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February 26, 2025

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 During Fiscal Year 2024

Dear Committee Members,

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) is respectfully requesting 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 of 24-MW energy generating capacity.

ITL Duration: April 30th, 2019 through April 30th, 2040. As of the end of FY 2024, this project is five years (24%) through the permit term.

Status of ITL

The Habitat Conservation Plan (HCP) for this facility requires that reports are only submitted on an annual basis. This differs from other HCPs that have requirements to report on a quarterly basis. Therefore, take in relation to the status of the ITL will only be evaluated for the period of the State FY 2024 (July 2023 – June 2024). However, observed take in the first two quarters of FY 2025 will be shared here to be consistent with other wind projects included in this annual review.

There were no reported Hawaiian hoary bat fatalities in FY 2024, but one fatality did occur in the first quarter of FY 2025. There was no take during FY 2024 for the remaining seven Covered Species. However, there was one Hawaiian petrel fatality reported in the second quarter of FY 2025. A single wing and leg were recovered and sent for genetic testing at the Bernice Pauahi Bishop Museum—Pacific Center for Molecular Biodiversity. DOFAW will update the ESRC on the results of this test as they become available. **A major amendment that includes the Hawaiian petrel as a covered species is still in progress. NPMPP will tentatively submit a draft of this amendment in July or August of 2025.**

Figure 1: Total observed fatalities and estimated total take since ITL issuance under the Nā Pua Makani Wind Energy ITL as of June 30th 2024.

Common Name	Total Observed Take[1]	Estimated Unobserved Take[2]	Indirect Take using HCP multipliers	Total Estimated Take
Hawaiian Hoary Bat	1	2	1	4

[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) projected take of Hawaiian hoary bat individuals through the end of the permit term using the Evidence of Absence (EoA) model and the fatality monitoring data collected through FY 2024. The objective of this analysis was to evaluate the potential for this wind farm to exceed the permitted take limit at 80 percent UCL before the end of the permit term. For this analysis, the detection probability for future years is assumed to be constant at 0.482 (95 percent CI = [0.411, 0.553]). As future indirect take is unknown and will potentially vary based on the timing of ODT, we assumed the total indirect take for the Project over the permit term would be a maximum of three adult equivalents (10 juveniles based on assumed Hawaiian hoary bat survival rates; USFWS 2016) or 5.8 percent of the permitted take. Currently, the proportion of total take that is attributable to indirect take is 4.3 percent (0.135 [adult indirect take]/3.135 [adult direct and indirect take] = 0.043). Assuming

three adult bat equivalents are attributed to the Project as indirect take, the permitted direct take under the Project's ITP and ITL would be 48 bats (i.e., 51 permitted take – 3 indirect take = 48 direct take). Based on the analysis described above there is a 97.5 percent chance that the 80 percent UCL of cumulative take will not be exceeded during the permit term.

Avoidance and Minimization Measures Implemented in FY 2024

During FY 2024 changes to on-site lighting, to minimize impacts on wildlife, were implemented across the facility. This included: **1)** lighting at the operations and maintenance building and substation was directed downward and fitted with non-white bulbs; and **2)** lighting near or around the WTGs was only used when workers were conducting night work. It should be noted that no night work requiring lighting occurred in FY 2024.

NPMPP also implements low wind speed curtailment for the benefit of Hawaiian hoary bats. Implementation included increasing the manufacturer's recommended cut-in speeds to five meters per second and feathering turbine blades into the wind below five meters per second. Low wind speed curtailment is instituted annually from March – November between sunset and sunrise. In FY 2024 this included implementation during July – November 2023 and March – June 2024. Not only does this practice provide the benefit of reducing bat fatalities, but it also reduces risk to other Covered Species (e.g., Newell's shearwaters and the Hawaiian Short-eared owl) that may transit the facility at night.

Mitigation and ITL Special Conditions Statuses:

The mitigation plan for the 'Ōpe'ape'a in the HCP includes preparation and implementation of research and management plans targeting actions that will improve and protect bat habitat in the 'Ewa Forest Reserve, Poamoho Management Area (PMA) and study the effectiveness of habitat restoration activities on improving the availability of bat food resources, increasing bat activity, or other appropriate variables. Revisions were provided by DOFAW on drafts that were submitted to them in FY 2024. In Q3 the newest iteration of the plans was submitted for review by the Endangered Species Recovery Committee (ESRC). The Q4, the ESRC provided guidance and revisions to these plans including ongoing close coordination with all stakeholders involved in the management of the PMA. Through the close of Quarter 4 and into the second quarter of FY 2025 NPMPP met with stakeholders and worked on revisions to the mitigation plan. NPMPP anticipates submittal of a revised mitigation plan for ESRC approval in Q3 of FY 2025.

As part of the HCP, NPMPP is obligated to mitigate potential impacts to native waterbird species covered by the HCP. Due to changes at the site since the development of the HCP which made the original plan not suitable, DOFAW and the United States Fish and Wildlife Service (USFWS) agreed that a modified waterbird mitigation program implemented at Hāmākua Marsh was required. The development of this new waterbird

mitigation plan was accomplished through the adaptive management process, and the final iteration of this plan has been approved. An MOU between NPMPP and DOFAW to complete the mitigation actions has been finalized. The first lump-sum payment required for mitigation to begin was made in Q4 of FY 2024. Implementation started in the second quarter of FY 2025, and the first quarterly report is due February 14th, 2025.

