Kaheawa Pastures Wind Energy Generation Facility: Phase 2
Habitat Conservation Plan
FY-2012 Year 1 Annual Report

State of Hawaii ITL No. ITL-15 and USFWS ITP No. TE27260A-0

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KAHEAWA PASTURES WIND ENERGY GENERATION FACILITY (PHASE 2)
HABITAT CONSERVATION PLAN

YEAR 1 ANNUAL REPORT
July 1, 2011 – June 30, 2012

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EXECUTIVE SUMMARY

Construction of the KWP II wind energy facility was completed in June, 2012. Operations and full-scale monitoring began in early July, 2012. Land Services, Inc. (LSI) performed environmental compliance monitoring that included wildlife and environmental sensitivity training to all staff and contractors, inspections of off-site sources of raw materials, inspections of all vehicles and equipment entering the work area to ensure no unwanted biological materials were allowed to be transported to the project area, daily pre-construction sweeps for Nene activity in the vicinity of construction work areas including on-site monitoring as necessary, depending on Nene presence and activity in proximity to construction activities, to ensure avoidance and minimization of take risk, and searches of the area beneath all turbines during installation. No downed wildlife incidents were documented in association with the construction phase or during the initial operational period prior to July 1, 2012. Searcher efficiency and carcass removal studies are being implemented in early Q1-2013. KWP II is combining resources with KWP to implement seabird mitigation at Makamaka'ole, West Maui and to explore contingency options for Newell's Shearwaters with an emphasis in 2012 on upper Kahakuloa. Areas disturbed and/or cleared during construction are being monitored for the emergence of invasive flora; fireweed was noted toward the end of the construction period near the maintenance building and along the underground collection line and is being treated and managed to prevent establishment and limit its spread to other areas. A Daily Search Activity Report was created to provide a daily account and daily certification of downed monitoring and related activities that is expected to provide greater transparency and information exchange with the agencies. Funding for implementation of the HCP is on pace and has provided initial support for seabird mitigation, downed wildlife monitoring, and a one-time payment is being directed to DOFAW to support Hawaiian Short-eared Owl rehabilitation efforts.

I. INTRODUCTION

Construction of the Kaheawa Wind Power II (KWP II) project began in December, 2010 and included marking and fencing of sensitive resource areas (archeological, cultural, and ecological), installation of temporary and permanent erosion control BMPs, re-alignment and grading of the access road, excavation for foundations, foundation fabrication and concrete pouring, transport of turbine components (tower sections, nacelles, hubs and blades), erection of 14 GE 1.5 MW wind turbines (WTGs), installation of the underground collection system, installation of an overhead collection line across the gulch, construction of a new substation and battery storage facilities, construction of an operations and maintenance building, and final site stabilization and revegetation.

Land Services, Inc. (LSI) was contracted to provide daily environmental compliance oversight during the construction phase of the project. LSI was responsible for ensuring that all of the provisions outlined in the EIS and HCP were followed, which included inspections of all vehicles and equipment entering the site to ensure no unwanted vegetation, soil, or organic debris were allowed to enter the work area. LSI provided wildlife sensitivity and environmental awareness training to all construction personnel prior to their entering the work area (similar to WEOP) and this training was reiterated during daily Plan of the Day meetings and on an as-needed basis. In addition, LSI performed daily pre-construction sweeps for Nene activity in the vicinity of construction work areas and provided on-site monitoring as necessary, depending on Nene presence and activity in proximity to construction activities, to ensure avoidance and minimization of take risk. A final report summarizing construction phase environmental compliance oversight was prepared by LSI (Appendix 1).

The entire construction phase of the project spanned 540 days and ended in June, 2012. During pre-operational testing, 3-4 turbines were operated each day (daylight hours only) to conduct performance and system testing. LSI conducted daily searches for downed wildlife throughout the commissioning period and there were no incidents documented. Commercial operations began in July, 2012.

II. THE COVERED SPECIES

Of the four State and Federally listed species covered under the HCP for KWP II (the Covered Species), the Nēnē (*Branta sandvicensis*) and Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) are the only two that likely use the habitats in the project area. Nēnē are known to be resident in the project area and acoustic bat detectors stationed in the KWP and KWP II project areas have recorded low levels of bat activity that may be seasonal. Hawaiian Petrels (*Pterodroma sandwichensis*) and Newell's Shearwaters (*Puffinus auricularis newelli*) nest in the West Maui Mountains; individuals of these species may occasionally fly through the airspace of the KWP II project area.

