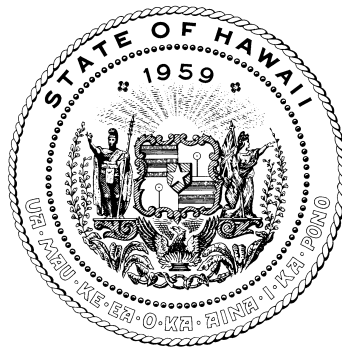


REPORT TO THE TWENTY-SEVENTH LEGISLATURE  
REGULAR SESSION OF 2014

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, 2012 – JUNE 30, 2013



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  
November 2013

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, 2012 – JUNE 30, 2013

**PURPOSE**

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

- The effectiveness of Habitat Conservation Plans and Safe Harbor Agreements 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 established under §195D-31, HRS; and
- Recommendations to further the purposes of Chapter 195D, HRS.

Incidental Take Licenses are issued in conjunction with an approved Habitat Conservation Plan (HCP) or Safe Harbor Agreement (SHA) for the legal take<sup>1</sup> of threatened or endangered species, if such take is incidental to an otherwise lawful activity. Habitat Conservation Plans and Safe Harbor Agreements are important management tools in the State of Hawai‘i as they accomplish the following:

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

This annual report is submitted to fulfill the reporting requirement for Fiscal Year (FY) 2013 and provides detailed information for 10 HCPs and 5 SHAs approved under the Incidental Take License (ITL) program. The report is organized by HCP project type, provides an overview of SHAs, describes the condition of the Endangered Species Trust Fund, and concludes with recommendations to further the purposes of Chapter 195D, HRS.

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<sup>1</sup> “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 (HRS §195D-2).

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

*Transportation Projects*

**Habitat Conservation Plan for *Abutilon menziesii* at Kapolei, O‘ahu. Approved 2004.**

ITL Licensee: Hawai‘i Department of Transportation

Project: Development of 1,300 acre East Kapolei Master Plan project and construction of the North-South Road arterial highway planned to bisect the 1,300 acre property.

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

Take Authorization: All plant individuals of *Abutilon menziesii* within the 1,381 acre project area.



*Ko'oloa'ula (Abutilon menziesii), Island of O'ahu.*

Mitigation Status: The goal of the HCP is to initiate and sustain a program which would result in an overall net gain in the number of endangered *Abutilon menziesii* plants on O‘ahu. The end goal is the establishment of three protected self-sustaining populations of *A. menziesii* from the single degraded Kapolei population. Populations of *A. menziesii* have been successfully established at the following sites: 1) Diamond Head State Park; 2) Koko Crater Botanical Garden; 3) Honouliuli Refuge part of the U.S. Fish and Wildlife Service (USFWS) O‘ahu National Wildlife Refuge Complex; and 4) Pouhala Marsh on City and County property in Waipahu. From an original founder population of 93 plants on the project site in 2002, outplanting efforts have resulted in establishment of 435 mature *A. menziesii* plant individuals throughout the four off-site mitigation areas. A Division of Forestry and Wildlife (DOFAW) Horticulturist and Botanist are working to ensure successful natural regeneration of outplanted individuals. Current monitoring data indicate that a total of 10 seedlings from outplanted individuals have survived beyond three years. The goal in the next fiscal year is to increase the survival of seedlings from natural generation through weed management, education, outreach, and site maintenance.

Funding Source and Status: Funding to implement mitigation activities were provided to DOFAW from the Hawai‘i Department of Transportation. Table 1 provides the HCP summary of revenue and expenditures. Act 328, SLH 1997 established a separate appropriation (S-97-800) for transactions related to the *Abutilon menziesii* HCP.

Table 1. Summary of Revenue and Expenditures for the *Abutilon menziesii* HCP at Kapolei.

<b>Description</b>	<b>Revenue</b>	<b>Expenditure</b>
Beginning cash balance	\$555,352.96	
Interest earned in FY13	\$1,801.19	
Expenditures in FY13		\$71,097.45
<b>Ending cash balance</b>		<b>\$486,056.70</b>

*Wind Energy Facilities and Structures*

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

ITL Licensee: Kaheawa Wind Power, LLC; First Wind

Project: Twenty Wind Turbine Generators (WTGs) with a total 30 megawatt (MW) energy generating capacity.

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



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

Take Authorization Over 20-year Term:

Common Name	Scientific Name	Baseline Limit <sup>2</sup>	Higher Limit <sup>2</sup>
‘Ua‘u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	25	38
‘A‘o or Newell’s Shearwater	<i>Puffinus auricularis newelli</i>	4	8
Nene or Hawaiian Goose	<i>Branta sandvicensis</i>	60	n/a
‘Ope‘ape‘a or Hawaiian Hoary Bat	<i>Lasiurus cinereus semotus</i>	20	n/a

Status of ITL: Table 2 provides a listing of all documented wildlife fatalities during the reporting period.

Table 2. Documented wildlife fatalities at KWP I during the reporting period. Each row represents one individual. Each Wind Turbine Generator (WTG) has a unique number at each facility. The Location column identifies the WTG where the carcass was found, followed by the distance in meters to that particular turbine.

Common Name	Date	Location (WTG)	Distance to Turbine (m)	ITL Covered Species (Yes/No)
Hawaiian Petrel	07/12/12	10/11	18	Yes
Ring-necked Pheasant	08/23/12	1	1	No
Japanese White-eye or Mejiro	10/11/12	11	64	No
Nene	01/03/13	20	29	Yes
Nene	01/15/13	15	31	Yes
Unidentified Bird	01/22/13	6	24	n/a
Nene	01/30/13	7	n/a	Yes
Unidentified Bird	01/30/13	Meteorological Tower #2	17	n/a
Sooty Tern	02/06/13	MECO Substation	123	No
Eurasian Skylark	03/07/13	15	43	No
Nene	03/12/13	6	46	Yes
Hawaiian Hoary Bat	04/11/13	8	33	Yes
White-tailed Tropicbird	04/15/13	1	29	No
Hawaiian Hoary Bat	04/17/13	2	39	Yes
Wedge-tailed Shearwater	04/17/13	1	51	No

<sup>2</sup> Take authorization is delineated by Baseline and Higher limits or in some cases Tiers. These demarcations serve as adaptive management triggers to ensure that mitigation keeps pace with take. If regulatory agencies anticipate authorized take to be exceeded, then the ITL licensee is required to seek a major amendment and provide a plan to achieve mitigation. ITL major amendments require approval from the Board of Land and Natural Resources.

Table 2. continued.

Unidentified Bird	04/22/13	5	73	n/a
Myna	05/08/13	12	37	No
Eurasian Skylark	05/21/13	16	unknown	No
Unidentified Bird	06/14/13	4	40	n/a

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. In order to determine the overall status of an ITL and thus the overall impact to threatened and endangered species, wind developers are required to implement the following two components as part of downed wildlife monitoring: 1) searcher efficiency (SEEF) studies to provide estimates of how effective searchers are at finding carcasses; and 2) carcass retention (CARE) studies to estimate the average time an avian or bat carcass remains detectable to searchers before being removed by scavengers or otherwise rendered undetectable due to decomposition. SEEF and CARE data are then combined with actual documented fatalities using the best available scientific information<sup>3</sup> to determine the total adjusted take of a wind energy facility. The science behind estimating take at wind energy facilities is evolving nationwide and DOFAW will continue to use the best available scientific information, in partnership with federal agencies and wind developers. Table 3 provides an estimate of the overall total adjusted take that has occurred since KWP I ITL issuance.

Table 3. Total observed fatalities including those from previous years (FY 2006-FY 2012) and estimated total adjusted take covered under the KWP I ITL as of June 30, 2013. There have been no reported injuries or fatalities of the Newell's Shearwater. All take estimates presented below are rounded to whole numbers for mitigation and ITL compliance purposes.

