. The fencing and maintenance of the ponds do support Koloa and Nēnē habitat. No non-native waterfowl were reported using the ponds during the reporting period. Stray dogs are controlled.

## CONDITION OF THE ENDANGERED SPECIES TRUST FUND

Act 144, SLH 2004 established the Endangered Species Trust Fund, with purposes set forth in Section 195D-31, HRS.

| Description | Expenditure | Revenue | |
|---|---|---|---|
| Beginning Cash Balance | | $ 1,462,095 | |
| Outstanding Encumbrances FY2016 | $ 1,066,015 | | |
| Expenditures in FY2016 | $ 399,129 | | |
| Total in Encumbrances from previous years | $ 379,006 | | |
| Funds to Implement Obligations of a Habitat Conservation Plan | | $ 679,149 | |
| Private Contributions for the Management and Recovery of Hawaii's Native Wildlife | | $1,337,214 | |
| **Subtotal Ending Balance** | | | **$2,013,314** |
| **Total in Encumbrances** | | | $ 1,445,021 |
| **Total in ESTF in FY16** | | | $ 3,458,336 |
| Funds rolled over from previous years HCP Technical Assistance Program | | $51,982 | |
| Funds Received as Payment for the Use of the HCP Technical Assistance Program | | $11,349 | |
| **Total in ESTF (including outstanding encumbrances)** | | | **$ 3,521,667** |

## RECOMMENDATIONS TO FURTHER THE PURPOSES OF CHAPTER 195D, HRS

Habitat Conservation Plans and SHAs are necessary tools in Hawai‘i to achieve endangered species protection while balancing growth and addressing the need for energy independence. FY 2017 marks the nineteenth year since implementation of Chapter 195D, HRS, to include the issuance of ITLs. The program has demonstrated successes over the last nineteen years.

The following are recommendations to further improve implementation of Chapter 195D, HRS.

- Increase staff capacity statewide for HCPs by providing for a fully funded State civil service position to effectively track and monitor funds and expenditures related to each Habitat Conservation Planning project. The staff within DLNR/DOFAW is currently three members in administration managing statewide HCP and SHA projects and reviewing all projects statewide with the potential to impact threatened or endangered species. Additional staff are supported by grant to produce standalone HCPs. Additional staff capacity would allow development of administrative rules for the program (described in the last bullet), development of procedures for promoting consistency in HCPs, conducting follow-up monitoring for development projects, and implementation and management of mitigation and other projects that are extremely beneficial for the recovery of Hawai‘i’s threatened and endangered species.
- Conduct an analysis of the cumulative-effects of ITLs on threatened and endangered species.
- Continue fostering partnerships between DLNR/DOFAW, other State and Federal agencies, and private landowners to ensure program success.
- Conduct additional outreach to further educate private landowners and developers on the benefits of HCPs and SHAs.
- Provide resources to establish a habitat/conservation banking system as authorized under Section 195D-21(b)(1), HRS.
- Establish administrative rules under Chapter 195D, HRS, to provide guidelines, limitations, and parameters specific to the authority provided under Chapter 195D, HRS.

For information on DLNR’s Endangered Species Recovery Committee, please see http://dlnr.hawaii.gov/wildlife/esrc/. For a full listing of the State’s Habitat Conservation Plans and license-holder annual reports please see http://dlnr.hawaii.gov/wildlife/hcp/approved-hcps/

For further information on the State’s Habitat Conservation Plans contact:

Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, HI 96813
Email: Katherine.Cullison@hawaii.gov
Telephone: (808) 587-4148
Internet: http://dlnr.hawaii.gov/wildlife