

**NA PUA MAKANI
WIND ENERGY PROJECT**

HCP Annual Report FY 2020

(July 1, 2019 – June 30, 2020)

Incidental Take License: ITL-21

Incidental Take Permit: TE63452B-0

Prepared for

Na Pua Makani Power Partners, LLC

Prepared by

Tetra Tech Inc.



July 2020

1.0 Introduction

Na Pua Makani Power Partners, LLC (NPMPP) has developed a Habitat Conservation Plan (HCP; Tetra Tech 2016) and received a U.S. Fish and Wildlife Service (USFWS) incidental take permit on September 7, 2018 (ITP; TE63452B-0) and the Hawai'i Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) incidental take license on April 30, 2019 (ITL; ITL-21). Covered Species include the Hawaiian hoary bat (*Lasiurus cinereus semotus*), Newell's shearwater (*Puffinus newelli*), Hawaiian goose (*Branta sandvicensis*), Hawaiian duck (*Anas wyvilliana*), Hawaiian coot (*Fulica alai*), Hawaiian gallinule (*Gallinula chloropus sandvicensis*), Hawaiian stilt (*Himantopus mexicanus knudseni*), and Hawaiian short-eared owl (*Asio flammeus sandwichensis*). This report covers activities relating to the Na Pua Makani Wind Energy Farm (Project) HCP for the State of Hawai'i fiscal year (FY) 2020, from July 1, 2019 through June 30, 2020, pursuant to the terms and obligations of the approved HCP, ITL, and ITP.

2.0 Construction

Construction of the Project began in FY 2019 and continued through FY 2020¹. Concrete pouring for the first turbine foundation began on April 30, 2019 and coincides with the effective start date of the ITL. Project commissioning and commercial operations are anticipated to begin in Quarter 1 (Q1) of FY 2021. The Project turbines, meteorological tower, and facilities construction were mostly completed in FY 2020.

Because the Project was under construction throughout FY 2020, risks to wildlife associated with Project operation were not present. Nevertheless, nighttime activities associated with Project construction were required during FY 2020, and NPMPP implemented several avoidance and minimization measures to reduce the associated risks to wildlife. These avoidance and minimization measures included the use of nighttime biological monitors when construction lighting was in use, implementation of wildlife education trainings, and regular inspections for downed wildlife in the immediate vicinity of Project security lights.

During 46 nights between October 13, 2019 and December 2, 2019, supplemental security lights were staged and operational between dusk and dawn along a route between Barber's Point and Kahuku to facilitate safe transport of turbine components to the Project (actual turbine component transport occurred on 21 of those nights), and nocturnal construction activities were attempted on December 19, 2019. During these activities, nighttime biological monitors were present at the Project to respond to downed wildlife and conduct focused monitoring efforts. Downed wildlife searches were performed by trained personnel at each of the lights at dawn. Subcontractors and Project personnel associated with the nighttime work underwent focused wildlife training

¹ Fiscal year references in this report refer to the State of Hawai'i fiscal year, which begins every July 1 and ends every June 30th.

associated with potential for nighttime lighting to attract wildlife and result in downed wildlife. See the results of the downed wildlife monitoring under Section 3.3.

NPMPP operates lights nightly between dusk and dawn near the base of each turbine due to Project safety and security needs. The height and position of security lights are checked by site personnel regularly to ensure they are positioned appropriately to minimize potential attraction of wildlife, while meeting project safety and security needs. These lights are 15 feet tall and angled downward to minimize the potential attraction of wildlife (Figure 1). Security personnel conduct downed wildlife sweeps at sunrise each day in the vicinity of security lights. See the results of the downed wildlife monitoring under Section 3.3.

3.0 On-Site HCP-Related Management

3.1 Wildlife Education and Incidental Reporting System

NPMPP implemented a Wildlife Education and Incidental Reporting Program for contractors and Project staff working at the Project during construction. This training enables contractors and staff to identify the Covered Species that may occur at the Project site by providing staff with printed reference materials that include photographs of each of the Covered Species, information on their biology and habitat requirements, threats to the species onsite, and avoidance and minimization measures of the HCP. Project staff and contractors are responsible for awareness of wildlife activity onsite, and responding to and treating wildlife appropriately. Project personnel and contractors are responsible for documenting any Project-related wildlife incidents and reporting any downed wildlife to the on-site manager.

Seventy-six Project personnel or subcontractors were trained through this program in FY 2020. Two wildlife incidents were reported in FY 2020 (Section 3.3).