<b>Common Name</b>	<b>Total Observed Take from Previous Years + Take in FY13</b>	<b>Estimated Unobserved Take</b>	<b>Total Adjusted Take (mean)</b>	<b>Statistical conclusion<sup>4</sup></b>
Hawaiian Petrel	4	3.70	7.70	95% certain that no more than 9 fatalities have occurred
Nene	14	2.97	16.97	95% certain that no more than 20 fatalities have occurred
Hawaiian Hoary Bat	4	4.49	8.49	95% certain that no more than 14 fatalities have occurred

**Mitigation Status:** Mitigation for the take of Nene at the Baseline level consists of providing funding to DOFAW for the construction of a release pen, and to support propagation and release of 50 Nene. Construction of a new release pen for Nene on Maui was completed and the first group of

<sup>3</sup> In June 2013, DOFAW consulted with statisticians from the U.S. Geological Survey and U.S. Fish and Wildlife Service to ensure the best available scientific methods are used for estimating wind farm fatalities in Hawai'i. Citation for current method used throughout this report to estimate total adjusted take at wind energy facilities: Huso, M. and D. Dalthorp. 2013. Evidence of Absence User's Guide: U.S. Geological Survey Data Series, Unpublished.

<sup>4</sup> These statistical conclusions provided throughout this report are based on the best available scientific information at the time of writing and may change as the model and search protocols are refined.

10 birds was released on May 5, 2011. An additional 12 birds were released in early September 2011, followed by another eight birds in April 2012; totaling 30 birds released at the protected off-site area. Payments in the amount of \$264,000 were made to DOFAW from 2008-2011 in accordance with the HCP. DOFAW will continue to monitor the reproductive success and movement of Nene on Maui.

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 construction and management of two 4-5 acre predator-free fenced enclosures (one for each species), provisioned with artificial burrows and social attraction, at the Makamaka'ole site in West Maui. Planning began soon after ITL issuance and permits for the enclosures were obtained in late



*Enclosure A at the Makamaka'ole seabird mitigation site, West Maui, completed in May 2013.*

2012/early 2013. Construction of enclosure A (Newell's enclosure) began in early 2013 and was subsequently put on hold during the rainy season. Construction recommenced in April and enclosure A was completed in late May 2013 (see photograph). The Makamaka'ole

Predator-proof Enclosures for Seabird Protection are expected to be completed by early fall 2013. When complete, these enclosures will be the first of their kind in Hawai'i and will serve to inform future seabird protection efforts world-wide. DOFAW will continue to work closely in partnership with First Wind staff and contractors to ensure future success of the project.

Baseline mitigation for the Hawaiian Hoary Bat includes providing \$20,000 in support of Bat research in Hawai'i. Bats continue to be monitored using Anabat™ acoustic detection and recording instruments. Since bat monitoring using acoustic sensors began in 2008, two stations have been set up at KWP I and maintained as reference stations (Detectors 10 and 19). Overall, 17 qualifying bat passes were documented within the monitoring area in gulches surrounding the project site from July 1, 2012 through June 30, 2013. Passes are defined as call sequences containing three or more distinct call pulses. The majority of the documented passes (59%) were recorded during October 2012 at two Anabat™ stations (detector ID 22 & 26); consequently October also had the highest mean detection rate.

Funding Status: First Wind is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, First Wind used their own procurement processes to obtain equipment and services.

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

ITL Licensee: Kaheawa Wind Power, LLC; First Wind

Project: Fourteen wind turbine generators (WTGs) with a total 21 megawatt (MW) energy generating capacity. Project is makai and adjacent to KWP I.

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

Take Authorization Over 20-year Term:

Common Name	Scientific Name	Level of Take	5-year Limit	20-year Limit
‘Ua‘u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	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	<i>Puffinus auricularis newelli</i>	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
Nene or Hawaiian Goose	<i>Branta sandvicensis</i>	Tier 1	8 adults/ juveniles & 1 fledgling	18 adults/ juveniles & 3 fledglings
		Tier 2	12 adults/ juveniles & 3 fledgling	27 adults/ juveniles & 3 fledgling
‘Ope‘ape‘a or Hawaiian Hoary Bat	<i>Lasiurus cinereus semotus</i>	Tier 1	6 adults & 3 juveniles	6 adults & 3 juveniles
		Tier 2	9 adults & 5 juveniles	9 adults & 5 juveniles

Status of ITL: Table 4 provides a listing of all documented wildlife fatalities during the reporting period.

Table 4. Documented wildlife fatalities at KWP II during the reporting period. Each row represents one individual. Each wind turbine generator (WTG) has a unique number at each facility. The Location column identifies the WTG where the carcass was found, followed by the Distance in meters to that particular turbine.

Common Name	Date	Location (WTG)	Distance to Turbine (m)	ITL Covered Species (Yes/No)
White-tailed Tropicbird <sup>5</sup>	07/18/12	13	100	No
Pigeon	07/30/12	14	300	No
Apapane	12/22/12	6	60	No

<sup>5</sup> This White-tailed Tropicbird discovered on 07/18/12 was found alive but with 75% of its left wing missing; the bird was humanely euthanized by wildlife officials.

Table 4. continued.

Eurasian Skylark	02/08/13	2	27	No
Eurasian Skylark	03/05/13	2	7	No
Dove	03/07/13	Substation	n/a	No
Hawaiian Hoary Bat	03/13/13	6	17	Yes
Nene	04/22/13	1	31	Yes

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. Please see additional text on page 4, for background information on total adjusted take calculated at the KWP II wind energy facility. Table 5 provides an estimate of the overall total adjusted take that has occurred since KWP II ITL issuance.

Table 5. Total observed fatalities since ITL issuance and estimated total adjusted take covered under the KWP II ITL as of June 30, 2013. There have been no reported injuries or fatalities of the Newell’s Shearwater or Hawaiian Petrel at the KWP II facility. All take estimates presented below are rounded to whole numbers for mitigation and ITL compliance purposes.

Common Name	Total Observed Take since ITL issuance	Estimated Unobserved Take	Total Adjusted Take (mean)	Statistical conclusion
Nene	1	.205	1.205	95% certain that no more than 2 fatalities have occurred
Hawaiian Hoary Bat	1	1.813	2.83	95% certain that no more than 7 fatalities have occurred

Mitigation Status: The KWP II HCP requires that mitigation for Nene occur in the form of a Nene protected release pen before June 2015 or earlier with six months notification from DOFAW. Management of the release pen during preconstruction and construction is the responsibility of First Wind staff. In accordance with the KWP II HCP, systematic visual observations of Nene were made at KWP II during Year 1. Nene activity was monitored from one turbine within upper, middle, and lower sections of the site for at least three hours each week. Monitoring times and locations were chosen at random. As prescribed in the HCP, the objective of these observations is to document how Nene use the project area following construction and to record observations of Nene behavior and activity in the vicinity of the WTGs, including in-flight response to collision hazards (e.g., changing flight direction to avoid WTGs).

Observation data showed that out of the 126 observation periods, only 11 surveys reported seeing or hearing Nene. Additional data collection of Nene activity at KWP II will continue for the life of the project through the Wildlife Education Observation Program (WEOP) implemented at the Kaheawa wind energy facilities.

In addition to seabird mitigation activities underway in conjunction with KWP I at Makamaka‘ole (see page 5), KWP II is also required to conduct surveys consisting of at least 14 survey nights, and no more than 20 nights, not necessarily consecutive, for each site where access is granted and



evidence suggests birds are present in sufficient numbers between the months of May-August. Site surveys were initiated at Kahakuloa, Maui in June 2012 and permits were obtained to conduct the remaining surveys. Avian monitoring is scheduled to continue during Year three of the project. All seabird mitigation activities are conducted under close coordination with DOFAW and other appropriate State agencies.

