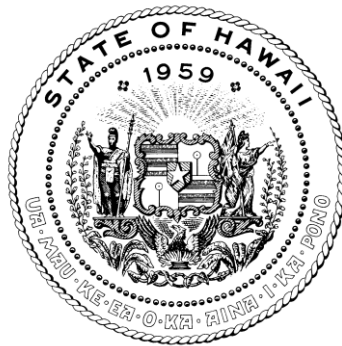


**REPORT TO THE TWENTY-SIXTH LEGISLATURE
REGULAR SESSION OF 2011**

**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, 2009 – JUNE 30, 2010**



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
December 2010

**STATUS OF THE ISSUANCE OF
INCIDENTAL TAKE LICENSES FOR ENDANGERED, THREATENED,
PROPOSED, AND CANDIDATE SPECIES;
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FOR THE PERIOD JULY 1, 2009 – JUNE 30, 2010**

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:

1. The effectiveness of habitat conservation plans or safe harbor agreements issued under Chapter 195D, HRS, and the status of all species for which incidental take licenses have been issued;
2. Description of the condition of the Endangered Species Trust Fund established under §195D-31, HRS; and
3. Recommendations to further the purposes of Chapter 195D, HRS.

This annual report is submitted to fulfill the reporting requirement for Fiscal Year (FY) 2010.

FINDINGS

- 1) Effectiveness of Habitat Conservation Plans (HCP) and Safe Harbor Agreements (SHA) Issued Under Chapter 195D, HRS, and the status of all species for which incidental take licenses (ITL) have been issued:
 - a) The following individuals served on the Endangered Species Recovery Committee (“ESRC”) during FY 2010.
 - i) Ms. Laura H. Thielen, Chairperson, Board of Land and Natural Resources (Agency Representative), Designated Representative: Dr. J. Scott Fretz, Wildlife Program Manager, DLNR - Division of Forestry and Wildlife (DOFAW), Honolulu
 - ii) Dr. Loyal Mehrhoff, Field Supervisor, United States Fish and Wildlife Service (USFWS), Pacific Islands Ecoregion, Honolulu (Agency Representative), Designated Representative: Dr. Jeff Newman, USFWS, Pacific Islands Ecoregion, Honolulu.

- iii) Dr. Gordon Tribble, Director, United States Geological Survey (USGS), Pacific Islands Ecosystems Research Center (PIERC), Honolulu, Designated Representative: Dr. James Jacobi, USGS-PIERC, Honolulu
 - iv) Dr. Cliff Morden, Assistant Professor, University of Hawaii Environmental Center, University of Hawai‘i, Mānoa.
 - v) Dr. Patrick J. Hart, Assistant Professor, University of Hawaii, Hilo, HI (Appointed member, Term expires June 30, 2012).
 - vi) Dr. John Harrison, Executive Director, University of Hawaii Environmental Center, University of Hawaii, Manoa, HI. (Appointed Member, Term expires June 30, 2013).
- b) ESRC met four times during the reporting period and provided consultation on the following issues, applications, proposals, and projects:

Draft Kauai Seabird Habitat Conservation Plan
 Draft North Kona Game Mammal Habitat Conservation Plan
 Draft Kauai Lagoons Resort Habitat Conservation Plan
 Draft Short-term Kauai Island Utilities Cooperative Habitat Conservation Plan
 Hawaii Department of Transportation Abutilon Menziesii Habitat Conservation Plan
 Draft Advanced Technology Solar Telescope Habitat Conservation Plan
 Kaheawa Wind Power I Habitat Conservation Plan
 Draft Kaheawa Wind Power II Habitat Conservation Plan
 Lanai Met Towers Habitat Conservation Plan
 Cyanotech Habitat Conservation Plan
 Draft Sempra Auwahi Habitat Conservation Plan
 Kahuku Wind Power Habitat Conservation Plan
 Haleakala Ranch Safe Harbor Agreement
 Chevron Safe Harbor Agreement
 Umikoa Ranch Safe Harbor Agreement
 Puu o Hoku Safe Harbor Agreement
 Informational executive sessions on two proposed HCPs/SHAs, confidential under §195D-24, HRS.

- c) The sunset date on the issuance and approval of new SHAs, HCPs, and ITLs was extended to July 1, 2012 as a result of Act 90, SLH 2006, amending Act 380, SLH 1997. ITLs have been issued to accompany the following HCPs and SHA’s as of June 30, 2010.
- d) Summary of ITL's issued to date and status of affected species.
 - i) Reintroduction of Nēnē to Pu‘u o Hoku Ranch, Moloka‘i. Issued: September 4, 2001.

The Pu‘u o Hoku Ranch was the first SHA issued in Hawaii. The SHA calls for Pu‘u o Hoku Ranch to allow the reintroduction of nēnē on the Ranch, construct a release pen, provide habitat for nēnē grazing and breeding, and to control predators in the release pen

and breeding areas. A total of 74 birds have been released at Pu‘u o Hoku Ranch since the beginning of the Agreement. The Moloka‘i nēnē population has increased from zero (0) to 121 birds in eight years, as a direct result of the Pu‘u o Hoku Ranch SHA activities (Table 1).

This past nesting season a total of 18 nests were recorded within the open-top release pen at Pu‘u o Hoku Ranch. No additional nests were located on the Ranch or adjacent to Pu‘u o Hoku. Of these 18 nests, 42 goslings hatched, but only two fledged into the wild. The very low fledging success was due to high mortality of nestlings resulting from several very aggressive adults harassing and trampling the young. The reasons for this are not known but may be related to overcrowding. Plans are being developed to deploy another open-top pen to reduce the problem next year.