As part of the State and Federal plans for Nēnē recovery, Nēnē have been re-introduced onto the islands of Kaua`i, Maui, Moloka`i and Hawai`i; this recovery program includes a captive-release pen in the Hana`ula area of the West Maui mountains, near the upper end of the KWP project site. As of 2006, 104 Nēnē had been released from this pen since releases began in 1994 and, although some monitoring is routinely done by DOFAW, their exact distribution, movements, and present population structure are not well known. The anticipated take of Nēnē at KWP II, when indirect impacts are taken into consideration, is not expected to exceed two individuals per year, on average.

The Hawaiian Petrel is known to nest primarily on Maui and, to a lesser extent, on Kaua`i, Lana`i, and Hawai`i. On Maui, these petrels are known to nest on Haleakala Crater on East Maui and studies undertaken by KWP biologists and others have ascertained that nesting is likely in the mountains of West Maui. The anticipated direct take of Hawaiian Petrel at KWP II, when indirect impacts are taken into consideration, is less than 3 individuals per year, on average.

The Newell's Shearwater breeds on several of the main Hawaiian Islands, with indications that the species may also nest on Maui, although the present status of the species on Maui is unclear. There have been no confirmed detections (visual or audio) of Newell's Shearwaters in the vicinity of the project area. When indirect impacts are taken into consideration, the overall take is not expected to exceed 1 bird per year, on average, at KWP II.

Little is known about the distribution or habitat use of the Hawaiian Hoary Bat, although recent studies on several islands suggest it may be more abundant than previously thought. While it has been recorded on several islands, it is believed to be most abundant on Hawai`i and present in lower numbers on Maui. The species has been detected in the project area, although observations suggest its occurrence may be seasonal and partially limited by the availability of suitable roosting habitat, as well as strong winds. When indirect impacts are taken into consideration, the anticipated take of the Hawaiian Hoary Bat at KWP II is less than 2 individuals per year, on average.

III. AVIAN AND BAT FATALITY MONITORING

Once construction activities adjacent to the WTGs was nearly complete, KWP II environmental staff began laying out the search areas beneath each turbine as prescribed in the HCP under Downed Wildlife Monitoring. Transects markers were installed using rebar and colored safety caps. Transect lines are 6 meters apart enabling searchers to survey 3 meters to each side. First Wind staff began full-scale avian and bat fatality monitoring activities as the commissioning period was nearing completion and transition to full operations commenced in early July, 2012.

The arid, windswept ridge where the KWP II search areas are located is dominated by buffelgrass which does not create a dense canopy of foliage. As a result, searches can be performed with little variation in the search pattern. Conversely, some areas are too steep for safely searching because they are either at the edge of a gulch (e.g., WTG 1-4) or simply do not afford adequate footing. The entire search area is being characterized so that each plot can be adequately classified according to slope, ground cover, search conditions, and "unsearchable area". KWP II is exploring innovative techniques to adapt the search methods in several specific areas initially considered too steep and/or rocky to safely search. A summary of this assessment is expected to be ready to submit along with the Q1-2013 progress report in October, 2012.

IV. SEARCHER EFFICIENCY AND CARCASS REMOVAL STUDIES

Trials to assess searcher efficiency (SEEF) and the retention time of carcasses prior to removal by scavengers (CARE) will be initiated in Q1-2013.

V. DIRECT OBSERVATIONS OF INCIDENTAL TAKE

There were no documented injuries or fatalities of wildlife during construction or with the newly operational KWP II wind facility prior to July 1, 2012.

VI. MITIGATION

Seabird Mitigation at Makamaka`ole

Mitigation for the two seabird species (Hawaiian petrel and Newell's shearwater) is being implemented in conjunction with KWP. The primary mitigation site entails construction and management of two predator-free enclosures (one for each species), coupled with artificial burrows and social attraction, at the Makamaka'ole site in West Maui (commonly referred to as "the Maka site"). The Maka site straddles three state land management jurisdictions: Natural Area Reserve (NAR), State Forest, and state land leased to a private ranching interest. Implementation of the plan requires approvals from the NARS Commission, DLNR Division of Forestry and Wildlife (DOFAW), the State Land Division, and the Office of Conservation and Coastal Lands (OCCL), as well as adherence to other applicable statutes and regulations.