In accordance with the KWP II HCP, baseline mitigation for the Hawaiian Hoary Bat will consist of funding studies intended to provide a better understanding of the status and distribution of the species on Maui in order to facilitate future State, Federal, or private conservation and management efforts. First Wind KWP II has provided DOFAW an initial payment of \$53,130 for bat research. DOFAW is working closely with First Wind and the USGS Biological Resources Division to complete a bat management research plan for Maui.

Funding Status: First Wind is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, First Wind used their own procurement processes to obtain equipment and services.

**Habitat Conservation Plan for the Construction and Operation of the Lana‘i Meteorological Towers, Lana‘i, Hawai‘i. Approved 2008.**

ITL Licensee: Castle & Cooke Resorts, LLC

Project: Install six 50-meter-tall (165-foot-tall) meteorological (met) towers to collect data on wind speeds and patterns throughout the northern portion of Lana‘i island.

ITL Duration: October 10, 2008 – March 1, 2016

Take Authorization Over 8-year Term:

Common Name	Scientific Name	Level of Take	Authorized Over Entire ITL Duration
‘Ua‘u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	Tier 1	7 adults/ juveniles
		Tier 2	14 adults/ juveniles
‘A‘o or Newell’s Shearwater	<i>Puffinus auricularis newelli</i>	Tier 1	2 adults/ juveniles
		Tier 2	n/a
Ae‘o or Hawaiian Stilt	<i>Himantopus mexicanus knudseni</i>	Tier 1	2 adults
		Tier 2	n/a
‘Ope‘ape‘a or Hawaiian Hoary Bat	<i>Lasiurus cinereus semotus</i>	Tier 1	2 adults
		Tier 2	n/a

Status of ITL: There were no observed wildlife fatalities during the reporting period. In 2013, as in the previous years, no carcasses or injuries of the four ITL covered species were found during standardized downed wildlife surveys or incidentally by searchers. In February 2010, five of the six met towers were taken down, leaving only one tower in operation. Since 2010, the single remaining tower is required to have flagging and bird diverter hardware installed on the tower and all guyed-wires to increase visibility of the tower to birds and bats. Standardized downed wildlife surveys will continue in accordance with the approved HCP, throughout the duration of the ITL.

Mitigation Status: Since HCP approval, Castle & Cooke Resorts has provided to DOFAW \$252,203 to conduct habitat restoration and predator control at the Lanaihale mitigation site. In accordance with the HCP, the two-year mitigation project was complete in March 2010. DOFAW will continue monitoring and maintaining the restoration area pursuant to the conditions outlined in the Memorandum of Agreement between DOFAW and Castle & Cooke. It is noted that all HCPs require mitigation sites be protected in perpetuity.

Funding Status: Castle & Cooke Resorts, LLC is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, Castle & Cooke used their own procurement processes to fulfill HCP obligations.

**Kahuku Wind Power Habitat Conservation Plan, O‘ahu, Hawai‘i. Approved 2010.**

ITL Licensee: Kahuku Wind Power, LLC; First Wind

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

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

Take Authorization Over 20-year Term:

Common Name	Scientific Name	Level of Take	Annual Take Limit <sup>6</sup>	5-year Limit <sup>7</sup>	20-year Limit <sup>6</sup>
‘Ua‘u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	Baseline	4	8 adults/ juveniles	8 adults/ juveniles
		Higher	8	12 adults/ juveniles	12 adults/ juveniles
‘A‘o or Newell’s Shearwater	<i>Puffinus auricularis newelli</i>	Baseline	3	9 adults/ juveniles	12 adults/ juveniles
		Higher	6	12 adults/ juveniles	18 adults/ juveniles
Koloa Maoli or Hawaiian Duck	<i>Anas wyvilliana</i>	Baseline	4	12 adults/ juveniles	16 adults/ juveniles
		Higher	8	16 adults/ juveniles	24 adults/ juveniles
Ae‘o or Hawaiian Stilt	<i>Himantopus mexicanus knudseni</i>	Baseline	3	9 adults/ juveniles	12 adults/ juveniles
		Higher	6	12 adults/ juveniles	18 adults/ juveniles
‘Alae Ke‘oke‘o or Hawaiian Coot	<i>Fulica alai</i>	Baseline	3	9 adults/ juveniles	12 adults/ juveniles
		Higher	6	12 adults/ juveniles	18 adults/ juveniles
‘Alae ‘Ula or Hawaiian Moorhen	<i>Gallinula chloropus sandvicensis</i>	Baseline	4	10 adults/ juveniles	14 adults/ juveniles
		Higher	7	14 adults/ juveniles	20 adults/ juveniles
‘Ope‘ape‘a or Hawaiian Hoary Bat	<i>Lasiurus cinereus semotus</i>	Baseline	7	18 adults/ juveniles	21 adults/ juveniles
		Higher	14	21 adults/ juveniles	32 adults/ juveniles
Pueo or Hawaiian Owl	<i>Asio flammeus sandwichensis</i>	Baseline	4	12 adults	16 adults
		Higher	8	16 adults	24 adults

Status of ITL: Table 6 provides a listing of all documented wildlife fatalities at the Kahuku Wind Power facility during the reporting period.

<sup>6</sup> 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.

<sup>7</sup> “5-Year” and “20-year” take limits are cumulative for the respective period of years.

Table 6. Documented wildlife fatalities at Kahuku Wind Power during the reporting period. Each row represents one individual. Each wind turbine generator (WTG) has a unique number at each facility. The Location column identifies the WTG where the carcass was found, followed by the Distance in meters to that particular turbine.

Common Name	Date	Location (WTG)	Distance to Turbine (m)	ITL Covered Species (Yes/No)
Wedge-tailed Shearwater	11/16/12	4	55	No
Wedge-tailed Shearwater	11/20/12	12	44	No
Kolea, Pacific Golden Plover	12/12/12	Substation	n/a	No
Common Barn Owl	04/23/13	11	490	No

No injury or fatality of a threatened or endangered species was found during the reporting period. On August 1, 2012 a fire at the Kahuku Wind project shut down energy generation. While the facility is shut down or off-line, blades of the non-operating turbines are kept in a “feathered” position, meaning the blades do not catch the wind and rotor rotation is minimal. However, some rotation is necessary in order to properly circulate the lubricating fluids within the gearboxes. By agreement with USFWS and DOFAW, starting September 2012 downed wildlife searches around the WTGs and met tower were reduced to the 50% radius (64 meters from the base of the turbine) once each week. The reduced search protocol will continue while the project is off-line, provided the operational mode of the turbines continues as described and blade rotation is minimal. Table 7 provides an estimate of the overall total adjusted take that has occurred since Kahuku Wind ITL issuance.

Table 7. Total observed fatalities since ITL issuance and estimated total adjusted take covered under the Kahuku Wind Power ITL as of June 30, 2013. There have been no reported injuries or fatalities of the seven other protected species covered under the ITL. All take estimates presented below are rounded to whole numbers for mitigation and ITL compliance purposes.

Common Name	Total Observed Take Since ITL Issuance	Estimated Unobserved Take	Total Adjusted Take (mean)	Statistical conclusion
Hawaiian Hoary Bat	3	1.29	4.29	n/a <sup>8</sup>

DOFAW and USFWS work closely with all wind facilities to ensure the best available scientific information is used to determine downed wildlife search protocols. A portion of the wildlife monitoring plot for WTG 10 and 11 falls within Kalaheokahipu Gulch (see photograph to the right). This portion of WTG’s 10 and 11 monitoring plots are considered unmanageable and adjustments will be made in the next fiscal year to account for any take of covered species that may occur but are not recovered from this unsearchable area.