A total of 52 birds were identified this past year by their state and federal bands. Eighteen birds were recognized as released birds and 34 were Molokai birds.

On June 15, 2010, a two-day annual survey was conducted at Pu‘u o Hoku and Dunbar Ranches with the assistance of ranch volunteers, the National Park Service, and state personnel. During this period, a total of 31 birds were identified by their darvic bands and an additional 38 birds were counted without bands. Data obtained from this survey and yearly sightings revealed a population of 121 birds. Survey numbers were down 30 percent from last year.

No adult birds were found dead or needing rehabilitation this past season. There were no recaptures, relocations, or new releases of nēnē on Moloka‘i this year.

The Pu‘u o Hoku Ranch SHA has been a tremendous success. Ongoing predator control and invasive weed management has contributed to the continued success of this SHA. The Moloka‘i nēnē population has increased from zero (0) to 121 birds in eight years, as a direct result of the Pu‘u o Hoku Ranch SHA activities. The Ranch is continuing to review the possibility of renewing the SHA in the future.

Table 1-SHA monitoring activities

Year	# released	# mortalities	# nests found	# fledged	# nests predated	# predators killed*	Est. pop size	# Incidental Take
2002	14	0	0	0	0	61	14	0
2003	41	1	4	2	no data	59	55	0
2004	8	1	6	10	no data	179	>54	0
2005	11	2	12	21	no data	17	>47	0
2006	0	5	12	9	2	83	>56	0
2007	0	0	21	22	10	16	146	0
2008	0	3	28	36	1	40	152	0
2009	0	6	17	14	5	22	173	0
2010	0	0	18	2	no data	18	121	0
Total	74	18	100	116	18	495	121	0

* Includes mongoose, cats, dogs

- ii) HCP for Hawaiian Stilt at Cyanotech Aquaculture Facility Keahole Point, Island of Hawaii. Approved: June 13, 2002.

The HCP covers ongoing operations and maintenance activities at Cyanotech’s Aquaculture Facility within the Natural Energy Laboratory of Hawaii (NELHA) along the Kona Coast of the Big Island, and provides mitigation for the accidental loss of juvenile ae’o (Hawaiian stilts) in the Facility’s production ponds (Figure 1 and Table 2). The following mitigation measures have been implemented: 1) Cyanotech created and maintained a 1.7-acre pond to produce optimum ae’o breeding habitat – 48 ae’o chicks were fledged before the pond was drained and netted to prevent further nesting at the facility to avoid conflicts with the adjacent Kona Airport; 2) Predator control was conducted to reduce mortality of stilts present at the Facility, and later at off-site ae’o and alae ke’oke’o (Hawaiian coot) locations; and 3) deterrent measures were implemented to discourage stilts from occupying the facility.

Cyanotech was previously the site of a 0.69 hectare nesting habitat that had been maintained at the Facility as part of Cyanotech’s HCP for ae’o. The nesting habitat was managed from 1998-2002. As part of the HCP, habitat management was discontinued after the 2002-nesting season, to avoid conflicts with the nearby airport. The 45 fledglings produced in the area (48 in total minus three cases of incidental take) were sufficient to mitigate anticipated take on the two remaining years on Cyanotech’s ITL. Predator control at the facility was utilized on an as needed basis with Havahart live traps. Predator control has since been used at off-site locations, including use of tamper-proof bait boxes, baited with diphacinone rodenticide at Kealakehe Wastewater Treatment Plant, ‘Opae’ula Pond, and Kukio Fishponds. Conservation work under this HCP has also included waterbird surveys at four wetland sites (Aimakapa Pond, Kaloko Pond, ‘Opae’ula Pond, and Kukio Fishponds), one coastal reef site (Honokohau Reef) and one artificial habitat (Kealakehe Wastewater Treatment Plant).



Figure 1. Cyanotech Facility, Big Island (Hawai'i). Photo by S. Waddington

During FY10, the nesting habitat and Ducks Unlimited raceway continued to be maintained in a manner unusable to the stilts. Cleaning the *Spirulina* production raceways reduces the invertebrate food source. As per the HCP, surveying for incidental take was conducted twice per week during the nesting season and once per week during non-nesting season. However, monitoring for injured or dead stilts was conducted daily as part of normal operations of the production raceways. Surveying the raceways for debris was conducted daily in an effort to protect the mechanical and harvest systems of the production raceways. Surveying the raceways visually is conducted first thing in the morning, before the paddlewheels were turned on. The total amount of incidental take at Cyanotech for 2010 was three (3) stilts.

The lava field adjacent to the Cyanotech facility, where stilts had nested in past years, was monitored weekly for nesting activity. Surveys were conducted every Saturday during the nesting season. A Nikon 20 x 60 Fieldscope and Zeiss 10 x 40 binoculars were used to survey the lava field. There were no instances of stilts being observed in the lava field.

Additionally, as part of the HCP, 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. The wetland is utilized for foraging by migratory waterbirds and shorebirds as well as for nesting by endangered Hawaiian Stilts (*Himantopus Mexicanus knudseni*) and Hawaiian Coots (*Fulicaa alai*). The coastal area mostly consists of dry scrub, non-native vegetation. The vegetation around the perimeter of wetland consists mostly of Kiawe trees (*Prosopis pallida*) and other non-native scrub type vegetation.

Predator control was implemented in an effort to increase survivorship of all life stages of nesting Hawaiian Stilts and Hawaiian Coots, by reducing densities of Small Indian mongooses (*Herpestes auropunctatus*), rats (*Rattus spp*), and European House Mouse (*Mus domesticus*). Predator control efforts consisted of utilizing 27 tamper-resistant bait boxes around the perimeter of the wetland baited with Diphacinone rodenticide. The predator control work and wildlife surveys were conducted on the second and fourth Monday of each month. In 2010, to date, there have been seven stilt nests with 13 fledglings at Opae'ula Pond.