Permitting began in fall of 2011, prior to approval of the KWP II HCP, with the goal of constructing the enclosures in late winter/early spring of 2012, and commencement of social attraction activities in the 2012 breeding season. In early November, 2011 First Wind submitted a Special Use Permit application to the NARS Commission, which addressed agency comments that were received during the drafting of the application materials. In late November, during the NARS review process, First Wind presented an overview of the project to the NARS Commission in Honolulu, and the project received support for Special Use Permit issuance.

Authorization from OCCL was applied for on December 21, 2011 and approval received on January 11, 2012. Early in 2012, First Wind met with the Maui DOFAW Forestry Managers to review requirements for an Access Permit that would cover the scope of the proposed project in the West Maui Forest Reserve. An Access Permit application was submitted along with revisions in February, 2012. The Special Use and Access Permit applications share much of the same descriptive and technical detail concerning the project, enabling NARS and Forestry officials to collaborate during the review process. Several rounds of comments and requests for clarification were received over the course of several weeks to finalize the permits and obtain approval to proceed. First Wind met with the Land Division, NARS, and DOFAW on Maui in late February, 2012 to discuss the remaining comments and concerns and to obtain guidance from the Land Division concerning the process for approving the proposed use of state lands for the project.

The rancher leasing the balance of the state land, Mr. Nobriga, has consistently expressed support for the proposal, which will not infringe on his use of the land because the proposed seabird enclosures are located within an area he previously allowed to be fenced off by DLNR for conservation purposes. The Maui Land Division agent did not foresee a problem securing their approval for the proposed use.

Unexpectedly, in early April, 2012 DLNR officials in Honolulu requested that the enclosures be redesigned to exclude the leased ranch land. This would have required significant alterations and could have rendered the project unacceptable to USFWS. Numerous options to reconfigure the enclosures were considered and discussed with USFWS and DOFAW. Finally in July, 2012, First Wind met with DLNR in Honolulu and was able to reach agreement on a path forward to allow the ranch lands to be reincorporated into the project. The end result was a delay of approximately 4 months, and new requirements added to the DLNR authorization process including a metes and bounds survey and formal access agreements both for the prior existing fence and the new proposed enclosures and surrounding buffer areas.

As of July, 2012 fence building materials are being staged on Maui and contractors are ready to get underway. The Special Use Permit application for the NARS and Access Permit from DOFAW are being finalized to reflect the return to the original configurations prior to resubmittal for final approval. First Wind is in the process of retaining a survey team on Maui for the metes and bounds survey, and is coordinating with DLNR to draft the required access agreements. In addition, we have retained a cultural and archeological consultant to delineate any existing cultural artifacts, features, and important cultural and/or historic uses to be avoided in the project area. First Wind expects to see final approvals in Q1-2013 that will enable the fence installation phase of the project to get underway by fall, 2012.

Supplemental Seabird Mitigation Investigations

In accordance with the approved HCP, during the first 5 years following ITP issuance, First Wind will 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.

First Wind biologists initiated these efforts at the Kahakuloa study area in June 2012 by trialing the use of state-of-the-art acoustic detection technology. The use of remote detection devices reduces disturbance of habitats and intrusion into potentially sensitive habitats, and has the added advantages of being able to record over extended periods without repeated helicopter visits, overnight camping, and human safety risks. Using these methods to evaluate the presence/absence and activity levels of remotely nesting species (birds and bats) has received considerable attention in recent years and is currently being utilized by DOFAW at Limahuli Valley, Kauai and near Hookipa, Maui to study seabirds. The expectation is that using remote methods will enable greater sampling effort without the need for human observers to perform each survey.

The Wildlife Acoustics SM2 (Song Meter)^{TM} was selected by First Wind as well-suited for these purposes (Fig. 1). These instruments have been used successfully for studies of several other seabird species where frequent visits to conduct audio detection surveys are impractical or otherwise limit the ability of observers to collect data. First Wind has purchased several SM2s and consulted with collaborators on the mainland to identify the most suitable survey methodology for deployment in environmental conditions encountered in the mountainous interior of Maui.