*Kalaheokahipu Gulch near WTG 11 at the Kahuku Wind Power facility.*

**Mitigation Status:** In accordance with the Kahuku Wind HCP, the seabird mitigation plan for Newell’s Shearwater and Hawaiian Petrel requires First Wind to fund seabird colony-based protection and management measures on the island of Kauai. In June 2013, staff from the DOFAW Kauai Endangered Seabird Recovery Project, in coordination with DOFAW District staff and First

<sup>8</sup> Due to the change in search interval, search radius, and turbine feathering as a result of the facility fire, it is not possible to form a valid statistical conclusion for take estimation at Kahuku Wind during this reporting period.

Wind, deployed Wildlife Acoustic™ Songmeters at four locations on Kauai to determine seabird activity. Once suitable sites are confirmed, colony protection funded by Kahuku Wind Power is expected to begin next year.

Baseline mitigation for the four waterbird species covered under the ITL consists of Kahuku First Wind payments to DOFAW to conduct predator control and wetland restoration at Hamakua Marsh, part of the State’s Kawainui-Hamakua Marsh Complex. In January 2013, Kahuku First Wind provided DOFAW \$153,500 to conduct waterbird mitigation as outlined in the HCP. During the reporting period a total of 50 staff hours were spent conducting waterbird surveys and an additional 60 hours spent on vegetation maintenance. Survey results indicate that two, 19, and 11 new fledglings of the Hawaiian Coot, Moorhen, and Stilt, respectively were observed at Hamakua Marsh during the reporting period.



*'Alae 'Ula or Hawaiian Moorhen foraging at Hamakua Marsh.*

In accordance with the Kahuku Wind HCP, baseline bat mitigation consisted of a \$150,000 payment to DOFAW procured on May 31, 2012. Mitigation for the Hawaiian Hoary Bat is being planned for the Kahikinui and Nakula area on the island of Maui. DOFAW is working closely with First Wind and the USGS Biological Resources Division to complete a bat management plan for the area.

Baseline mitigation for the Pueo consisted of a \$25,000 payment to DOFAW in December 2010, to initiate the first Pueo research on O‘ahu aimed at determining population status and management priorities. DOFAW is working with other researchers in the continental U.S. to develop a Pueo research plan for O‘ahu by pooling several different funding sources. In July 2013, Kahuku First Wind contributed an additional \$25,000 for Pueo mitigation and provided the funding directly to the Hawaii Wildlife Rehabilitation Center on Hawai‘i Island.

**Funding Status:** Kahuku Wind Power, LLC is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. Below is solely a breakdown of revenue and expenditures related to DOFAW’s implementation of waterbird mitigation at Hamakua Marsh.

<b>Description</b>	<b>Revenue</b>	<b>Expenditure</b>
Revenue rolled over from previous years	\$90,004.83	
<b>Total revenue in FY13</b>	<b>\$153,000</b>	
Expenditures in FY13		\$45,773.83
<b>Ending cash balance</b>		<b>\$197,231</b>

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

ITL Licensee: Kawailoa Wind Power, LLC; First Wind

Project: Thirty wind turbine generators (WTGs) with a total 69 megawatt (MW) energy generating capacity.

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

Take Authorization Over 20-year Term:

Common Name	Scientific Name	Level of Take	5-year Limit <sup>9</sup>	20-year Limit <sup>8</sup>
‘A‘o or Newell’s Shearwater	<i>Puffinus auricularis newelli</i>	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	<i>Anas wyvilliana</i>	Tier 1	4 adults/ juveniles & 4 ducklings	4 adults/ juveniles & 4 ducklings
		Tier 2	6 adults/ juveniles & 6 ducklings	6 adults/ juveniles & 6 ducklings
Ae‘o or Hawaiian Stilt	<i>Himantopus mexicanus knudseni</i>	Tier 1	6 adults/ juveniles & 3 fledglings	8 adults/ juveniles & 4 fledglings
		Tier 2	8 adults/ juveniles & 4 fledglings	12 adults/ juveniles & 6 fledglings
‘Alae Ke‘oke‘o or Hawaiian Coot	<i>Fulica alai</i>	Tier 1	6 adults/ juveniles & 3 fledglings	8 adults/ juveniles & 4 fledglings
		Tier 2	8 adults/ juveniles & 4 fledglings	12 adults/ juveniles & 6 fledglings
‘Alae ‘Ula or Hawaiian Moorhen	<i>Gallinula chloropus sandvicensis</i>	Tier 1	6 adults/ juveniles & 3 fledglings	8 adults/ juveniles & 4 fledglings
		Tier 2	8 adults/ juveniles & 4 fledglings	8 adults/ juveniles & 4 fledglings
‘Ope‘ape‘a or Hawaiian Hoary Bat	<i>Lasiurus cinereus semotus</i>	Tier 1	16 adults & 8 juveniles	16 adults & 8 juveniles
		Tier 2	24 adults & 12 juveniles	32 adults & 16 juveniles
		Tier 3	32 adults & 16 juveniles	48 adults & 24 juveniles
Pueo or Hawaiian Owl	<i>Asio flammeus sandwichensis</i>	Tier 1	4 adults & 4 owlets	4 adults & 4 owlets
		Tier 2	6 adults & 6 owlets	6 adults & 6 owlets

Status of ITL: Table 8 provides a listing of all documented wildlife fatalities at the Kawailoa Wind Power facility during the reporting period.

<sup>9</sup> “5-Year” and “20-year” take limits are cumulative for the respective period of years.

Table 8. Documented wildlife fatalities at Kawaihoa Wind Power during the reporting period. Each row represents one individual. Each wind turbine generator (WTG) has a unique number at each facility. The Location column identifies the WTG where the carcass was found, followed by the Distance in meters to that particular turbine.

Common Name	Date	Location (WTG)	Distance to Turbine (m)	ITL Covered Species (Yes/No)
Cook's Petrel	09/18/2012	26	37	No
Zebra Dove	11/16/2012	22	36	No
Zebra Dove	11/26/2012	2	1	No
Hawaiian Hoary Bat	11/27/2012	25	44	Yes
African Silverbill	11/27/2012	25	4	No
African Silverbill	11/27/2012	25	8	No
African Silverbill	11/27/2012	25	41	No
African Silverbill	11/27/2012	25	40	No
Zebra Dove	11/29/2012	28	41	No
African Silverbill	11/30/2012	25	38	No
Common Waxbill	12/03/2012	9	3	No
Common Waxbill	12/6/2012	14	2	No
Zebra Dove	12/20/2012	3	2	No
Zebra Dove	12/21/2012	18	30	No
Zebra Dove	12/21/2012	19	41	No
Spotted Dove	12/24/2012	7	2	No
Common Waxbill	12/26/2012	29	1	No
Zebra Dove	12/27/2012	6	2	No
Zebra Dove	12/28/2012	17	42	No
African Silverbill	12/28/2012	26	90	No
Zebra Dove	01/02/2013	18	57	No
Nutmeg Mannikin	01/03/2013	5	27	No
African Silverbill	01/04/2013	24	78	No
White-tailed Tropicbird	01/15/2013	22	50	No
Spotted Dove	02/01/2013	25	0.5	No
Hawaiian Hoary Bat	02/14/2013	13	51	Yes
Hawaiian Hoary Bat	02/26/2013	26	73	Yes
Zebra Dove	02/26/2013	18	1.5	No
White-tailed Tropicbird	03/07/2013	13	43	No
Red-crested Cardinal	04/02/2013	29	1.8	No
Zebra Dove	04/05/2013	27	4.8	No
Zebra Dove	04/15/2013	15	15	No
Nutmeg Mannikin	04/26/2013	21	22	No
Spotted Dove	04/12/2013	17	3	No
Cattle Egret	05/06/2013	3	64	No
Common Myna	05/14/2013	19	3	No
Red-vented Bulbul	05/23/2013	15	2	No
Common Myna	05/17/2013	26	1	No
Common Myna	06/02/2013	26	2.8	No
Hawaiian Hoary Bat	06/13/2013	15	44	Yes
White-tailed Tropicbird	06/14/2013	29	67	No
Common Myna	06/28/2013	25	2.8	No
Hawaiian Hoary Bat	06/29/2013	3	99	Yes