The nēnē was originally included in the HCP as a covered species requiring mitigation. However, this species was extirpated from O‘ahu before the construction and operation of the Project. USFWS, DOFAW, and NPMPP have agreed that the Project currently poses no risk to the species. Therefore NPMPP will modify the mitigation framework for the Hawaiian goose through an HCP major amendment. NPMPP is proposing a tiered mitigation option focused on funding rehabilitation activities. This will be included in a major amendment, along with coverage and mitigation for ‘ua‘u. This amendment is anticipated to be submitted in July/August of 2025.

Mitigation for ‘A‘o and Pueo have been completed. Though, at the end of FY 2024 funding from NPMPP to the National Fish and Wildlife Fund (NFWF) for Newell‘s Shearwater mitigation has yet to be used. USFWS and DOFAW are coordinating on mitigation project selection that will benefit from NFWF funding.

The ITL held by NPMPP contains several requirements to include Special Condition 8 which states: “*In addition to the funding commitments set forth in the HCP, 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 shall be approved by DOFAW and results shall be made publicly available. The research shall be focused on deterrence measures with the goal of reducing the take of ‘ōpe‘ape‘a by wind turbines. The research shall be done in compliance with HCP section 6.1.2.1.*” It was contemplated 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 pending the nature of the research.

NPMPP and Tetra Tech have consulted with DOFAW on their priorities for this research, potential challenges, and possible research approaches over several years. In Q2 FY 2024, NPMPP and Tetra Tech submitted a revised research plan for review. In Q4, Tetra Tech presented the plan for review by the ESRC. The ESRC recommended the development of a further revised plan that more directly evaluates the efficacy of deterrents. Upon receiving additional input from DOFAW on potential research sites, and recommendations from USGS, NPMPP will further revise the plan and submit it for ESRC review. The current iteration of this plan includes the deployment of thermal video cameras and acoustic recorders at four turbines. The study design and budget are currently being finalized and once implemented it will last two years.

Last ESRC Review:

The ESRC made the following recommendations at the FY 2023 annual review meeting that ***were incorporated*** in the FY 2024 actions:

1) The ESRC recommends bringing the PCMM plan for review and comment to the ESRC in a future meeting.
2) The ESRC recommends bringing the research plans from Nā Pua Makani to the ESRC for review and approval.

Issues and Concerns:

Nā Pua Makani is working on a major amendment to include ‘ua‘u on their ITL due to incidental take at the wind facility.

Current and past annual reports from 2021 have indicated that there were at least two Hawaiian petrel fatalities at this site. Additionally, a recent downed wildlife report from January 28th, 2025 has indicated that there was potentially another take of this species. There has been no amendment to the ITL/HCP for coverage and no compensatory mitigation has occurred. This concern was brought to the licensee’s attention at the FY 2023 ESRC annual review meeting.

Nā Pua Makani is working on a request as part of the major amendment to change the authorized take of nēnē on the ITL to reflect a tiered system.

Changes to the ITL and HCP for the take of the Hawaiian goose have been proposed since 2023; however, a finalized version of an amendment has yet to be submitted.

DOFAW and the USFWS receipt of the revised Nā Pua Makani Hawaii Hoary Bat Tier 1 Mitigation Management Plan, the Hawaiian Hoary Bat Tier 1 Mitigation Research Plan, and the Hawaiian Hoary Bat Deterrent Research Plan are outstanding.

To date, three Hawaiian hoary bats have been taken by this operation, with the first occurring in 2021 and the most recent on January 28th, 2025. NPMPP has been working closely with USFWS and DOFAW since 2013 to develop bat mitigation for this site. NPMPP has yet to produce documents containing acceptable mitigation and research actions. Therefore, no compensatory mitigation has occurred. This concern was brought to the licensee’s attention at the FY 2023 ESRC annual review meeting.
Work has continued on the bat deterrent research plan. This was contemplated in the HCP to be implemented one year after the commercial operation start date in December 2020.

<u>Agency Recommendations</u>:

1) ‘Ua‘u

There have been at least two, with a tentative third, documented fatalities of this species to date at the Project. Only a wing was found for the third fatality, so DOFAW supports NPMPP submitting this tissue for genetic identification and awaits the results of this test. Additionally, a lack of major amendments covering take and compensatory mitigation was brought to the licensee’s attention at the FY 2023 annual review meeting. DOFAW urges NPMPP act on their proposed timeline and submit a finalized copy of the major amendment including this new take data in all estimates and models. This submission should be received by or before Q1 of FY 2026.

2) Nēnē

Planning for changes to the ITL for this species has been in preparation since 2023. DOFAW recommends that NPMPP adhere to their putative timeline and include the proposed tiered mitigation in the major amendment that will include requests and compensatory mitigation plans for the Hawaiian petrel. This submission should be received before Q1 of FY 2026.

3) ‘Ōpea‘ape‘a

Three bats have been taken at this project as of Q3 FY 2025. A lack of approved plans required to complete compensatory mitigation for this species was brought to the licensee’s attention at the FY 2023 annual review meeting. DOFAW suggests that NPMPP act on their communicated timeline and submit finalized versions of the mitigation and research plans to the ESRC by or before Q4 of 2025.

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

Respectfully Submitted,

Robert Hauff

for DGS

DAVID G. SMITH
Administrator