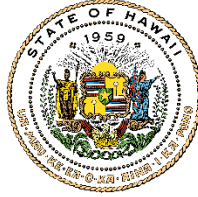


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KAHOOLAWE ISLAND RESERVE COMMISSION
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March 2, 2026

Endangered Species Recovery Committee
State of Hawai'i
Honolulu, Hawai'i

SUBJECT: Division of Forestry and Wildlife Evaluation of the Nā Pua Makani Wind Energy Project Habitat Conservation Plan Implementation for Fiscal Year 2025 and Request for ESRC Review of the Licensee's HCP Annual Report

Dear Committee Members,

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW), respectfully requests the Endangered Species Recovery Committee (ESRC) to review the Nā Pua Makani Wind Energy Project (Project), located on the island of O'ahu, annual report in accordance with the requirements of HRS § 195D-25. This annual report was prepared by Tetra Tech, on behalf of Nā Pua Makani (licensee), as part of the obligations of the Nā Pua Makani Habitat Conservation Plan (HCP; Tetra Tech 2016) and State Incidental Take License (ITL; ITL-21). This submittal provides a summary of the annual report and includes comments from DOFAW.

BACKGROUND

ITL Licensee: Nā Pua Makani Power Partners (NPMPP), LLC

Project: Eight wind turbine generators (WTGs) with a total capacity of 24 MW.

ITL Duration: April 30, 2019, through April 30, 2040. As of the end of Fiscal Year (FY) 2024, this project is six years (29%) into the permit term.

Status of ITL

The Habitat Conservation Plan (HCP) for this facility requires annual reports, unlike some other HCPs that require quarterly reports. As a result, the assessment of the ITL status will focus only on the State FY 2025 period (July 2024 – June 2025). However,

observed take during the first two quarters of FY 2026 will be included here to ensure consistency with other wind projects reviewed annually.

There were three reported Hawaiian hoary bat fatalities in FY 2025, with no mortalities during the first two quarters of FY 2026. One Hawaiian petrel fatality was reported in the second quarter of FY 2025. A major amendment that includes the Hawaiian petrel as a covered species is still underway, with NPMPP submitting it in late September 2025. Two mitigation projects have been identified as potential options for this amendment.

Figure 1: Total observed fatalities and estimated total take since the issuance of the ITL under Nā Pua Makani Wind Energy as of June 30, 2025.

Common Name	Tier One Take Authorization	Total Observed Take ¹	Estimated Unobserved Take ²	Indirect Take using HCP multipliers	Total Estimated Take
Hawaiian Hoary Bat	34	4	6	1	11

¹ Excludes hoary bat takes that were incidental and not observed during systematic monitoring (incidental takes are evaluated as part of the EoA modeling software and therefore accounted for in the unobserved take).

² Based on the 80% credible maximum using the following model: Dalthorp, D., M. M. P. Huso, and D. Dail. 2017. Evidence of absence (v 2.0) software user guide: U.S. Geological Survey Data Series 1055.

Total Projected Take at the End of the Permit Term

Nā Pua Makani Power Partners (NPMPP) estimated the number of Hawaiian hoary bat individuals that could be taken during the permit period using the Evidence of Absence (EoA) model and fatality monitoring data collected through FY 2025. The purpose of this analysis was to determine whether this wind farm might exceed the permitted take limit at an 80 percent upper confidence limit (UCL) before the permit expires. For this analysis, the detection probability in future years is assumed to be constant at 0.489 (95% CI = [0.410, 0.568]). Since future indirect take is unknown and may vary depending on the timing of ODT, it is assumed that the total indirect take over the permit period would be up to three adult equivalents (equivalent to 10 juveniles, based on Hawaiian hoary bat survival rates, USFWS 2016), or 5.8 percent of the permitted take. Currently, indirect take accounts for 3.9 percent of the total take (0.405 [adult indirect take] / 10.405 [adult direct and indirect take] = 0.0389). If three adult bat equivalents are considered indirect take, the permitted direct take under the Project's Incidental Take Permit (ITP) and Incidental Take Limit (ITL) would be 48 bats (i.e., 51 permitted take minus 3 indirect take). The analysis indicates an 83.9 percent chance that the upper confidence limit of the cumulative take will remain below the permitted threshold during the permit period.