Figure 1. The Wildlife Acoustics SM2 (left) and the SM2 system contained in a water-tight case ready for use in the field (right).

First Wind received a Special Use Permit from the NARS in late June, 2012 to conduct field studies in Kahakuloa Natural Area Reserve in West Maui that included deploying up to 6 SM2 units at 3-4 deployment sites in upper Kahakuloa Valley in 2012. Selecting the sites required concurrence with Maui NARS personnel and entailed aerial reconnaissance surveys of the proposed areas to ensure sufficient helicopter landing sites were present and to identify the sites prior to deployment of instruments. KWP II biologists and Maui NARS personnel conducted several aerial missions and identified several sites that met the criteria for safe landing and foot travel to deploy the instruments. The first deployments were made on June 15, 2012. Two SM2s on dual channels (2 mics each) were placed in an area close to our 2011 audio-visual point count site. The next deployment was on July 2, 2012 and was just upslope of the initial deployment site, closer to the head of the valley. During the second deployment we landed personnel briefly at the first deployment site in order to check the SM2 systems and ensure each unit was operating properly. The elevations at the deployment sites range between 960-990 meters amsl.

The SM2s are set on a duty cycle to record for the first 3.5 hours after sunset, then for 1 minute every 10 minutes until 2.5 hours before sunrise, when they revert back to continuous recording until sunrise. On this duty cycle the data cards provide enough storage capacity for roughly 60 consecutive days before cards need to be replaced, downloaded, and/or the systems may be re-deployed elsewhere or retrieved. KWP II plans to retrieve data cards and begin analyses of the audio data in August, 2012.

Nene

The Tier 1 mitigation for Nene at KWP II will consist of providing funding to DOFAW to build an additional nēnē release pen and five years of funding for conducting predator control, vegetation management and monitoring at the additional pen beginning in 2016. The construction of a new pen will accommodate family units from the other overcrowded release pens on Maui and Hawai`i where birds are being released in accordance with the 5-year Nene Action Plan being developed in response to Governor Abercrombie's April, 2011 proclamation related to the translocation and monitoring of the Kauai Lagoons nēnē population.

In addition, KWP II biologists began performing systematic surveys on July 9, 2012 to document how nēnē use the project area following construction and to record observations of nēnē behavior and activity in the vicinity of the WTGs, including in-flight response to collision hazards (e.g., changing flight direction to avoid WTGs). These surveys are being performed for 3 hours a week, at a minimum. Survey locations are selected in advance and are scheduled to enable survey effort to cover various times of the day and environmental conditions. These surveys will continue for the entire first year of project operations, contribute to a better understanding of how nēnē respond to wind facilities, and will inform interpretations and management actions relevant

to the population ecology of nēnē in West Maui. It is anticipated that avoidance and minimization measures will be refined and improved as a result of these studies, thereby reducing future nēnē fatalities at wind facilities.

Hawaiian Hoary Bat

At the time of this writing, KWP II has received guidance from DOFAW concerning how funds should be directed to satisfy mitigation obligations for the Hawaiian Hoary Bat. Per the HCP, annual payments will be made to DOFAW over the 20 year term of the permit to support the fencing and restoration of habitat in the Kahikinui Forest Reserve to enhance bat survival and reproduction. The total amount of funding will be $250,000. First Wind is currently discussing a payment structure with DOFAW.

Pueo

A one-time payment of $25,000 will be made to DOFAW or the Hawaii Wildlife Center in August, 2012 to provide support for Hawaiian Short-eared Owl rehabilitation on the island of Hawai`i (see Funding, below).

VII. WILDLIFE EDUCATION AND OBSERVATION PROGRAM

The Wildlife Education and Observation Program (WEOP) is a life of project provision of the HCP that ensures all personnel working at or visiting the KWP II site receive training in wildlife sensitivity, avoidance and minimization measures, and guidance concerning covered species. The training includes rules of the road such as adherence to site speed limits, information on wildlife species that may be encountered on the site and their general habits, what to do when wildlife is encountered, how to report observations, and procedures for notifying environmental and/or operations staff in the event injured or dead wildlife are encountered. This program was initiated by LSI during the construction phase and continues into operations as any new personnel enter the site and in periodic refresher exercises.