The HCP annual report included the following recommendations: 1) Continue to modify and improve current deterrent measures as well as identify and research new deterrent measures for the facility; 2) Continue to modify and improve methods of reducing the invertebrate food source in the production raceways. It is recommended that Cyanotech operate at 100% of production capacity during the stilt-nesting season (March-August). If this is not possible, idle raceways should be filled with seawater to prevent stilts from nesting in the idle raceways. Cyanotech requests that the wildlife agencies continue to work cooperatively with the Cyanotech staff to provide technical assistance on policy and conservation issues, as well as biological expertise (e.g., compliance, adaptive management, bird deterrents, etc.).

The Cyanotech HCP has been very successful, both in terms of fledgling production, as well as adaptive management. Original management goals were for on-site stilt enhancement, which produced a net gain of 45 stilts. Potential conflict with the adjacent airport led to a change in management goals to avoid stilt use of the Cyanotech facility, and instead enhance other areas off-site through predator control. This has resulted in the net production of 54 ae'o fledglings and 45 'alae ke'oke'o as a result of this project.

Table 2. Cyanotech HCP Summary

Year	Cyanotech ae'o fledged	Cyanotech ae'o pop size	# Incidental Take	Off-site ae'o fledged	Off-site est. ae'o pop size	Off-site 'alae fledged	Off-site est 'alae pop size
2003	48	132	3	9	215	1	122
2004	0	38	6	3	162	8	90
2005	0	0	0	5	111	2	117
2006	0	11	1	9	133	3	93
2007	0	0	0	6	150	8	109
2008	1	3	0	8	136	14	104
2009	0	0	3	14	124	9	114
2010	0	0	#	#	#	#	#
Total	49	184	13	54	1031	45	749

Information for 2010 will not be available until November each year. Data reported here are for 2009.

iii) SHA and Habitat Management Plan for Koloa (Hawaiian Duck) and Nēnē (Hawaiian Goose) on Umikoa Ranch, Island of Hawaii. Issued: December 5, 2001.

The Umikoa SHA calls for the creation and management of 2.0 acres of wetland ponds and 150 acres of riparian and associated uplands, fencing ponds, predator and weed control, and out-planting of food items to benefit koloa maoli (Hawaiian duck) and nēnē. As per the SHA, eight permanent and two seasonal ponds ranging from 0.05 to 0.57 acres (totaling 2.01 acres) and 151.3 acres of ponds and uplands have been fenced, and are being managed for koloa and nēnē.

DOFAW performed a compliance visit in May 2010. The visit determined a predator control program consisting of dog removal from the area. Traps and bait stations were no longer in use on the Ranch. Cats have not been observed. The new management at Umikoa Ranch mentioned that they may be interested in terminating the SHA.

Currently, the koloa population is estimated to be six birds, which is three times the baseline number at the beginning of the SHA. There were no birds reported as taken on the ITL. During the ESRC's annual review in January 2009, and in a status update in April 2009, USFWS stated that they were planning on meeting with Umikoa Ranch representatives in June 2009, in order to discuss how to best proceed with this SHA, and would generate a report after that time.

iv) Programmatic SHA for the Nēnē on the Island of Moloka'i. Issued: April 7, 2003.

This is the first "programmatic" SHA issued in the State. DOFAW is the licensee. Landowners may voluntarily enroll by signing a cooperative agreement with DOFAW, which commits them to make appropriate habitat on their land available to nēnē for a period of 10 years, and in return, the landowner receives assurances from both state and federal agencies that they will not be held responsible if nēnē should be harmed or killed on their property incidentally as a result of otherwise legal activities, for the duration of the ITL, which expires in 2053.

During FY 2010, there were no landowners enrolled under this SHA, but discussions with a landowner about participation under this have taken place, or a separate multi-species SHA. DOFAW has conducted the necessary baseline surveys on lands adjacent to Pu'u o Hoku Ranch SHA lands where nēnē reestablishment is occurring. Because other protected species may be protected on the adjacent property, a multi-species SHA for the adjacent property would be best for the species involved; however, whichever type of SHA is used, it appears that nēnē protection will occur through an SHA on an adjacent property in the near future.

v) HCP for *Abutilon menziesii* at Kapolei, Island of O'ahu. Approved April 8, 2004.

This HCP was developed to cover the impacts and measures that will be taken to mitigate the impacts to the endangered plant species, ko'o loa 'ula (*Abutilon menziesii*) (Figure 2, Table 3), that are present on a 1,381-acres of state and city-owned property, which is the site of the proposed construction of the North-South Road Highway, Kapolei Parkway and subsequent developments. The Department of Transportation (DOT) is the HCP and license holder. The implementation of the HCP mitigates for the impact of development

actions that may be conducted by DOT and other agencies/organizations in the area. To date, Certificates of Inclusion, which authorize incidental take to third parties, have been issued to the Department of Hawaiian Home Lands, the University of Hawaii, and the City and County of Honolulu. The Salvation Army, City and County Honolulu (light rail), and Mutual Housing Association of Hawaii are in development or processing applications for Certificates of Inclusion.



Figure 2. Ko'oloa'ula (*Abutilon menziesii*) at Kapolei, Island of O'ahu. Photo by Laura Shiels (DOFAW/PCSU).

The HCP outlines the mitigation measures planned over the next 20 years. The goal of the HCP is to initiate and sustain a program which would result in an overall net gain in the number of *Abutilon menziesii* on Oahu. The end goal is the establishment of three protected off-site populations on Oahu from the single degraded Kapolei population.

