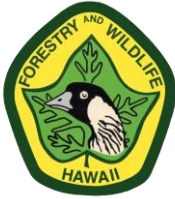
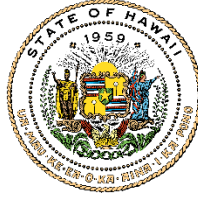


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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

January 25, 2024

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

Committee Members:

SUBJECT: Division of Forestry and Wildlife Evaluation of the Kaheawa Wind Farm II
Project Habitat Conservation Plan Implementation During Fiscal Year
2023, and Quarters 1 and 2 of 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) review the Kaheawa Wind Energy Project (Project) annual report per the requirements outlined in Section 195D-25, Hawaii Revised Statutes. Tetra Tech prepared the annual report on behalf of Kaheawa Wind Farm (licensee) as part of the obligations of the Kaheawa Wind Power II Habitat Conservation Plan (HCP; SWCA 2011) (HCP Amendment; 2019) and State Incidental Take License (ITL; ITL-15 amended in 2014 and 2019). DOFAW requests the ESRC review the annual report per the requirements outlined in Section 195D-25, Hawaii Revised Statutes.

This submittal summarizes the annual report and includes comments from DOFAW.

BACKGROUND

ITL Licensee: Kaheawa Wind Power II, LLC
(Note that Terraform Power owns KWP II, LLC, in 2020 Brookfield Renewables merged with Terraform Power).

Project: Fourteen WTGs with a total 21-MW energy generating capacity. The project is adjacent to and downslope of KWP I.

ITL Duration: January 5, 2012 – January 30, 2032 (as of the end of FY 2023, 11.5 years (57.5 %) through the permit term).

Take Authorization Over 20-year Term:

Table 1: Take Authorization for KWP II.

Common Name	Scientific Name	Level of Take ¹	5-year Limit	20-year Limit
‘Ua‘u or Hawaiian Petrel	<i>Pterodroma sandwichensis</i>	Tier 1	8 adults/ juveniles & 4 chicks/eggs	19 adults/ juveniles & 9 chicks/eggs
		Tier 2	16 adults/ juveniles & 8 chicks/eggs	29 adults/ juveniles & 14 chicks/eggs
‘A‘o or Newell’s Shearwater	<i>Puffinus auricularis newelli</i>	Tier 1	2 adults/ juveniles & 2 chicks/eggs	2 adults/ juveniles & 2 chicks/eggs
		Tier 2	5 adults/ juveniles & 3 chicks/eggs	5 adults/ juveniles & 3 chicks/eggs
Nēnē or Hawaiian Goose	<i>Branta sandvicensis</i>	Tier 1	8 adults/ juveniles & 1 fledgling	18 adults/ juveniles & 3 fledglings
		Tier 2	12 adults/ juveniles & 3 fledgling	27 adults/ juveniles & 3 fledgling
		Tier 3 ³	Not applicable	44 adults
‘Ōpe‘ape‘a or Hawaiian Hoary Bat ²	<i>Lasiurus cinereus semotus</i>	Tier 1	7 individuals	7 bats
		Tier 2	11 individuals	11 bats
		Tier 3 ³	Not applicable	30 bats
		Tier 4 ³	Not applicable	38 bats

¹ Take authorization is delineated by Tiers. Upon reaching higher Tiers additional mitigation measures or funding are triggered to ensure that mitigation keeps pace with take.

² Minor amendment to clarify permitted bat take processed on November 26, 2014.

³ New tier approved in a major amendment on November 8, 2019.

Status of ITL:

There was no taking of HCP-covered species at KWP II in FY 2023 and extending into December 2023.

Table 2. Total observed fatalities and estimated total take since ITL issuance covered under the KWP II ITL through December 2023 as reported by USFWS.

Common Name	Total Observed + Unobserved Take¹	Indirect Take using HCP multipliers	Total Estimated Take
Nēnē	25	2	27
‘ōpe‘ape‘a	11	1	12

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

Total Projected Take at the end of the permit term:

‘Ōpe‘ape‘a: Based on KWP II’s FY 2023 annual report, there is a 98.55 percent chance that the 80 percent upper confidence limit (UCL) of cumulative bat take will not be exceeded during the permit term. In addition, the median years of operations without exceeding this direct take threshold is 20, so the licensee suggests even with an indirect take contribution of two adult equivalents, the project is unlikely to exceed a cumulative take estimate of 38 bats (permitted take). The licensee anticipates their project will likely remain below both Tier 3 of ‘ōpe‘ape‘a take threshold of 30 bats and the permitted take limit of 38 bats for the permit term.