VIII. MINIMIZING AND MANAGING INVASIVE SPECIES

During pre-construction planning, First Wind and LSI developed invasive species avoidance and minimization protocols consistent with the guidance contained in the FEIS and HCP. The Maui Invasive Species Commission (MISC) and the Hawaii Department of Agriculture were consulted for their input and advice, and the MISC provided comments on the draft protocols. LSI performed over 1500 inspections of incoming vehicles and equipment during construction and on

approximately 30 occasions requested that vehicles and/or equipment that did not satisfy entry requirements leave the site and perform thorough wash-downs before returning. In addition, LSI performed inspections of all off-site sources of raw materials (e.g., gravel) prior to materials being delivered to the site, to screen for invasive biological materials. This diligence resulted in no documented cases of unwanted biological materials being transported to the project site during construction activities.

Fireweed (*Senicio madagascariensis*) is an incipient weed that threatens to become established almost anywhere in Hawaii where the ground has been disturbed or cleared. This species is considered difficult to manage once established. We monitored areas closely that were disturbed by construction activity to ensure early detection and control measures should fireweed appear. Little or no fireweed was seen in the arid makai portion of the project site, but toward the end of construction, fireweed was detected in discrete areas of the mauka portion of the project adjacent to the maintenance building, sub-station, and BESS, all of which are adjacent to the existing KWP facility where fireweed was already established. These areas were cleared and graded during construction and all exposed soils received subsequent hydro-seed treatments. Once fireweed was detected it was removed manually and treated with a pre-emergent herbicide (Garlon^{TM}). These areas are being monitored and re-treated as necessary in an effort to control fireweed and prevent its spread. Managing and preventing the spread of fireweed at KWP II and the nearby KWP facilities is expected to be ongoing. No previously absent invasive species are believed to have been brought to the KWP II and adjacent KWP project areas as a result of construction-related activities.

IX. REPORTING

Reporting will follow the procedures outlined in the HCP including annual reports, downed wildlife incident reports, notifications, interim reports, project updates, and other reporting requirements that are either warranted or requested by USFWS and DOFAW. In response to recent comments, KWP II has created a Daily Search Activity Report that contains fields for recording the daily search activities which include the names(s) of monitors, plots that are searched, the times plots were searched (start and end), notes on plot maintenance requirements, carcasses discovered (actual downed wildlife and SEEF carcasses), weather and search conditions. The activity reports will be included in future reports as a way of validating that monitoring activities are being performed in compliance with the HCP.

X. FUNDING

Funding for implementation of HCP has so far included hiring of additional staff to support downed wildlife monitoring and seabird mitigation at Makamaka'ole, purchase of equipment and supplies, and securing two Letters of Credit totaling $1MM in fulfillment of the HCP Funding Assurance requirements (Appendix 2). A one-time payment of $25,000 will be made to

DOFAW or the Hawaii Wildlife Center to provide support for Hawaiian Short-eared Owl rehabilitation on the island of Hawai`i.

XI. LOOKING AHEAD

Mitigation for seabirds at Makamakaole is expected to proceed with the fence installations planned for early in the 2013 fiscal year as permits are finalized and approved, metes and bounds are completed, and the process for obtaining other access and Land Division approvals are completed. The 2012 Newell's shearwater contingency studies in Kahakuloa Valley are expected to provide useful information necessary to evaluate the presence and possible activity levels of this species in the vicinity of the SM2 audio recording stations and will inform planning in Year 2. Funding to support the fencing and habitat restoration to benefit Hawaiian hoary bats at Kahikinui should enable that work to commence in 2013 while a one-time payment to support Hawaiian short-eared owls is also being disbursed in early 2013. KWP II will continue monitoring the status of fireweed and will take actions to reduce the abundance and spread of this unwanted invasive species in the project area. KWP II is working with the DLNR Na Ala Hele Trail and Access System on Maui to fully implement the provisions for the historic Lahaina-Pali Trail, which intersects the project area. These provisions include interpretive kiosks that will provide historic and present day interpretative information to guide and enrich the experience of trail system users. Following guidance contained in the State Historic Preservation Plan for Site 50-50-09 5648, KWP II plans to implement measures to protect various features associated with Site 5648 including the installation of 4 identical informational/cautionary signs that inform hikers and other visitors concerning the historic and cultural sensitivities of the site.