3.2 Invasive Species Management Surveys

In FY 2019 NPMPP developed an invasive species management plan to limit the potential impacts of invasive species. Consistent with HCP requirements, NPMPP coordinated with the Oahu Invasive Species Committee to identify and implement measures to minimize the risk of introducing *Chromolaena odorata* to the Project area. Approaches to minimize risk include periodic site inspections by qualified personnel to search for the presence of plants and cleaning of equipment used in the Project area. In FY 2020 Tetra Tech, Inc. (Tetra Tech) performed an invasive species survey at the Project over two dates November 6 and December 18, 2019. Surveyors did not observe any *Chromolaena odorata* within the Project construction disturbance footprint nor at the vehicle decontamination site.

3.3 Downed Wildlife Monitoring

The Project will initiate standardized carcass searches with the beginning of turbine operations during the Project commissioning phase in FY 2021. Although Project turbines were not operating during FY 2020, NPMPP implemented several actions to identify and respond to downed wildlife

resulting from construction activities including: on-site biological monitors during nighttime construction/transportation lighting, inspections for downed wildlife in the vicinity of Project security lights, and focused wildlife education trainings to increase the probability of incidental detection of downed wildlife.

NPMPP documented two wildlife incidents in FY 2020, but no fatalities of Covered Species were observed (Table 1). NPMPP followed the DOFAW and USFWS downed wildlife protocol in responding to both incidents (DOFAW and USFWS 2019). One downed wedge-tailed shearwater (*Puffinus pacificus*; protected under the Migratory Bird Treaty Act [MBTA]) was recovered during a routine check for downed wildlife in the vicinity of security lights located at the base of each turbine. One downed spotted dove fatality (non-MBTA species) was observed by a Project contractor during regular work activities and reported. The on-site biological monitor and trained staff did not detect wildlife around the Project lights during the component transportation activities (October – December 2019; see Section 2.0) or during the one night of attempted Project construction activity (December 19, 2019).

Table 1. Downed Wildlife and Fatalities Recovered at the Project in FY 2020

Species	Date Documented	Turbine	Distance to Turbine (meters)	Bearing from WTG (degrees)	Notes
<i>Puffinus pacificus</i> (Wedge-tailed shearwater)	12/07/2019	9	3.9	188	Downed bird recovered below security light; transported to wildlife rehabilitation facility and assessed. Released into the wild
<i>Spilopelia chinensis</i> (Spotted dove) ¹	03/04/2020	9	2	340	Fatality
1. Species not afforded protection under the MBTA.					

4.0 Mitigation and Related Activities

No mitigation activities were conducted in FY 2020. NPMPP and Tetra Tech communicated regularly with mitigation partners, USFWS, and DOFAW throughout FY 2020 to prepare for the initiation of mitigation and related actions identified in the HCP and ITL Special Condition 8 (see Section 6.0 for meeting topics and dates). These discussions occurred as part of semi-annual HCP implementation meetings in October and April and conference calls targeted toward specific mitigation projects in April (2 calls) and May (2 calls). Topics included:

- Coordination and planning related to Hawaiian goose and waterbird mitigation projects,
- Gathering information and updating stakeholders on the status of the Poamoho management area,
- Outlining and refining management and research objectives for the Poamoho management areas, and

- Identifying DOFAW’s objectives for a bat deterrent research plan.

5.0 Adaptive Management

No adaptive management measures were implemented in FY 2020. NPMPP has developed a plan to voluntarily install ultrasonic acoustic bat deterrents on four Project turbines based on available scientific research and preliminary results from the Kawaihoa Wind Farm on O’ahu (Tetra Tech 2019, Weaver et al. 2019). This plan was discussed with USFWS and DOFAW during the April 21, 2020 HCP implementation review meeting (Section 6.0). Barring unforeseen circumstances, NPMPP anticipates these deterrents will be operational by the Project’s commercial operation date. There were no changed or unforeseen circumstances in FY 2020.

6.0 Meetings

NPMPP and Tetra Tech communicated actively with mitigation partners, USFWS, and DOFAW throughout FY 2020 through in-person meetings, conference calls, and e-mail communications related to the Project’s HCP (Table 2). The purposes of these communications included required semi-annual meetings, and planning associated with avoidance and minimization measures, monitoring, and mitigation.