To date, *Abutilon menziesii* has been outplanted at six different sites on Oahu: Diamond Head, Honouliuli Wildlife Refuge, Ewa Villages Golf Course, Contingency Reserve Area (off of North South Road, Kapolei), Pouhala Marsh, and Koko Crater Botanical Garden. Diamond Head and Honouliuli Wildlife Refuge will be used towards the goal of establishing three self-reproducing populations. The third site is yet to be identified or established. Pouhala Marsh has potential to be the third site. The Koko Crater Botanical Garden and Ewa Villages Golf Course populations will function as protected repositories for the full genetic stock of the Kapolei population. The Pouhala Marsh site is an experimental site meant to test the biological requirements of the plant. The main focus for 2009-2010, was to continue to represent the full genetic stock available for this species at each of the reintroduction sites, monitor for seedling establishment, and to look for potential sites for future outplantings.

Propagation of select rare coastal species continued during this reporting period. A total of 493 rare coastal species were outplanted in joint projects with the Boy Scouts, Camp Erdman, and DOFAW'S Oahu Forestry staff. In addition, coastal plants were grown for the Army's Natural Resource Program.

During FY 2010, DOT, DOFAW, USFWS, ESRC, and project staff worked together for the HCP's first major five-year review. Compliance and review site visits occurred in May, June, and July 2009, for the purposes of assessing current status and adaptive management recommendations. There has been a five-fold increase from a founder population of 93 plants in 2002, to 462 plants in 2010. While yearling survival has been low over this period, the wild population has also had slow reproductive rates over the same period of time, probably due to natural inter-annual variation in this slow-reproducing species.

Adaptive management recommendations for future years include an assessment of irrigation needs, how to improve seedling survival over natural rates, an amendment to define 'wild' versus 'managed' populations, consideration of making the Contingency Reserve into a permanent reserve, follow-up for use of upper Pouhala Marsh lands, development of multi-species management goals, a half-time research botanist, and improvement to reporting performance requirements. Finalization of the five-year review process and implementation of adaptive management measures to improve long-term survival of the species is planned for the following year.

During FY 2010, DOT, DOFAW, USFWS, ESRC, and project staff worked together for the HCP's first major five year review. Compliance and review site visits occurred in May, June and July 2009, for the purposes of assessing current status and adaptive management recommendations. There has been a five-fold increase from a founder population of 93 plants in 2002, to 462 plants in 2010. As a result of the HCP, there was a net population gain of 369 individuals.

Table 3. Summary - Status of *Abutilon menziesii* populations

	Kaena Point	Koko Head	CRA	Honouliuli Reserve	Ewa Villages	Pouhala Marsh	Diamond Head	Total
Mature	0	88	65	90	71	31	117	462
% Genetic Representation	0%	50%	52%	50%	58%	27%	71%	N/A
Seedlings 2004 (Natural Regeneration)	0	N/A	N/A	0	N/A	N/A	N/A	0
Seedlings 2005 (Natural Regeneration)	0	N/A	N/A	0	N/A	N/A	N/A	0
Seedlings 2006 (Natural Regeneration)	0	N/A	N/A	1	N/A	N/A	0	1
Seedlings 2006 (Natural Regeneration)	0	N/A	N/A	0	N/A	N/A	0	0

Seedlings 2007 (Natural Regeneration)	0	N/A	N/A	0	0	N/A	6	6
Seedling 2008 (Natural Regeneration)	0	N/A	N/A	2	0	0	28	30
Seedling 2009 (Natural Regeneration)	0	N/A	N/A	26	N/A	N/A	5	31
Seedling 2010 (Natural Regeneration)	0	N/A	N/A	0	N/A	N/A	0	0
Survival of Seedlings (0 mon.-1 yr.)	0	N/A	N/A	17	N/A	N/A	28	45
Survival of Seedlings (over 1 yr.)	0	N/A	N/A	2	N/A	N/A	16	18

Goals for 2010-2011

- (1) Complete the tracking database for the project.
- (2) Ensure that at least one (as many as possible given space availability) of every Kapolei plant is represented in at least one of the outplanting sites.
- (3) Fully represent the Kapolei plants in the Koko Crater, Diamond Head, and Honouliuli populations.
- (4) Continue to monitor and maintain the plants at all sites.
- (5) Continue to survey for and collect from rare coastal species.
- (6) Continue to outplant rare coastal species within the *Abutilon* populations.
- (7) Establish an additional outplanting site (location unknown at this time).
- (8) Expand Mokuleia Nursery facilities to accommodate a pesticide and fuel storage area.
- (9) Expand existing range of *Sesbania tomentosa*.
- (10) Continue to outplant rare coastal species.
- (11) Continue work on *Schiedea adamantis*.

vi) SHA for the Introduction of the Nēnē to Pi‘iholo Ranch, Island of Maui – Issued: September 21, 2004.

Under this SHA, Pi‘iholo Ranch is maintaining or improving approximately 600 acres of nēnē habitat for a period of 10 years by continuing cattle ranching operations, thereby maintaining open, short-grass habitat; in cooperation with DOFAW, a nēnē release pen was constructed and Pi‘iholo Ranch has agreed to control predators around breeding and release sites and outplant native plant species known to be nēnē food sources.

At Pi‘iholo Ranch, approximately 3.7 acres were mowed monthly in the open-top release pen. Ninety additional acres were also mowed in the adjacent areas of the release pen, ranch pond and cabins this past year. Outplanting at Pi‘iholo Ranch was accomplished by

ranch personnel and volunteers. A total of 100 a'ali'i, 50 u'u'lei and five (5) koa were planted in and around the open-top release pen.