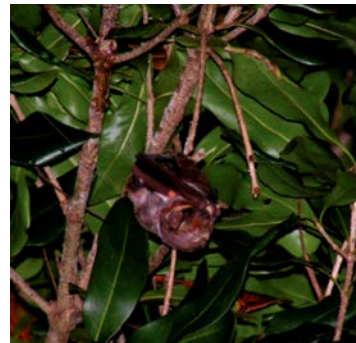
The Kawaiiloa Wind Power began commercial operations on November 2, 2012. Kawaiiloa First Wind staff search 50% of each WTG plot (out to a radius of 75 meters from the base of the turbine) twice per week, and 75% of each WTG plot (out to a radius of 113 meters from the base of the turbine) every two weeks, in accordance with the monitoring protocol prescribed in the HCP. It is in the best interest of the wind developer to search more of an area and increase their searcher efficiency in order to find as many downed wildlife as possible, thus lowering their total adjusted take. DOFAW is committed to working closely with wind developers and scientific experts in order to apply the best knowledge in Hawai'i to minimize and mitigate wildlife impacts.

A total of five Hawaiian Hoary Bat fatalities were observed during the reporting period (with an additional seven Hawaiian Hoary Bat fatalities since the start of FY 2014.) No incidental take of the other six covered species under the ITL occurred during the reporting period. This rapid increase in bat fatalities has prompted First Wind, DOFAW, USFWS, and USGS to work together with Bat Conservation International (BCI) to test new acoustic bat deterrent technology in Hawai'i. Plans began in June 2013 to obtain permission from private landowners on Hawai'i Island to test acoustic non-harmful bat deterrents beginning in the fall of 2013, with results expected by early 2014. If successful, this acoustic technology would be housed within the turbine near the rotors and emit a sound audible only to bats, deterring bats from coming into contact with the turbine.

In August 2013, DOFAW notified Kawaiiloa First Wind that they have exceeded their Tier 1, 5-year Take Limit for the Hoary Bat. As a result, Kawaiiloa First Wind is required to increase mitigation efforts in additional restoration of wetland or forest habitat to increase foraging capacity and provide additional roost trees (see Mitigation Status below.) Plans are underway to further consult with DLNR's Endangered Species Recovery Committee, outside experts, and First Wind officials to ensure future adverse impacts to the Hawaiian Hoary Bat are minimized and mitigated to the maximum extent practicable. Table 9 provides an estimate of the overall total adjusted take at the Kawaiiloa Wind Power facility for the reporting period.



*Hawaiian Hoary Bat carcass at Kawaiiloa Wind Power facility.*



*'Ope'ape'a roosting in a tree.  
Photo by F. Bonaccorso, USGS.*



Table 9. Total observed fatalities since ITL issuance and estimated total adjusted take covered under the Kawailoa Wind Power ITL as of June 30, 2013. There have been no reported injuries or fatalities of the seven other protected species covered under the ITL. All take estimates presented below are rounded to whole numbers for mitigation and ITL compliance purposes.

Common Name	Total Observed Take for FY 2013	Estimated Unobserved Take	Total Adjusted Take (mean)	Statistical conclusion
Hawaiian Hoary Bat	5	3.46	8.46	95% certain that no more than 13 fatalities have occurred

In order to increase statistical power and reduce the range of uncertainty for bat fatalities, Kawailoa First Wind began using specially trained dogs on June 20, 2013 for downed wildlife searches. Three Labrador retrievers began their training in California on October 2012 to detect wildlife carcasses, and are led by a team of specially trained Kawailoa First Wind dog-handlers. DOFAW and USFWS are working with First Wind and other experts nationwide to develop consistent search protocols that could be instituted at other wind energy facilities in Hawai‘i.

Mitigation Status: Baseline Tier 1 bat mitigation required a research component, in accordance with the Kawailoa Wind HCP. In May 2013, First Wind began a cooperative study with the USGS and BCI to intensively monitor bat activity using thermal and near-infrared video cameras. Concurrently BCI began daily searches around selected WTG monitoring plots as part of the study. Results of this study will be used to further understanding of Hawaiian Hoary Bat behavior. After the bat fatality on November 27, 2012 Kawailoa First Wind elected to continue low wind speed curtailment (LWSC) at 5 m/s through the winter months. The HCP requires LWSC initially only during periods known to be highest for bat activity (March through November.) LWSC was required as a result of earlier studies in other states finding that most bat fatalities occurred at relatively low wind speeds. Under LWSC turbine operations are curtailed on nights when winds are light and variable, resulting in minimal rotor rotation.

The broader Hawaiian Hoary Bat mitigation plan is currently being finalized for approval following agency review and comments over the last several months. Plans are underway to focus both waterbird and bat mitigation efforts at ‘Uko‘a Wetland near Hale‘iwa on O‘ahu (see photograph.) Bat activity assessments began at ‘Uko‘a on June 20, 2013 and will continue for the next several years.



*‘Uko‘a Wetland in Hale‘iwa, O‘ahu. Management proposed for FY 2014 would remove invasive species as described in the HCP.*

As part of baseline mitigation for waterbirds, in July 2013 Kawailoa First Wind contractors completed a four-foot high fence to completely enclose 135 acres of ‘Uko‘a Wetland for the protection of waterbirds and bats that are known to forage in the area.

Baseline mitigation for Newell's Shearwater 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. In accordance with the HCP, Kawaihoa First Wind provided \$130,000 to Goodnature™, Ltd. of Wellington, New Zealand in 2012 to develop a self-resetting pest-control trap. Following the development phase, in spring of 2013, First Wind worked with Kaho'olawe Island Reserve Commission and Goodnature™ to deploy 19 prototype traps at Kaho'olawe Island for 6 weeks. Although the traps were not successful during this period, First Wind will continue to work with Goodnature™ and State experts to refine the model. Once the re-setting trap is successful, First Wind will fund the deployment of these traps at a suitable site near a seabird colony on Kaua'i, under DOFAW coordination.

Baseline mitigation for Pueo in FY 2014 consisted of Kawaihoa First Wind providing \$12,500 to the Hawaii Wildlife Rehabilitation Center on Hawai'i Island.

Funding Status: Kawaihoa Wind Power, LLC is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, Kawaihoa First Wind used their own procurement processes to fulfill HCP obligations.

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

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



Auwahi Wind Energy in east Maui.

Project: Eight turbine generators (WTGs) with a total 21 megawatt (MW) energy generating capacity.

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

Take Authorization Over 25-year Term:

Common Name	Scientific Name	Level of Take	25-year Limit <sup>8</sup>
'Ua'u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	Tier 1	19 adults & 7 chicks/eggs
		Tier 2	32 adults & 12 chicks/eggs
		Tier 3	64 adults & 23 chicks/eggs
Nene or Hawaiian Goose	<i>Branta sandvicensis</i>	Length of permit	5 adults
'Ope'ape'a or Hawaiian Hoary Bat	<i>Lasiurus cinereus semotus</i>	Tier 1	5 adults & 2 juveniles
		Tier 2	10 adults & 4 juveniles
		Tier 3	19 adults & 8 juveniles
Blackburn's Sphinx Moth	<i>Manduca blackburni</i>	Not applicable	28-acres permanently disturbed habitat is an index of take

Status of ITL: Table 9 provides a listing of all documented wildlife fatalities at the Auwahi Wind Energy facility during the reporting period. Auwahi Wind Energy began commercial operations on December 28, 2012.