APPENDIX 1

Kaheawa Wind Power II

Construction Phase Environmental Compliance

Prepared for First Wind Energy

By

Land Services, Inc.

Colorado Springs, Colorado

June, 2012

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Construction Phase Environmental Compliance

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Project Summary

The construction of Kaheawa Wind Power (KWP) II began in December 2010 on the island of Maui, Hawaii. The project involved the construction of 14 1.5 MW GE wind turbines, a substation, a battery energy storage system (BESS), maintenance building, operations and maintenance building remodel, and approximately 30,000 feet of collector line trenching. The project was built on state conservation land owned by the Department of Land and Natural Resources (DNLR). Construction was completed in June 2012. Land Services, Inc. (LSI) provided environmental consulting services during construction ensuring compliance with all state and federal permits, including the Environmental Impact Statement (EIS) and the Habitat Conservation Plan (HCP). LSI ensured that there were zero reports of noncompliance throughout the project that spanned approximately 540 days.

Biological Activity

Five endangered or threatened wildlife are present on the project site, including the Hawaiian goose (nēnē or *Branta sandvicensis*), Newell's shearwaters ('a'o or *Puffinus newelli*), Hawaiian petrels ('Ua'u or *Pterodroma sandwichensis*), Hawaiian hoary bat ('Ōpe'ape'a or *Lasiurus cinereus semotus*), and the Hawaiian short-eared owl (pueo or *Asio flammeus sandwichensis*). Nēnē are extremely common on the project site and were frequently observed near the main access road and construction areas. LSI ensured that all drivers followed speed limits and maintained appropriate distances from nēnē near the access road. At times construction work and traffic was stopped if nēnē were close to construction activities. Work was paused until nēnē were a safe distance away from activity. LSI's active monitoring and awareness of nēnē activity throughout the construction site ensured that there were zero construction-related incidental takes.

Environmental Orientations

LSI provided environmental orientations for approximately 435 personnel. Orientations were required upon entrance to the job site prior to travel up the hill. Trainings ensured all employees were aware of site rules, compliance obligations, and standard operating procedures, as well as speed limits, wildlife sensitivity and protocol for encountering species of concern throughout the project site.

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Invasive Species

In order to comply with requirements in the EIS, as well as requests by Maui Invasive Species Committee (MISC) to reduce the spread of invasive species throughout the project site, all incoming trucks and heavy equipment were checked for the presence of excessive dirt, vegetation or biological material. Any heavy equipment or trucks that were not clean and free of material (vegetation, dirt, etc.) were not allowed onsite and had to be cleaned prior to return. Approximately 30 trucks or pieces of equipment did not pass inspection and were sent back for further cleaning. LSI performed over 1500 inspections throughout the project, ensuring that all trucks and heavy equipment used during construction were clean and free of biological material. Additionally, LSI inspected all off-site sources of raw materials prior to transport and use on the project site to minimize spread of invasive species.

NPDES Compliance

KWPII is located on the West Maui Mountains with a consistent grade between 16-18% through the project site. The steep site presents a stormwater control concern during heavy precipitation events typical of the rainy season from November to March. LSI worked with the contractor and client to ensure that best management practices (BMPs) were in place and maintained during civil construction to ensure Nonpoint Discharge Elimination System (NPDES) permit compliance. Permanent stormwater prevention elements were incorporated into the site to ensure minimal erosion and runoff prevention and control over the long-term. LSI recommends that permanent stormwater control features be maintained and silt accumulation be removed after rain events in order to prevent stormwater runoff through the life of the project.

Over 30 small, non-reportable petroleum-based spills were reported throughout KWPII construction. Most spills were less than one gallon of hydraulic fluid or diesel fuel and none were greater than seven gallons. LSI worked with the contractor to ensure these spills were cleaned up and the soil was properly disposed of according to the Resource Conservation and Recovery Act. LSI also consistently ensured that the NPDES permit was in full compliance and wastewater was stored in lined tanks and properly disposed during all concrete pours.