Predator control and monitoring activities continued throughout the year by Ranch and state personnel. This past season, 11 nests were observed at Pi'iholo Ranch. Of the 11, five were located at the open-top release pen, five bordering the pen, and one outside the Ranch. There were no additional releases from Maui Bird Conservation Center. No adults were found dead this year however, five goslings and two fledglings were found near the pen and one fledgling near an adjoining landowner. The five goslings found dead in the open-top release pen may have been cause by aggressive adults.

Nēnē monitoring and observations were performed on a weekly basis by Ranch and state personnel throughout the year. During May, a two day annual survey was conducted on the Ranch and known areas in the Makawao District. Only four banded nene were sighted throughout the survey. In addition to the birds sighted this season, five birds were captured and fitted with state and federal bands. Tabulations from weekly observations, monthly, and annual surveys produced a population of 38 birds.

On Maui at Pi'iholo Ranch, a total of 19 mongoose and one (1) cat were removed from around the open-top release pen area. One hunting dog was sighted in the area a few times but personnel were unable to remove it. One wild dog was also eliminated on the Ranch this past season.

This project is progressing well, providing an excellent release and nesting site for Maui nēnē. The nēnē population has grown from zero (0) to 38 birds over four years, due largely to releases. The introduced nēnē are maturing and beginning to nest in the predator-controlled pen. The population is expected to continue to grow as the birds become more mature. Native plants planted and managed at the pen provide appropriate nesting sites, as well as encouraging these plants on the Ranch. The Pi'iholo Ranch SHA success has provided a positive example for other landowners on the Island, and DOFAW has recently (August 2009) finalized an additional SHA at Haleakalā Ranch on Maui for nēnē recovery.

Table 4. Pi'iholo Ranch Safe Harbor Agreement

Year	# released	# mortalities	# nests found	# fledged	# nests predated	# predators killed*	Est. pop size	# Incidental Take
2005	5	0	no data	no data	no data	no data	no data	0
2006	8	0	0	0	0	35	no data	0
2007	25	2	3	0	0	26	26	0
2008	10	0	1	4	0	36	49	0
2009	0	5	6	3	0	36	46	0
2010	0	0	11	0	0	21	38	0
Total	48	7	21	7	0	154	38	0

* Includes mongoose, cats, dogs

vii) SHA for Chevron Hawaii Refinery, James Campbell Industrial Park, Island of Oahu.
Issued: November 7, 2005.

This SHA is for the management of nesting and foraging habitat for endangered ae‘o and ‘alae ke‘o ke‘o at the Chevron Refinery Hawaii at the James Campbell Industrial Park on Oahu. The SHA has a term of six years and during that period, Chevron is required to maintain six acres of ae‘o nesting habitat and five acres of habitat for ae‘o and ‘alae ke‘oke‘o foraging (Table 5). Chevron is in compliance when managing the water level and vegetation in a basin known as Rowland's Pond to maximize nesting habitat and conduct predator control around Rowland's Pond and several other pond areas within the Refinery to provide additional foraging habitat. Chevron has committed to monitor the ae‘o and ‘alae ke‘oke‘o occurring on their property and implement adaptive management strategies, should current management activities appear ineffective. In addition, Chevron conducts an education program for its employees and contractors about the ae‘o and ‘alae ke‘oke‘o at the Refinery.

This SHA's annual report is due in November of each year, to match the waterbird season, therefore this report reflects events during the 2009 calendar year. During the 2009 season, take of three ae‘o and one ‘alae ke‘oke‘o were recorded. Chevron continues to manage water levels at the ponds per the SHA for ae‘o and ‘alae ke‘oke‘o. Chevron has been diligent in their predator trapping and other SHA-related management activities. From October 2008 to September 2009, nine mongooses and two cats were captured (Table 5). No rats were captured during this time period. This is a large decrease in animal trappings on the Refinery as compared to January through September 2008 when

a total of 64 mongooses, five cats, and two rats were captured. This drop in the number of predators caught may be attributed to a decline in population due to a reduction in habitat from the construction activity on the property adjacent to Rowland's Pond and/or the more attractive housing developments nearby. The moat at Rowland's Pond may also keep the nests out of reach from some predators, deterring them from returning to the area. DOFAW has recently met with USFWS and Chevron on updating the SHA, and working toward off-site mitigation at Pouhala Marsh, under a future HCP for the project, expected to begin in 2011.

Chevron has been diligently approaching management of protected species onsite, with particular success with the Hawaiian stilt. In a recent meeting with USFWS and DOFAW, Chevron has discussed updating the SHA through adaptive management efforts, as well as initiating discussion on off-site mitigation at Pouhala Marsh under an HCP expected to begin in 2011.

Table 5. Chevron SHA.

Year	# nests found	# fledged	# predators killed*	Est. pop size	# Incidental Take**
2006	25	8	267	73	5
2007	16	12	247	100	6
2008	24	27	71	90	4
2009	26	45	11	127	4
2010	report due in November 2010				
Total	91	92	596	127	19

* Includes mongoose, cats, and rats

** Includes stilt and coot

viii) HCP for Kaheawa Pastures Wind Energy Generation Facility, Island of Maui.
 Issued: January 30, 2006.

This HCP was developed to mitigate for impacts that construction and operation of the wind farm facility may have to four listed species: Hawaiian Petrel (‘ua‘u), Newell's Shearwater (‘a‘o), Hawaiian Goose (nēnē) and Hawaiian Hoary Bat (‘ōpe‘ape‘a) if they collide with any of the 20 turbines on the site. Table 6 summarizes the monitoring that occurred for bird species and the Hawaiian hoary bat.