Table 10. Documented wildlife fatalities at Auwahi Wind Energy facility during the reporting period. Each row represents one individual. Each wind turbine generator (WTG) has a unique number at each facility. The Location column identifies the WTG where the carcass was found, followed by the Distance in meters to that particular turbine.

Common Name	Date	Location (WTG)	Distance to Turbine (m)	ITL Covered Species (Yes/No)
White-tailed Tropic Bird	03/21/2013	1	25	No
Common Myna	unknown	unknown	unknown	No

No observed take of the four ITL covered species occurred during the reporting period, thus estimates for adjusted take were not calculated.

Mitigation Status: Baseline Hawaiian Petrel mitigation during the reporting period consisted of petrel burrow monitoring at Kahikinui Forest Reserve to obtain an estimate of the number of active petrel burrows and reproductive (fledging) success. All monitoring protocols followed methods used by the Haleakalā National Park Service. New burrows located in 2013 were marked, mapped, and added to the monitoring dataset. Currently, 58 petrel burrows are being monitored, including

four burrows that were discovered in 2013. To date, signs of depredation have not been observed at any of the monitored burrows. In May 2013, 10 Reconyx game cameras were deployed at active petrel burrows to document burrow activity and will remain in place throughout the breeding season. Petrels were observed on all cameras placed at active burrows during May and June 2013. 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. DOFAW will continue to work closely and collaboratively with Auwahi Wind to further develop and implement a management strategy to benefit seabirds in the State's Kahikinui Forest Reserve.

Baseline 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. This parcel was placed into a conservation easement held by the Hawaiian Islands Land Trust on December 18, 2012, and will be protected in perpetuity. Currently, the parcel is being enclosed with ungulate-proof fence, and will be planted with native trees to restore the native forest. Auwahi Wind is working with USGS and DOFAW to develop a research project combining radiotelemetry and acoustic monitoring. The goal of this study is to track the success of restoration efforts in the Waihou Mitigation Area. A site visit with USGS occurred in March 2013 to confirm the feasibility of conducting the research study. A final research plan is under development, taking into account observations made during the site visit.

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 six acres of dryland forest at the Auwahi Forest Restoration Project. According to LHWRP, funds were used to outplant 8,792 native seedlings of fifteen different native species into the eastern section of the Auwahi II enclosure. In particular, three endangered 'Aiea (*Nothocestrum latifolium*), and 20 endangered 'Iliahi (*Santalum haleakalae* var. *lanaiense*) were planted; both plant species have been known to serve as host plants for the endangered Blackburn's Sphinx Moth.

Baseline mitigation for Nene consisted of a payment in April 17, 2012, of \$25,000 to the National Park Service for use in building a Nene rescue pen and predator fence to support egg, gosling, and adult rescue efforts at Haleakalā National Park.

Funding Status: Auwahi Wind Energy, LLC is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, Auwahi Wind Energy-Sempra used their own procurement processes to fulfill HCP obligations.

***Other Development Projects***

**A Conservation Plan for Hawaiian Stilt at Cyanotech Aquaculture Facility, Keahole Point, Hawai‘i. Approved 2003.**

ITL Licensee: Cyanotech Corporation

Project: Commercial microalgae farming operation.

ITL Duration: December 24, 2003 – March 17, 2016

Take Authorization Over 13-year Term:

<b>Common Name</b>	<b>Scientific Name</b>	<b>Total Authorized Over ITL Duration</b>
Ae‘o or Hawaiian Stilt	<i>Himantopus mexicanus knudseni</i>	The greater of, 45 or the number of chicks produced to offset losses <sup>10</sup>

Status of ITL: Table 11 provides a listing of all documented wildlife fatalities during the reporting period.

Table 11. Documented wildlife fatalities at the Cyanotech Aquaculture Facility during the reporting period.

<b>Common Name</b>	<b>Date</b>	<b>Condition Notes</b>	<b>ITL Covered Species (Yes/No)</b>
Hawaiian Stilt	01/19/2013	Recovered from the ground outside Spirulina ponds #52 and #53. Poor condition; appears to have been predated.	Yes

In accordance with the Cyanotech HCP, surveys for incidental take are conducted twice per week during the nesting season and once per week during the non-nesting season. However, monitoring for injured wildlife is conducted daily as part of normal operations of the production raceways.

Mitigation Status: Cyanotech funds predator control efforts at ‘Opae‘ula pond. ‘Opae‘ula pond is a 3.24 hectare coastal wetland located in the North Kona district of Hawai‘i Island. There have been four stilt nests with one hatchling to date in 2012 at ‘Opae‘ula pond.

Funding Status: Cyanotech Corporation is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, Cyanotech used their own procurement processes to fulfill HCP obligations.

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<sup>10</sup> From 1999-2003, 66 Ae‘o were found injured or killed at the facility due to the basin tanks also being used as foraging habitat. The tanks were netted in 2004, resulting in a significant decline in Ae‘o fatalities.

**Habitat Conservation Plan for Construction of the Advanced Technology Solar Telescope at the Haleakala High Altitude Observatory Site, Maui, Hawai‘i. Approved 2011.**

ITL Licensee: National Science Foundation (NSF)



ATST construction site. Maui, Hawai‘i.

Project: Construction of the Advanced Technology Solar Telescope (ATST) within the 18-acre University of Hawai‘i Institute for Astronomy Haleakalā High Altitude Observatory (HO) site at the summit of Haleakalā.

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

Take Authorization Over 10-year Term:

Common Name	Scientific Name	Total Authorized Over ITL Duration
‘Ua‘u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	30 fledglings and 5 adults

Status of ITL: Table 12 provides a listing of all documented wildlife fatalities during the reporting period.

Table 12. Documented wildlife fatalities at the ATST site during the reporting period.

Common Name	Date	Condition Notes	ITL Covered Species (Yes/No)
Hawaiian Petrel	05/09/2013	Emaciated.	Yes
Hawaiian Petrel	06/18/2013	Emaciated.	Yes
Hawaiian Petrel	06/18/2013	Trauma on right-side.	Yes

DOFAW and USFWS are working with ATST to determine whether or not the three observed fatalities listed in Table 12 are directly attributed to project activities. During the time period that incidental take occurred, ATST structures were not vertical and all noise-level instrumentation indicates that sound vibrations were minimal. Monitoring will continue in the next fiscal year.

ATST conducts wildlife monitoring daily around the construction site during the Hawaiian Petrel breeding season of February through November. Monitoring is done in an area of about 3.3 acres inside and around the construction site.

Mitigation Status: Because the project site lies within and near a Hawaiian Petrel breeding colony, USFWS and DOFAW are working with ATST to focus mitigation and minimization efforts on Haleakalā summit area. In accordance with the HCP, ATST will fence and conduct predator control within a 328-acre conservation area adjacent to Haleakalā National Park. The ATST construction site lies within the planned fence area. The Conservation District Use Permit for the fence was issued on May 17, 2013 and a fence contract awarded in July 2013. Fence construction is expected to be completed by the end of 2013, providing protection from predators and allowing Hawaiian Petrel colony management to occur in the area.

Funding Status: ATST-NSF is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, ATST-NSF used their own procurement processes to fulfill HCP obligations.

