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February 21, 2025

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

SUBJECT: Division of Forestry and Wildlife Evaluation of the Auwahi Wind Project Habitat Conservation Plan Implementation During Fiscal Year (FY) 2024 + Quarters 1 and 2 of Fiscal Year 2025

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) review the Auwahi Wind Energy Project annual report in accordance with the requirements outlined in Section 195D-25, Hawaii Revised Statutes. The annual report was prepared by IRG Acquisition Holdings, LLC on behalf of Auwahi (licensee) as part of the obligations of the Auwahi Wind Energy Habitat Conservation Plan (HCP;TetraTech 2012) and State Incidental Take License (ITL; ITL-17).

This submittal is a summary of the FY 2024 annual report plus Q1 and Q2 2025 reports, and includes comments from DOFAW.

BACKGROUND

ITL Licensee: Auwahi Wind Energy, LLC

Project: Eight WTGs with a total 21-MW energy-generating capacity

ITL Duration: February 9, 2012 – February 9, 2037 (13 years (52%) through the permit term)

Status of ITL: There were **12** reported Hawaiian hoary bats fatalities in FY 2024 through December 2024. No observed fatalities at the wind farm site were reported for other HCP covered species at the facility during FY 2024 or quarters 1 and 2 of FY 2025. A Hawaiian petrel adult was incidentally taken during the breeding season as a result of predator trapping at the Kahikinui mitigation area on April 22, 2024. Auwahi's cumulative take estimate for Hawaiian Hoary bats is **104 (95 direct + 9 indirect)** as of the **end of Q2 FY 2025 (December 2024).** There have been 11 female bat fatalities, and four fatalities of an unknown sex observed in the breeding season from monitoring performed in January 2013 – September 30, 2024 (Q1 FY 2025).

Table 1. Total **direct and indirect take and estimated total adjusted take since ITL issuance** under th**e** Auwahi Wind Energy ITL as of December 31st, 2024.

Common Name	**Total Direct Take (Observed/ Unobserved Take**[1, 2.3]	**Indirect Take**	**Total Estimated Take**
Hawaiian Hoary Bat	95	9	104
Hawaiian Petrel	3	1	4
Band-rumped Storm Petrel	1[5]	ND[4]	ND

[1.] Excludes 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.
[3.] Includes observed take of one injured bat rehabilitated in FY 2020.
[4.] ND - Not determined
[5.] Band-rumped Storm Petrel unobserved has not been determined

Total Projected Take at the End of the License Term:

Auwahi Wind used EoA to project the direct take estimate of Hawaiian hoary bats for the remainder of the permit term. The direct take estimate does not account for indirect take, which is based on the timing and gender of observed fatalities. The take authorization is based on a direct take estimate of 129. The results of EoA per the annual report suggest the median take prediction is estimated as 161 bats (interquartile range: 151–171) in the last year of operations, 2032.

Avoidance and Minimization Measures Implemented:

Auwahi Wind has continued to monitor bat use at project turbines using thermal cameras, and the monitoring shows bats continuing to utilize the rotor-swept zone despite deterrents being active. According to the **HCP Amendment Section 7.4.1.5 Schedule and Triggers**, "Auwahi Wind will calculate the Baseline Fatality Rate, and then compare that to the Threshold Value, at scheduled evaluations in 2020, 2025, and 2030.... Should the Baseline Fatality Rate exceed the Threshold Value at a given scheduled evaluation, the actions identified in the Adaptive Management Plan will be implemented. In this scenario, evaluation of the fatality rate will occur again 2 years following the implementation of additional measures to assess effectiveness. If the Project is predicted to exceed the permit authorization at the evaluation in 2020,

adaptive management actions must be implemented to reduce the fatality rate. Following the implementation of adaptive management actions, the fatality rate will be evaluated again in 2022 to determine if additional adaptive management actions are required. This process will be repeated every two years until the Project is no longer predicted to exceed the permitted take authorization[1]." Since the project triggered adaptive management in 2020 there have been ongoing re-evaluations to determine if adaptive management actions are effective at reducing take.

The meteorological tower was taken down at the site as an adaptive management action in February 2023. The bat fatality rate was re-evaluated in February 2025 to assess the effectiveness of this action, but the Baseline Fatality Rate still exceeds the Threshold Value[2]. Furthermore, Auwahi Wind investigated additional minimization measures and submitted a revised Adaptive Management Plan in March 2024. As part of this plan, Auwahi is intending to tackle ranching operations subject to approval of 'Ulupalakua Ranch including cattle management and water issues that might attract bats to the turbines. In September 2024, Auwahi increased coordination with the landowner to facilitate feral ungulate (deer and goat) removal by reporting ungulate activity and trapped ungulates and coordinating access for harvesters. The landowner has also agreed to keep the cattle troughs nearest to the turbines empty during the high bat activity period August through October–August. Auwahi will continue to monitor this and work with the landowner, but it was reported that the landowner cannot commit to keeping the cattle troughs empty in perpetuity.

[1]. The Threshold Value is calculated as the total requested direct take (129 bats) divided by the expected operational life of the Project (25 years). For Auwahi Wind, the Threshold Value reported in the amendment is 6.45 direct take per year (129 direct take estimated by EoA / 20 years -life of the wind farm operation). The Threshold Value for the amendment is based on a projected 30% reduction in take rate from current levels (2012-2018) for the remaining life of the Project (2019-2032) and represents a take rate that would result in a take estimate equal to the Tier 6 maximum take at the end of the permit term.