In 2009, the annual report for this HCP was submitted late resulting in a one year lag in reporting. The following report will cover activities conducted during FY 2009 and 2010.

During FY 2009, Kaheawa Wind Power (KWP), operated by First Wind, LLC, continued ground searches near the turbines to detect any downed wildlife in accordance with the specifications of the HCP. One Hawaiian Hoary Bat and one Hawaiian Goose fatality were documented during the reporting period. These incidents were treated as authorized takes under the Incidental Take Permit (ITP) and ITL issued to KWP by USFWS and DLNR, respectively. These take levels are within the expected annual baseline levels for each covered species as described in the HCP. Applying the results of monitoring, including Searcher Efficiency (SEEF) Trials, Carcass Removal Trials (CARE), and search frequency, the adjusted take of 1.98 Hawaiian hoary bats and 1.21 nēnē during Year 3 has been estimated. An accounting of take for each covered species through the end of the third year of the project estimates that, on average 0.57 Hawaiian Hoary Bats, 0.75 Hawaiian Petrels, and 1.63 Hawaiian Goose takes may have occurred each year as a result of project operations. No observed take of Newell’s Shearwater have been documented.

During FY 2010, ground searches around turbines detected remains of one Hawaiian Goose and the carcasses of six introduced game birds, one Spotted Dove, two Hawaiian short-eared owls, and one White-tailed tropicbird – the latter two species are protected under the Migratory Bird Treaty Act – were documented during monitoring in Year 4. Applying the results of monitoring, including SEEF and CARE, adjusted take for Hawaiian Goose Nene is estimated to be 1.21 during Year 4. An accounting of take for

each covered species through the end of the fourth year of the project estimates that, on average 0.44 Hawaiian hoary bats, 0.60 Hawaiian petrels, and 1.57 Hawaiian Goose takes may have occurred each year as a result of project operations. No take of Newell's Shearwater have been directly observed or documented. These take levels are well within the expected annual baseline levels for each covered species as described in the HCP.

The Wildlife Education and Observation Program (WEOP) continues to be a valuable extension of the conservation initiatives being pursued under the HCP. KWP maintains an active and well coordinated wildlife orientation and outreach process for all personnel on site. About 200 and 240 independent records were obtained in the WEOP logbook, during FYs 2009 and 2010, significantly improving ability to track and monitor the movements of Hawaiian Goose on site. WEOP also provides the training necessary to facilitate downed wildlife documentation, clearly demonstrating the success of this program.

In Spring 2009, First Wind, USFWS and DOFAW worked to develop the first year of on-the-ground seabird mitigation at the Makamaka'ole site in West Maui. The plan was reviewed and approved by ESRC, and began implementation in June 2009. The first year of work focused on providing predator control, initial surveys of the area, and better defining the population of potential breeders at the site, using audio-visual, radar and related survey techniques. In July 2010, the Seabird Planning Group met to discuss the expectations for mitigation at Makamaka'ole. The group recommended the construction of a fenceline, predator control, and social attraction be implemented if First Wind's surveys support the presence of active burrows on the ground. DOFAW biologists will conduct ground searches in October 2010 to assess the feasibility of the site.

Mitigation for the baseline level of take for Hawaiian Hoary Bats was provided in 2006 in the form of funding for research. In addition, since August, 2008, KWP biologists have continued to conduct acoustic monitoring of bats at Kaheawa using remote acoustic data loggers. Acoustic sensors are moved periodically to survey different portions of the site. Overall, of 37 call sequence files documented within the monitoring area from July 1, 2009 through June 30, 2010, 30 were considered bat passes. Bat activity is highest during the months of August through October.

Implementation of the provisions under this HCP has resulted in reduced take of endemic Hawaiian species. Cooperative efforts with the applicant, DOFAW and USFWS should provide net benefit to the species, when mitigation efforts are implemented to offset authorized incidental take. A more detailed report of the project is available in the "Kaheawa Pastures Wind Energy Generation Facility Habitat Conservation Plan Year 3 and 4 HCP Implementation: July, 2008 – June, 2009 and July 2009– June, 2010" (First Wind Environmental Affairs 2009 and 2010).

The Hawaiian Goose release pen at Kaheawa appears to be supporting a combination of wild and released Hawaiian Goose which utilize the pen for rearing fledglings. The off-site mitigation activities have proceeded more slowly, but have included identification, fencing and flagging of a previously unknown 'ua'u colony. Additional mitigation

activities in development include an additional release pen for Hawaiian Goose off-site, and predator control at the petrel colony. This project has resulted in net gain for Hawaiian Goose, and will result in net gain for ‘ua‘u.

Table 6. Kaheawa Pastures HCP.

Year	W Maui # nēnē released	W Maui # nēnē nests	W Maui # nēnē fledglings	# ‘ua‘u colonies monitored	# nēnē Incidental Take	# ‘ua‘u Incidental Take	# ‘ōpe‘ape‘a Incidental Take
2007	10	19	23	1	0	0	0
2008	0	17	24	1	4.5*	1.7*	0
2009	0	15	25	1	1.3*	0	2.0
2010	No data	No data	No data	1	1.6	0	0
Total	10	51	95	1	7.4	1.7	2.0

ix) Lāna‘i Meteorological Towers HCP. Issued: October 9, 2008

Castle & Cooke LLC was issued an ITL for the Lāna‘i Meteorological Towers HCP in October 2008, providing authorization for low levels of incidental take of a‘o (Newell’s shearwaters), ‘ua‘u (Hawaiian petrel), ae‘o (Hawaiian stilt), and ‘ōpe‘ape‘a (Hawaiian hoary bat), associated with the construction and operation of six meteorological towers in the western portion of the Island of Lāna‘i (Figure 8 and Table 7). The HCP provided avoidance and minimization measures, monitoring and mitigation of incidental take to provide net benefit to the species and environment.