**Kaua‘i Lagoons Habitat Conservation Plan, Kaua‘i, Hawai‘i. Approved 2012.**

ITL Licensee: Kaua‘i Lagoons, LLC

Project: Oceanfront resort encompassing approximately 600 acres.

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



*Kaua‘i Lagoons, Kaua‘i.*

Take Authorization Over 30-year Term:

Common Name	Scientific Name	Total Authorized Over ITL Duration
‘A‘o or Newell’s Shearwater	<i>Puffinus auricularis newelli</i>	27
Koloa Maoli or Hawaiian Duck	<i>Anas wyvilliana</i>	36
Ae‘o or Hawaiian Stilt	<i>Himantopus mexicanus knudseni</i>	38
‘Alae Ke‘oke‘o or Hawaiian Coot	<i>Fulica alai</i>	110-lethal; and 180-non-lethal
‘Alae ‘Ula or Hawaiian Moorhen	<i>Gallinula chloropus sandvicensis</i>	40-lethal; and 30-non-lethal
Nene or Hawaiian Goose	<i>Branta sandvicensis</i>	17
‘Ua‘u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	1
‘Akē‘akē or Band-rumped Storm Petrel	<i>Oceanodroma castro</i>	1

Status of ITL: Table 13 provides a listing of all documented wildlife fatalities during the reporting period.

Table 13. Documented wildlife fatalities at the Kaua‘i Lagoons site during the reporting period.

Common Name	Date	Condition Notes	ITL Covered Species (Yes/No)
Newell’s Shearwater	10/19/2012	Retrieved by Kauai Save Our Shearwaters (SOS) Program	Yes
Newell’s Shearwater	10/25/2012	Retrieved by Kauai SOS Program	Yes
Hawaiian Coot	11/14/2012	Carcass fresh near 18 <sup>th</sup> hole golf course	Yes
Hawaiian Duck	11/26/2012	Carcass fresh on facility road	Yes
Hawaiian Duck	12/05/2012	Carcass fresh near facility road	Yes
Nene	12/06/2012	Carcass approximately 2-days old, found near facility road	Yes
Hawaiian Moorhen	01/22/2013	Only feathers and bones visible; vegetation had recently been cut back possibly exposing the carcass	Yes
Hawaiian Coot	02/24/2013	Golf ball impact injury, brought to Kauai SOS Program and humanely euthanized	Yes

In accordance with the Kauai Lagoons HCP, the Resort implements the following minimization measures year-round:

- On-site predator control;
- Comprehensive endangered species awareness training to all Resort employees;
- 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.

Over the past ten years, the Kaua‘i Lagoons Resort (Resort) has assisted in efforts to increase the Nene population. However, due to the close proximity of the Resort to Lihue Airport, Nene from the Resort are bird-strike hazards to aircraft. In 2009, wildlife agencies determined that the Kaua‘i Lagoon’s HCP would solely address endangered species impacts from Resort construction and operation. Applicable Federal Aviation Administration (FAA) regulations require that the airport operator address aircraft-wildlife hazards. Thus, this HCP does not include or cover any specific Nene management measures designed to address aircraft safety issues. Instead, this HCP explicitly identifies and acknowledges aircraft safety issues, and commits the Resort to cooperate with the airport agencies and the wildlife agencies in their separate efforts to address these concerns in accordance with applicable FAA regulations. DOFAW will continue to work with the Resort and other state and federal agencies on the best approaches to minimize impact to wildlife while maintaining public safety.

Mitigation Status: 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.

Funding Status: Kauai Lagoons is required to provide all funding necessary to fulfill obligations outlined in the approved HCP. In FY13, Kauai Lagoons used their own procurement processes to fulfill HCP obligations.

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

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

ITL Licensee: Pu‘u o Hōkū Ranch, Limited

Project: Reintroduce Nene (*Branta sandvicensis*) to Pu‘u o Hōkū Ranch, Molokai.

ITL Duration: September 4, 2001 – September 3, 2008<sup>11</sup>

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

Baseline Condition<sup>12</sup>: No wild Nene on Pu‘u o Hōkū Ranch property or documented use of suitable habitat. At the time of agreement execution, there was no wild Nene on Moloka‘i.

Status of ITL: This Safe Harbor Agreement (SHA) allows Pu‘u o Hōkū Ranch (Ranch) to reintroduce Nene on their property, construct a release pen, provide habitat for Nene grazing and breeding, and control predators in the release pen and breeding areas. A total of 74 birds were translocated to the Ranch from 2002-2005. Table 14 provides survey data over the past 12 years for the original 74 birds translocated to the Ranch. The percentage of the original 74 birds that were re-sighted is a factor of survey effort, and may not necessarily be a measure of translocation success.

Table 14. Record of Nene translocated to Pu‘u o Hōkū Ranch from 2002-2013, including fate and re-sighting information.

<b>Year</b>	<b>No. of Birds Translocated</b>	<b>Cumulative Birds Translocated</b>	<b>No. of Known Fatalities</b>	<b>No. of Birds Sighted</b>	<b>Percentage (%) of Translocated Birds Sighted</b>
2013	0	64	0	6	9
2012	0	64	0	6	9
2011	0	64	0	7	11
2010	0	64	0	8	13
2009	0	64	0	18	28
2008	0	64	1	33	52
2007	0	65	0	38	58
2006	0	65	5	29	45
2005	11	70	2	47	67
2004	8	61	1	42	69
2003	41	54	1	54	100
2002	14	14	0	14	100

<sup>11</sup> DOFAW is currently in discussion with Pu‘u o Hōkū Ranch to renew this agreement in the next Fiscal Year.

<sup>12</sup> Baseline Conditions describe endangered or threatened species population estimates and distribution, or the habitat characteristics that sustain seasonal or permanent use by such species. Safe Harbor Agreements must achieve a net conservation benefit above Baseline Conditions.

On July 12, 2012, a survey for Nene in eastern Molokai was conducted. During this survey, a total of 69 banded birds, and five unidentified<sup>13</sup> birds were seen. Data and survey observations indicate an estimated population of 103 individual Nene, including those from the original translocation efforts.



*Nene, official bird of the State of Hawai'i, resting in the foreground.*

A total of 41 mongooses were removed around the open-top release pen at the Ranch. No rats, cats or dogs were trapped this year.

During the August – April nesting season, a total of 28 nests were recorded within the open-top release pen at the Ranch. Of the 28 nests, 23 nests were successful and resulted in a total of 55 hatchlings, with 23 successful fledglings.

**Programmatic Safe Harbor Agreement for Nene on the Island of Moloka'i, Hawai'i. Approved 2003.**

ITL Licensee: Division of Forestry and Wildlife (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 Nene and provide regulatory assurances if Nene occupy or breed on their property.

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

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

Baseline Condition: Not Applicable

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

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<sup>13</sup> These unidentified birds had unreadable bands or were unbanded.

**Safe Harbor Agreement for the Introduction of Nene to Pi‘iholo Ranch, Maui. Approved 2004.**

ITL Licensee: Pi‘iholo Ranch, LLC

Project: Establish a Nene population on Pi‘iholo Ranch.

ITL Duration: September 21, 2004 – September 20, 2054

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



*Pi‘iholo Ranch on Maui.*

Baseline Condition: Following Maui Nene reintroduction efforts that began at Haleakalā National Park in 1962, DOFAW began establishing a population in west Maui through a reintroduction program at Hanaula in 1995. There have been no known Nene sightings at Pi‘iholo Ranch premises by DOFAW staff or Ranch personnel. Therefore the baseline condition was determined to be zero.

Status of ITL: Under this SHA, Pi‘iholo Ranch is maintaining or improving approximately 600 acres of Nene habitat for a period of 10 years. In cooperation with DOFAW, Pi‘iholo Ranch is undertaking the following activities: (1) construction of a Nene release pen; (2) predator control activities around Nene nesting and breeding sites; and (3) out-planting native plant species known to be Nene food sources.