Table 2. Summary of Agency Coordination and Communication in FY 2020

Date	Description	Participants
August 13 – 14, 2019	Coordination with DOFAW regarding transport route	NPMPP, DOFAW
September 11, 2019	Meeting with USFWS to discuss ITP (in person)	NPMPP, Tetra Tech, USFWS
October 10, 2019	HCP implementation review meeting (in person)	NPMPP, Tetra Tech, USFWS, DOFAW
January 15, 2020	Project HCP annual report submitted to Endangered Species Recovery Committee	Tetra Tech, USFWS, DOFAW
April 2, 2020	Mitigation coordination meeting (conference call)	NPMPP, Tetra Tech, DOFAW (O’ahu Branch)
April 7, 2020	Mitigation coordination meeting (conference call)	NPMPP, Tetra Tech, USFWS, DOFAW
April 21, 2020	HCP implementation review meeting (conference call)	NPMPP, Tetra Tech, USFWS, DOFAW
May 27, 2020	Poamoho management and research planning meeting (conference call)	Tetra Tech, Ko’olau Mountain Watershed Partnership
May 29, 2020	Bat mitigation planning meeting (conference call)	NPMPP, Tetra Tech, USFWS, DOFAW

Date	Description	Participants
June 30, 2020	Draft Newell's shearwater and Hawaiian short-eared owl mitigation agreement submissions to USFWS and DOFAW	Tetra Tech submitted to USFWS and DOFAW on behalf of NPMPP

7.0 Expenditures

Total HCP-related expenditures for the Project in FY 2020 were \$155,641. These expenditures covered the implementation of the wildlife education and incident reporting program, performance of invasive species surveys, and monitoring and mitigation planning efforts. A letter of credit providing funding assurances for the implementation of HCP requirements was issued in FY 2020.

8.0 FY 2021 HCP Implementation Work Plan

NPMPP's FY 2021 HCP implementation work plan is provided as Attachment 1.

9.0 References

- DOFAW (Hawai'i Division of Forestry and Wildlife) and USFWS (U.S. Fish and Wildlife Service). 2019. Standard Protocol for Holders of a State of Hawai'i Incidental Take license and U.S. Fish and Wildlife Service Incidental Take Permit Responding to Dead or Injured Birds and Bats that are Threatened and Endangered Species or MBTA species.
- Tetra Tech (Tetra Tech, Inc.). 2016. Na Pua Makani, Final Habitat Conservation Plan. Document prepared for Na Pua Makani, LLC.
- Tetra Tech. 2019. Kawaiiloa Wind Project Habitat Conservation Plan FY 2019 Annual Report. Prepared for Kawaiiloa Wind, LLC.
- Weaver, S., C. Hein, T. Simpson, and I. Castro-Arellano. 2019. Testing ultrasonic acoustic deterrents for reducing bat fatalities at wind turbines in south Texas. Proceedings of the National Wind Coordinating Collaborative, Wind-Wildlife Research Meeting, XII, 27–30 November 2018, St. Paul, Minnesota, USA. National Wind Coordinating Collaborative, Washington, D.C., USA.



Figure 1. Security Light at Turbine 4

Attachment 1. FY 2021 HCP Implementation Work Plan

Program	Component	FY 2021			
		Q1	Q2	Q3	Q4
PCMM	Fatality Searches	Weekly searches coincide with start of commissioning and continue throughout FY			
	Bias Correction Trials	Searcher efficiency and carcass persistence trials	Searcher efficiency and carcass persistence trials	Searcher efficiency and carcass persistence trials	Searcher efficiency and carcass persistence trials
	Scavenger Control	Weekly trap checks for 1 month, trap checks every 2 weeks for remainder of year, quarterly evaluation			
	Vegetation Management	To occur shortly after completion of searches on as-needed basis, planned for approximately monthly			
Bat Acoustic Monitoring	Monitor Deployment	Deploy			
	Data downloads and Equipment Checks	Download data and equipment check monthly			
Bat Deterrents	Research Study	Develop research plan		Implement research plan	
	Installation	Install deterrents on 4 turbines			
Mitigation	Nene	Planning		Implementation	
	Waterbirds	Planning		Implementation	
	Newell's Shearwater	Funding of National Fish and Wildlife Foundation mitigation project	Coordinate with USFWS regarding mitigation progress and reporting		
	Hawaiian Hoary Bat	Planning	Research plan and management plan approvals	Implementation	
	Hawaiian Short-eared Owl	Funding of Endangered Species Trust Fund mitigation project	Coordinate with DOFAW regarding mitigation progress and reporting		
Reporting	Wildlife Incidents	As required per DOFAW and USFWS 2019 protocol			
	Regular Reporting	FY 2020 annual report	Q1 report	Q2 report	Q3 report