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Revegetation

LSI worked with the contractor and client to ensure short-term revegetation was successful and quantified and assessed vegetative growth after the majority of civil work was completed, confirming that greater than 75% of disturbed areas were successfully stabilized using either vegetation or rip rap. LSI observed disturbed areas post-seeding to monitor for the presence of invasive species. Invasive species already common to KWP, such as fireweed, did regenerate in disturbed areas, however the presence of MISC priority target species was not observed. LSI recommends that a qualified botanist monitor disturbed areas every six months for two years post-construction, as is required in the EIS. Additionally LSI recommends that First Wind actively remove fireweed throughout the project site post-construction.

Night Work

During the winter months prior to seabird breeding season, foundations were poured at night and lighting towers were necessary to ensure personnel safety. LSI ensured that all precautionary measures were taken to reduce the ambient light field and ensure potential light attraction by wildlife, especially the Hawaiian hoary bat, Newell's shearwater, and Hawaiian petrel, was minimized. Lighting shields were used for all towers and LSI inspected each lighting tower prior to work beginning to ensure individual lights were directed downward. One Hawaiian petrel and multiple bat sightings were observed during the night pours, however wildlife were not attracted to the lighting sources and did not appear at risk. Night foundation pours were successfully completed without a single incidental take of a listed species.

Conclusion

Construction of Kaheawa Wind Power II was complete after approximately 540 days in June 2012. The project was successfully completed in full compliance with all state and federal permits.

APPENDIX 2

Year 1 Expenditures for HCP Implementation

General Measures	Year 1 HCP Budget	Expenditures (through June, 2012)	Comments
Pre-construction surveys for nene and nene nests	$ 5,000.00		
Daily searches for nene and nene nests during construction	$ 25,000.00		
Invasive species avoidance and minimization	$ 30,000.00	$ 250,000.00	Estimated portion of environmental compliance contractor (Land Services, Inc.) costs dedicated to HCP-related tasks. Budgeted cost was greatly exceeded due to extended construction schedule caused by delayed approval of the HCP.
Wildlife Education and Observation Program (WEOP)			
Construction phase wildlife sensitivity training	$ -		
Operational phase routine WEOP orientations	$ 1,500.00	$ 300.00	KWP II Staff
Hawaiian Short-eared Owl Mitigation	$ 25,000.00		One-time payment to DOFAW or the Hawaii Wildlife Center
General Measures Sub-Total	**$ 86,500.00**	**$ 250,300.00**	
Seabird Mitigation			
Equipment and materials for the construction of 2 fenced enclosures to protect seabirds at Makamakaole	$ 121,000.00	$ 115,000.00	Initial cost for major fence components and shipping
Fence installation			Contractor; after July 1, 2012
Coordination and project management		$ 30,000.00	KWP II Staff (G. Spencer)
		$ 8,000.00	KWP II Staff (M. Gilmour)
Consultant fees		$ 28,000.00	Ecoworks New Zealand
Seabird Mitigation Sub-Total	**$ 121,000.00**	**$ 181,000.00**	
Nene Mitigation			
Systematic on-site observations of nene interaction	$ 2,000.00	$ 300.00	KWP II Staff
Nene Mitigation Sub-Total	**$ 2,000.00**	**$ 300.00**	

Bat Mitigation	**Year 1 HCP Budget**	**Expenditures (through June, 2012)**	**Comments**
Funding for Kahikinui management			After July 1, 2012
Bat monitoring at the project site for 5 years	$ 12,500.00	$ 1,000.00	KWP Staff
Bat Mitigation Sub-Total	**$ 12,500.00**	**$ 1,000.00**	
Downed Wildlife Monitoring			
Downed wildlife searches, SEEF, CARE, reporting	$ 130,000.00	$ 8,000.00	KWP II Staff; includes plot and transect layouts, interim report preparation
Third party (DOFAW or designate) trial proctoring and QA/QC	$ 30,000.00		After July 1, 2012
Downed Wildlife Monitoring Sub-Total	**$ 160,000.00**	**$ 8,000.00**	
State Compliance Monitoring			
Technical Services (195-D)	$ 25,000.00		After July 1, 2012
State Compliance Monitoring Sub-Total	**$ 25,000.00**		
	Budgeted in Year 1	**Expenditures through June, 2012**	Approximately 6 months since permit issuance
Overall Totals	**$ 407,000.00**	**$ 440,300.00**	