Nene monitoring was performed on a weekly basis by Ranch and DOFAW personnel throughout the reporting period. There were no additional birds released from the Maui Bird Conservation Center. A total of 32 banded birds were sighted in upcountry Maui. Table 15 provides information on the 32 banded birds sighted during the reporting period.

Table 15. Origin of 32 individual Nene sighted during the reporting period, in or around Pi‘iholo Ranch.

<b>Number of individual birds</b>	<b>Origin</b>
11	Identified as birds released from captive propagation pens.
17	Identified as wild adult birds from natural population growth.
4	Identified as birds previously translocated from Kauai Island.

On September 13, 2012, a Maui Nene Survey was conducted. Data and observations indicate an estimated population of 39 individual birds at Pi‘iholo Ranch and nearby upcountry Maui.

Eight nests were observed at Pi‘iholo Ranch during the reporting period. Seven of these nests were located in the open-top release pen and one was located on Ranch property but outside of the open-top release pen. Two nests were depredated and one nest fate was unknown. A total of 10 goslings were sighted during the reporting period, and two fledged successfully.

At Pi‘iholo, a total of 46 acres were mowed annually both in and around the open-top release pen. Approximately 1.5 acres of alien vegetation were removed this season and ranch personnel also transplanted three ‘ōhi‘a and two koa plants outside the pen on the Ranch.

Predator control efforts resulted in a total of 26 mongooses trapped and removed around the open-top release pen at Pi‘iholo Ranch. No rats, cats or dogs were trapped during the reporting period.

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

ITL Licensee: Haleakalā Ranch Company

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

ITL Duration: May 22, 2012 – May 21, 2062

Take Authorization: Incidental take of Nene on lands owned or otherwise controlled by Haleakalā Ranch (HR).

Baseline Condition: There have been no Nene sightings at HR by DOFAW staff or ranch personnel, prior to execution of the Safe Harbor Agreement (SHA). Therefore the baseline condition was determined to be zero.

Status of ITL: Haleakalā Ranch is creating or improving approximately 1,600 acres of Nene habitat for a period of 10 years. In cooperation with DOFAW, HR is undertaking the following activities: (1) construction of a Nene release pen; (2) predator control activities around Nene nesting and breeding sites; and (3) maintenance of access roads leading to the Nene release pen.

DOFAW conducted weekly monitoring during the reporting period at Haleakalā Ranch. A total of 50 banded birds were sighted at the ranch. Of the 50 birds, 34 were identified as translocated birds from Kauai, and 16 were wild birds born at the ranch or in the surrounding area. On September 13, 2012, a Maui Island-wide Nene Survey was conducted and 12 banded birds were identified (some re-sighted.) Data from surveys indicated an estimated population of 52 individual birds at Haleakalā Ranch, not including the resident Nene population within Haleakalā National Park.

During the reporting period, a total of seven new birds were translocated to HR from the following locations: four from Kaua‘i; and three from Hawai‘i Island. Additionally, 12 birds were recaptured at various locations on Maui (Table 16) and returned to the HR pen.

In FY 2013, three nests were found inside the HR open-top release pen and two nests were found outside the pen but on HR property. Fifteen goslings hatched, and eight fledged successfully.

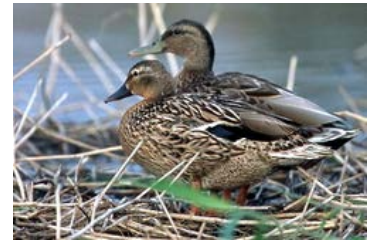
Table 16. Number of individual birds recaptured at various locations on Maui and their capture location and origin, if known.

Number of individual birds	Recapture location and origin of birds
2-adults and 2-fledglings	Makena Golf Course Driving Range, family group originally from Kaua‘i
2-adults	Near Kahului Airport and Maui Business Park, birds originally from Kaua‘i
2-adults and 3-goslings	West Maui in Lahaina at the landowner’s request, origin of birds unclear

Satellite transmitters are being placed on selected Nene from Kaua‘i prior to release at HR. The satellite transmitters will be used to track Nene movement and habitat use on Maui to better inform management approaches. A total of 5.75 acres on HR property was mowed to maintain Nene foraging habitat. Additionally, a total of 5.45 acres of alien vegetation were removed this season within the open-top release pen. Predator control efforts occurred around the Haleakalā Ranch open-top release pen. A total of 7 mongooses, 3 rats, and 9 mice were removed. No cats or dogs were trapped at the ranch during the reporting period.

**Safe Harbor Agreement and Habitat Management Plan for the Koloa Maoli or Hawaiian Duck (*Anas wyvilliana*) and the Nene or Hawaiian Goose (*Branta sandvicensis*) on Umikoa Ranch, Island of Hawai‘i. Approved 2001.**

ITL Licensee: Umikoa Ranch



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

Project: Establish a Koloa and Nene population on privately owned lands of Umikoa Ranch in the Hamakua District of Hawai‘i island.

ITL Duration: December 5, 2001 – December 4, 2100

Take Authorization: Incidental take of Nene 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 Nene 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 Nene was determined to be zero.

Status of ITL: Umikoa Ranch is creating or managing up to two acres of wetland ponds and 150 acres of riparian and associated upland habitat. Ten individual ponds, totaling 2.01 acres and an additional 151.3 acres of ponds and upland habitat have been fenced, and are being managed to support Koloa and Nene conservation efforts. DOFAW will continue to work with Umikoa Ranch in the next fiscal year.

**CONDITION OF THE ENDANGERED SPECIES TRUST FUND**

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

Description	Expenditure	Revenue
Beginning Cash Balance		\$1,247,740.63
Expenditures in FY2013	\$746,921.70	
Outstanding Encumbrances in FY2013	\$1,052,052.78	
Funds to Implement the Obligations of a Habitat Conservation Plan		\$866,086.85 <sup>1</sup>
Private Contributions for the Management and Recovery of Hawaii's Native Wildlife		\$381,203.25
Funds Received as Payment for the Use of the HCP Technical Assistance Program		\$27,950.00
<b>Ending Cash Balance</b>		<b>\$724,006.25</b>

<sup>1</sup>79% of this amount was provided to DOFAW to implement certain obligations under the federally-approved Kaua'i Island Utility Cooperative Short-term Seabird Habitat Conservation Plan, to conduct seabird protection activities on Kaua'i.

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

Habitat Conservation Plans and Safe Harbor Agreements are a necessary tool in Hawai‘i to achieve endangered species protection while balancing growth and addressing the need for energy independence. Fiscal Year 2013 marks the fifteenth year since implementation of Chapter 195D HRS, to include the issuance of Incidental Take Licenses (ITLs); and while the program has demonstrated successes over the last fifteen years, following are recommendations to further improve implementation of Chapter 195D.

- Increase staff capacity in DLNR / DOFAW 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. Additional staff capacity would allow further consistency in issuing ITLs and conducting follow up monitoring for development projects.
- Conduct a comprehensive cumulative effects analysis on the ITL program to further understand the costs and benefits of issuing ITLs and the cumulative effects of ITLs on 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 Habitat Conservation Planning.

For information on DLNR’s Endangered Species Recovery Committee, please go to <http://dlnr.hawaii.gov/wildlife/esrc/>

Or for further information and a full listing of the State’s Habitat Conservation Plans and Safe Harbor Agreements, contact:

Department of Land and Natural Resources  
Division of Forestry and Wildlife  
1151 Punchbowl Street, Room 325  
Honolulu, HI 96813  
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Telephone: (808)587-4148  
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