Three or six acres of native habitat (depending on the level of actual take) are to be restored to provide nesting habitat for a‘o, ua‘u and ‘ōpe‘ape‘a, funded by the HCP and implemented by DOFAW/ Pacific Cooperative Studies Unit (PCSU), with assistance provided by the Maui Invasive Species Committee and others. During FY 2009, three acres of native habitat have already been cleared and partially replanted, although ungulate damage has been limiting native plant regeneration. Predator control efforts include work at the restoration area on the Lāna‘ihale, as well as at the Lāna‘i City wastewater treatment ponds, the later providing net benefit to ae‘o. Additional work will continue by DOFAW through March 2010 under this HCP’s mitigation plan.

Survey for incidental take, carcass removal trials, and searcher efficiency trials were conducted during Fall 2008, resuming in Spring 2009, and ongoing. Carcass searches were conducted at each met tower twice a week the first season, and on a 10-day intervals in 2009 (following observation of low rates of carcass removal from trial data). While take incidents are to be reported immediately, regular monitoring results are reported on a quarterly basis. No incidental take has been observed or reported for the project during FY09.

Agency monitoring compliance visits were conducted in May and June, 2009, by Crystal Prussick of DOFAW/PCSU. She toured the project area and accompanied two crew members during the scheduled carcass searches. Project and HCP activities were found to be in compliance with HCP requirements. As a result of the visits however, recommendations were made for improvement of searcher efficiency trials at this and other projects across the State.

This HCP expired in February 2010. The applicant has requested an extension, which is now being processed.

Table 7. Lāna‘i Meteorological Towers HCP.

Year	# acres cleared	#traps	#cats trapped	# a‘o Incidental Take	# nēnē Incidental Take	# ‘ua‘u Incidental Take	# ‘ōpe‘ape‘a Incidental Take
2008	1.2	40	9	0	0	0	0
2009	1.9	72	19	0	0	0	0
Total	3.1	112	28	0	0	0	0

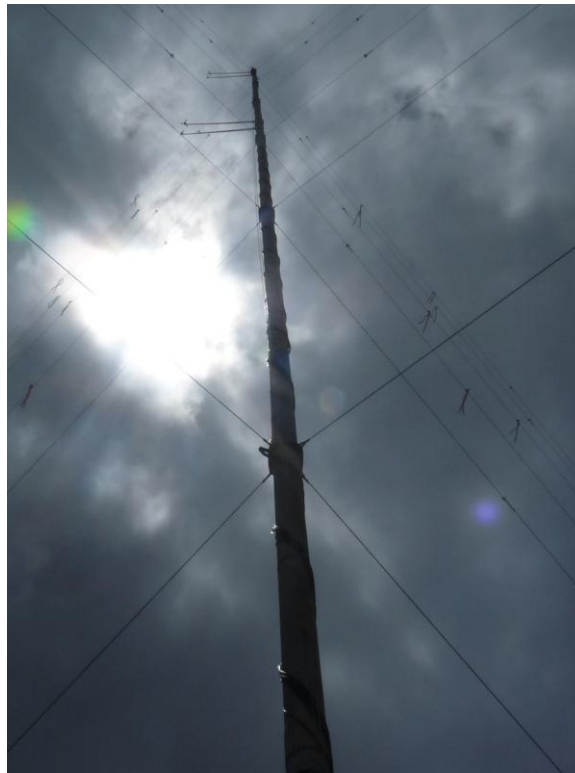


Figure 8. Guy wires on one of the meteorological towers on Lāna‘i, covered under the HCP. Guyed towers pose a much higher collision risk for seabirds and bats than do unguyed towers. Photo by Crystal Prussick (DOFAW/PCSU).

x) Haleakala Ranch SHA, Island of Maui. Approved: August 28, 2009.

The purpose of this SHA is to establish a population of the endangered nēnē (Hawaiian goose) on Haleakalā Ranch, Maui. Under this Agreement, the Ranch will work cooperatively with the State or its designee to: (1) Maintain or improve approximately 3,056 acres of habitat that may be suitable for nēnē on the Ranch for a period of 10 years by continuing cattle ranching operations in a manner sensitive to the presence of nēnē, maintaining open, short-grass habitat; (2) Establish and maintain a nēnē release pen on the designated portion of the property; (3) Control predators around the breeding and release sites; and 4) access the release pen using field roads maintained by the Ranch. This SHA will increase the likelihood that nēnē will recover by providing a protected pen where nēnē chicks can mature and then be released into the suitable surrounding habitat currently unoccupied by nēnē.

During FY 2010, a nēnē release pen was constructed. Currently, maintenance of habitat and predator control is underway. The first releases of birds to the site are planned for spring 2011.

xi) HCP for Kahuku Wind Power, Island of O‘ahu. Approved: June 7, 2010.

The purpose of this HCP is to mitigate for potential injury to and death to eight listed threatened and endangered species: ae‘o (Hawaiian stilt), ‘alae ke‘oke‘o (Hawaiian coot), koloa maoli (Hawaiian duck), ‘alae ‘ula (Hawaiian moorhen), a‘o (Newell’s shearwater), ‘ua‘u (Hawaiian petrel), ‘ōpe‘ape‘a (Hawaiian hoary bat), and the pueo (Hawaiian owl) on O‘ahu, caused by construction and operation of 12 Clipper 2.5-MW wind turbine generators. This project is currently in the construction phase and has not begun operations.