Avoidance and Minimization Measures Implemented in FY 2024

During FY 2024, changes to on-site lighting were made across the facility to reduce impacts on wildlife. This included: 1) directing lighting downward at the operations and

maintenance building and substation, and using non-white bulbs; and 2) limiting lighting near or around the WTGs to only when workers were performing night work. It should be noted that no night work requiring lighting took place in FY 2025.

NPMPP also enforces low-wind-speed curtailment to protect Hawaiian hoary bats. This involves raising the manufacturer's recommended cut-in speed to 5 m/s and feathering turbine blades into the wind below 5 m/s. Low wind speed curtailment is applied annually from March through November, between sunset and sunrise. In FY 2025, this was implemented from July to November 2024 and March to June 2025. Not only does this help reduce bat fatalities, but it also lowers the risk to other Covered Species (e.g., Newell's shearwaters and the Hawaiian Short-eared owl) that may cross the facility at night.

In consultation with USFWS and DOFAW, NPMPP installed ultrasonic acoustic bat deterrents designed by NRG Systems on four Project turbines based on available scientific research and preliminary results from the Kawaiiloa Wind Farm on O'ahu (Tetra Tech 2019c, Tetra Tech 2020b, Weaver et al. 2019). Deterrents became operational between September 17 and 28, 2020. Each bat deterrent system consists of six deterrent units (DU) and a single deterrent unit controller (DUC). Each DU is deployed at the front of the nacelle top and bottom. The three top-mounted DUs are 45 inches downwind of the rotor. The three bottom-mounted DUs are 30 inches downwind of the rotor. Each DU features a subarray of six speakers emitting sounds at different frequencies and decibel levels. FAA lights occupy the back of the nacelle, approximately 20 feet behind the top-mounted DUs. Each DU includes six subarray speakers. The DUs are connected via cables to the DUC, which powers the system, sets schedules, and monitors system status. The deterrent system is regularly monitored to ensure components operate according to the manufacturer's recommendations. The effective coverage area of each of the six deterrent units overlaps, providing system redundancy in case of component failure. Components are replaced promptly when they fall below the manufacturer's standards, and spare parts are stored on-site for quick replacement. During FY 2025, the deterrent units operated within manufacturer's recommendations 91 percent of the time. Additional information about NRG's bat deterrent system is available on their website (NRG Systems 2025).

Mitigation and ITL Special Conditions Statuses:

The mitigation plan for the 'Ōpe'ape'a in the HCP includes developing and implementing research and management plans aimed at actions that will enhance and protect bat habitat in the 'Ewa Forest Reserve, Poamoho Management Area (PMA), and studying the effectiveness of habitat restoration activities on increasing bat food resources, bat activity, or other relevant variables. Revisions were made in March, Q3 2025, prior to the ESRC meeting held on April 11 of Q4 2025. The ESRC, DOFAW HCP, and USFWS approved the revised bat management and research plans with amendments. NPMPP made final revisions to these plans, incorporating recommendations from the ESRC, DOFAW, and USFWS, and received concurrence from DOFAW in mid-September 2025 that all changes had been addressed.