[2]. For the years in which the Baseline Fatality Rate will be compared to the Threshold Value (i.e., 2020, 2025, 2030) to determine if adaptive management actions are required, the evaluation will be completed in February and will be based on data from January 2013 through December 31 of the preceding year. If adaptive management measures are required, they will be implemented as soon as possible, but no later than March 31.

Mitigation Status:

Hawaiian petrel: Mitigation for take of Hawaiian Petrels in FY 2024 consisted of monitoring burrows using game cameras and burrow checks, evaluating reproductive success, and continuing to implement the predator control strategy. In the 2023 management season which falls under FY 2024, 79 burrows were protected, and 30 Hawaiian petrel chicks successfully fledged from the Kahikinui Petrel Management Area (PMA).

Hawaiian hoary bat: Auwahi's incorporation of ESRC and agency comments and feedback for the Tier 5 Site Specific Mitigation Implementation Plan (SSMIP) for the

Hawaiian hoary bat was delayed over the course of the calendar 2024 year. DOFAW received a revised version of the plan in January 2024 and provided review, edits, and participated in meetings in the following months in attempt to seek Auwahi's agreement. With leadership redirection of Auwahi to work with our DOFAW HCP team over the course of 2024, in December 2024 Auwahi agreed to the plan revisions requested and the cost of management actions. The plan was reviewed for final edits and accepted and approved by the agencies in February of 2025. Based on the Auwahi Wind HCP, Tier 6 mitigation planning will be triggered when the cumulative bat take estimate exceeds 106 bats, which is very close to occurring. Auwahi has stated they have initiated internal coordination for the planning.

Blackburn's sphinx moth, Hawaiian goose, and red 'ilima (*Abutilon menziesii*): mitigation fulfilled

Last Annual Review:

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

- ESRC recommends licensee work with landowner to remove water troughs/ de watering near turbines
- ESRC requests that Auwahi incorporate March 2023 ESRC recommendations in Tier 5 Hawaiian Hoary Bat Mitigation plan

The ESRC made the following recommendations at the **FY 2023 annual review** meeting that were ***NOT reported to be incorporated*** in the **FY 2024 actions:**

- ESRC recommends using creative solutions like putting deterrents at or near the water troughs
- ESRC recommends additional minimization measures to slow take to prevent amendment for increase in licensed take of Hawaiian Hoary bats
    - ESRC recommends the licensee to use best available science
- ESRC recommends the licensee look at recent research of Hawaiian hoary bats to help with Tier 6 mitigation and to use the best available science
- ESRC continues to recommend that Auwahi amend their HCP/ ITL to add band-rumped storm petrel ('akē'akē) as a covered species.

Issues & Concerns:

As per the 2019 Amendment to the HCP, Auwahi will calculate the Baseline Fatality Rate (BFR), and then compare that to the Threshold Value, at scheduled evaluations every two years when the BFR is consistently exceeding the Threshold Value, to determine if further adaptive management actions are required. The evaluation will be completed in February and will be based on data from January through December 31 of the preceding year. The Adaptive Management plan was reviewed in February 2024 and the BFR is reported in the semi-annual FY 2025 Q2 report. The FY 2024 Baseline

Fatality Rate of 7.43 has once again surpassed the Threshold Value of 6.45, continuing the trend observed in recent years. While there are additional ranching activities being modified as adaptive management actions in FY 2025, the mean projected direct take of 161 is presently exceeding the licensed take limit of 140. Furthermore, Auwahi's cumulative take is rapidly approaching the Tier 6 mitigation planning trigger of 106 bats.

There was a take of an 'akē'akē on June 15th, 2020, and no amendment to the ITL/HCP for coverage and no compensatory mitigation has occurred.

AGENCY RECOMMENDATIONS:

Hawaiian hoary bat: Due to the high rate of annual take of Hawaiian hoary bats and a take that is set to exceed the licensed take of 140 bats in the last allotted tier, DOFAW recommends that Auwahi immediately take further action to avoid and minimize take of bats to the fullest extent. While Auwahi started implementing adaptive management back in 2020, DOFAW recommends that Auwahi regularly report to DOFAW and the ESRC any new avoidance and management actions. The adaptive management actions outlined in Auwahi's revised 2024 Adaptive Management Plan specifies first implementing spatial redistribution of curtailment nights, then redistribution of curtailment nights from low-risk turbines to high-risk turbines, and finally temporal redistribution of curtailment nights. DOFAW recommends that these actions, along with the future adaptive management options listed in the management plan are evaluated for implementation by Auwahi now. The proposed future actions include minimizing the amount of start and stop of blade rotations at turbines, modifying ranching operations including the timing of grazing of cattle near turbines, and the application of new deterrent technology and modifications to the present deterrent set up including adding additional deterrent units to the lower rotor swept zone. Due to the multi-year development process for the Tier 5 Hawaiian hoary bat Mitigation Plan, DOFAW also recommends that Auwahi start planning for Tier 6 Hawaiian hoary bat mitigation now, prior to the trigger being reached.

Band-rumped storm petrel: Due to the take of 'akē'akē in June of 2020, DOFAW in the second consecutive annual review requests that Auwahi file a major amendment to add this covered species to the HCP/ITL and implement mitigation to provide net benefit to the species. DOFAW requests that Auwahi start the amendment process now and work to have the amendment processed by the end of FY 2026.

If you have any questions, please contact Habitat Conservation Planning Program Associate, Kinsley McEachern, at laurinda.k.mceachern.researcher@hawaii.gov

Respectfully submitted,

for DGS Robert Hauff

DAVID G. SMITH
Administrator