2) Description of the condition of the Endangered Species Trust Fund established under §195D-31, HRS:

- a) The sources of revenue for the Endangered Species Trust Fund are deposits for implementation of HCPs, SHAs, donations earmarked for endangered species projects, and proceeds from the sale of environmentally-themed products such as endangered species stamps, posters, books, etc., sold to the public to raise money for conservation of Hawaii’s resources. Act 144, SLH 2004, amended the provisions establishing the Endangered Species Trust Fund by changing its status from a special fund to a trust fund, and allowing deposits of money provided as security, or to implement the obligations of a HCP. Trust funds are not assessed Central Services Fees and Administrative Costs. This change in the statute is expected to encourage donations and use of the Fund by contributors and donors that have expectations that monies deposited into a trust fund, will be protected and available in the future to use for the intended purpose, such as actions required to implement HCPs or SHAs. Two trust funds are used for the purposes of this program under §195D-31, HRS: 1) S-97-800 was established to manage deposits related to the Abutilon HCP. A single fund for this large account facilitates efficient management of that fund. 2) T-919 is used for the management of all other funds under

§195D-31, HRS. An older fund that was established prior to Act 144, SLH 2004, S-324, has now been discontinued and all funds transferred to T-919.

- b) Revenues into S-97-800 from FY 2010 were derived from interest income (\$11,046). Expenditures (\$94,486) and outstanding claims (\$98,373) from FY 2010 are for implementation of the *Abutilon* HCP.

Status Of S-97-800	
Beginning Balance of Fund on July 1, 2009	886,732
Revenues during FY 2010	11,046
Expenditures during FY 2010:	2,785
Cash Balance as of June 30, 2010	894,993
Unpaid encumbrances as of June 30, 2010:	98,373
Unencumbered Cash for carryover as of June 30, 2010:	796,620

Summary of Revenues FY 2010	
Investment Pool	11,046
Total Revenue for FY 2010	11,046

Summary of Expenditures FY 2010	
Abutilon HCP Mitigation	91,700
Abutilon HCP administration	2,785
Total Expenditures	94,486

Outstanding Claims FY 2010	
Abutilon HCP Mitigation	98,373
Total Claims	98,373

- c) Revenues into T-919 S-324 from FY 2010 are from interest income (\$6,932), the sales of endangered plant tags (\$10), the sales of conservation license plates (\$2,240), the sale of Wao Akua books (\$346), Kaheawa Wind Partners I HCP mitigation deposit (\$86,500), and Kauai lagoons nene mitigation (\$6,400). Expenditures made from T-919 were pursuant to the purposes of the deposits and are identified in the table below.

Status Of T-919

Beginning Balance of Fund on July 1, 2009	467,546
Revenues during FY 2010	102,428
Expenditures during FY 2010	51,916
Cash Balance as of June 30, 2010	518,058
Unpaid encumbrances as of June 30, 2010	18,546
Unencumbered Cash for carryover as of June 30, 2010	499,511

Summary of Revenues FY 2010

Investment pool	6,932
Sales of plant tags	10
Conservation license plate	2,240
Wao Akua book sales	346
Kaheawa Wind HCP mitigation deposit	86,500
Kauai Lagoons nene mitigation	6,400
Total Revenue for FY 2010	102,428

Summary of Expenditures FY 2010

Maui nene conservation	704
Kauai Lagoons nene mitigation	641
Development of the N. Kona GMA Endangered Plant HCP	2,244
Endangered Seabird Outreach	166
Lanai Met Towers HCP mitigation	738
Kaheawa Wind Partners I HCP mitigation	42,281
Development of the KIUC HCP	374
Development of the Kahuku HCP	1,053
Development of the KWP2 HCP	1,688
Development of the ATST HCP	964
Administration of HCPs	1,062
Total Expenditures	51,916

Summary of Outstanding Claims FY 2010

Abutilon HCP mitigation	13,158
Kaheawa Wind Partners 1 HCP mitigation	4,972
Kaheawa Wind Partners 2 HCP development	379
Misc administration	38
Total Outstanding Claims	18,546

3) Recommendations to further the purposes of Chapter 195D, HRS.

- a) Adoption of a statute and rule change that would allow for collection of application fees to cover the cost of state review and technical assistance to private landowners in the development of HCPs and SHAs, including an HCP/SHA Coordinator, HCP and SHA Assistants, and expert consultation (e.g., seabird experts) required for review and

recommendations in order to comply with Chapter 195D, HRS. While grant funding will continue to be sought, a stable funding source is needed for these positions to provide for adequate and uniform review of projects and reports, efficient and quick turnaround in process administration, and ultimately, more effective use of funds for conservation of our endangered species.

- b) The sunset date on the issuance and approval of new SHAs, HCPs, and ITLs be eliminated. In the thirteen years since the provisions of Chapter 195D, HRS, to include the issuance of ITLs, the Program has achieved unequivocal success and should be continued.

4) References Cited

- a) Medeiros J. 2010. *Puu o Hoku Ranch/Pi'iholo Ranch Safe Harbor Agreement Annual Reports, July 1, 2009-June 30, 2010*. Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife, Maui District.
- b) URS Corporation. 2009. 2009 Hawaiian Stilt and Hawaiian Coot Monitoring: Chevron Hawai'i Refinery. Annual report prepared for Chevron. Honolulu.
- c) Waddington S. 2010. *Cyanotech Corporation Conservation Plan for Hawaiian Stilt (*Himantopus mexicanus knudseni*) Annual Report for 2009*. Cyanotech Corporation.
- d) DOFAW publications are available online at <http://www.state.hi.us/dlnr/dofaw/pubs/index.html>.