As part of the HCP, NPMPP is obligated to minimize potential impacts on native waterbird species covered by the HCP. Due to changes at the site since the development of the HCP that rendered the original plan unsuitable, DOFAW and the United States Fish and Wildlife Service (USFWS) agreed that a revised waterbird mitigation program at Hāmākua Marsh was necessary. This new waterbird mitigation plan was created through an adaptive management process, and its final version has been approved. An MOU between NPMPP and DOFAW to implement the mitigation actions has been finalized. The initial lump-sum payment required to begin mitigation was made in Q4 of FY 2024. Implementation started in the second quarter of FY 2025. According to the MOU, DOFAW must submit quarterly reports. NPMPP received the first and second quarterly data submissions (covering November 2024 to January 2025 and February to April 2025, respectively) from DOFAW. The data from the third quarterly report (May 2025 to July 2025) is expected from DOFAW on August 15, 2025. Results from Hawaiian Waterbird mitigation efforts conducted between November 2024 and October 2025 will be included in the FY 2026 annual report.

The nēnē was initially included in the HCP as a species requiring mitigation. However, this species was extirpated from O'ahu before the Project's construction and operation. USFWS, DOFAW, and NPMPP agree that the Project currently poses no threat to the species. Therefore, NPMPP will revise the mitigation framework for the Hawaiian goose through a major HCP amendment. NPMPP proposes a tiered mitigation approach focused on funding rehabilitation activities. This is part of a major amendment, which also covers and mitigates for 'ua'u. DOFAW is reviewing this amendment and collaborating with NPMPP to finalize mitigation options.

Mitigation for 'A'io and Pueo has been completed. However, at the end of FY 2024, funding from NPMPP to the National Fish and Wildlife Fund (NFWF) for Newell's Shearwater mitigation has not yet been utilized. USFWS and DOFAW are coordinating on mitigation projects that will benefit from NFWF funding.

The ITL held by NPMPP includes several requirements, including Special Condition 8, which states: *"In addition to the funding commitments set forth in the HCP, the Applicant shall contribute an additional \$100,000 toward research on deterring bats as part of its Tier 1 mitigation. The resulting research may also utilize other funding sources. The research project or projects must be approved by DOFAW, and the results shall be made publicly available. The research shall focus on deterrence measures with the goal of reducing the take of 'ōpe'ape'a by wind turbines. The research shall comply with HCP section 6.1.2.1."* It was anticipated in the HCP that this plan would be approved by the Agencies within six months from the start of commercial operations in December 2020. It would then be implemented a full year after this start date, depending on the nature of the research.

In Q4 of FY 2024, Tetra Tech submitted the plan for review by the ESRC. The committee recommended developing an additional revised plan that more directly assesses the effectiveness of deterrents and considers including thermal videography.

NPMPP revised the deterrent plan to evaluate deterrent efficacy using a combination of thermal videography and ultrasonic acoustic recordings to monitor nightly activity, flight, and foraging behavior of bats at four wind turbines at the NPM project site: two turbines equipped with deterrents and two without. A revised research plan was submitted to DOFAW in Q3 2025. Comments were received in April of Q4 2025. Revisions were made, and the plan was resubmitted to DOFAW in late April of Q4 2025 and again in May 2025 of Q4 2025, with DOFAW formally approving the bat deterrent research plan in accordance with ITL Special Condition 8. The research plan is expected to be implemented during Q1 and Q2 of FY 2026, with results reported in Q3 of FY 2026.

Last ESRC Review:

The ESRC made the following recommendations at the FY 2023 annual review meeting that were included in the FY 2025 actions:

- 1) Include deterrents specifications in the annual report.

Agency Recommendations:

- 1) 'Ua'u: There have been at least two documented fatalities of this species at the Project to date. NPMPP has submitted a draft amendment to the Agencies, which is under review by DOFAW. Additionally, two mitigation projects have been identified for this species: 1) predator control in Kamehamenui, Maui; and 2) construction of a cat-proof fence on Hawai'i. DOFAW is working with the licensee to finalize project proposals.
- 2) Nēnē: Planning for changes to the ITL for this species has been ongoing since 2023. DOFAW has received a draft amendment that covers this taxon. The Division is currently reviewing the document.

If you have any questions, please contact Habitat Conservation Planning Program Associate, Jesse W. Adams at jesse.w.adams.researcher@hawaii.gov

Respectfully Submitted,



DAVID G. SMITH
Administrator