Nēnē: Based on KWP II’s analysis in their FY 2023 annual report, there is approximately a 56 percent probability that the 80 percent upper confidence limit (UCL) of cumulative take at the project will exceed the permitted amount during the permit term (Appendix 3 of the KWP II FY 2023 annual report). The estimated take at the 80 percent upper confidence limit (UCL) at the Project has surpassed 75 percent of the allowable take in the current tier. KWP II is currently in Tier 2, or higher level of take per the HCP. At the cumulative take estimate of 27 nēnē, KWP II has triggered Tier 3 mitigation planning.

‘Ua’u and a’o: No projected take identified was in the annual report.

Mitigation Status:

‘Ua’u and ‘A’o (Same as KWP I submittal). Mitigation for the two seabird species (Hawaiian Petrel and Newell’s Shearwater) is being implemented concurrently with Kaheawa Wind Power II. [KWP I and KWP II constructed a predator-proof fence at Makamaka’ole to attract new colonies of ‘ua’u and ‘a’o, but the site did not attract ‘ua’u, so the two mitigation projects are no longer occurring together.]

Mitigation for ‘a’o entails the management of two constructed (approximately four acres) predator-free fenced enclosures (one for each species), provisioned with artificial burrows and social attraction, at the Makamaka’ole site in West Maui. Work in FY 2023

at Makamaka'ole included predator trapping and tracking, ongoing maintenance of both enclosures, seabird social attraction, artificial burrow checks, and game camera operation. Traps and bait stations were deployed, and a total of 39 mongooses, 54 rats, and 16 mice were captured. The project has not maintained predator-free status at Makamaka'ole, with 26 rats and 11 mice captured inside the enclosures. Only Newell's Shearwater nesting activity has been observed in FY 2023 after Hawaiian Petrels were last seen at Makamaka'ole in 2017. To mitigate for the loss of productivity accrued from Hawaiian Petrel estimated take not yet mitigated at Makamaka'ole, Hawaiian Petrel nesting colony management and predator control by Pūlama Lāna'i on Lāna'i Island was conducted during FY 2020, from which 36 fledglings were produced.

In FY 2021, the two KWP projects adaptively managed their seabird mitigation programs by providing funds to Pūlama Lāna'i. A total of 9 cats and a minimum of 228 rodents were captured from the 150-acre petrel nesting area in FY 2023. During the 2022 breeding season, 224 known burrows were estimated to have produced 78 Hawaiian petrel chicks above baseline. Results from the 2023 breeding season will be reported in the FY 2024 annual report.

At Makamaka'ole a total of 22 'a'o burrows were consistently active during the breeding season, 14 of which were reproductively active with 18 eggs and one chick produced. DOFAW and USFWS allocated 8.530 NESH credits to KWP I and II based on observations of 148 adults observed and 2 fledglings produced from 2016 to 2022, and calculated survival rates at the colony. KWP I and II need a combined credit of 6.418 NESH to receive mitigation credit for NESH.

DOFAW conducted a site visit to the Makamaka'ole Seabird Enclosure on March 30th, 2023 and found the predator-proof fence to be non-functional and structurally compromised, with substantial holes and gaps. DOFAW and KWP I continue to discuss the transitioning of management responsibilities regarding Makamaka'ole; DOFAW is consulting the Attorney General's office.

Nēnē. Nēnē mitigation had been contracted to DOFAW for Tier 1 estimated take in prior fiscal years for the Pi'iholo Ranch Nēnē pen, and in conjunction with KWP I at the Haleakalā Ranch Nēnē pen. In Fiscal Year 2020, however, no funding was provided for either pen by KWP II. Although KWP II intended to resume funding the Pi'iholo Ranch Nēnē pen in FY 2021, the future ownership status of the ranch was uncertain that fiscal year. In June 2021, DOFAW received notification that the ranch had been sold and, after written inquiry by the agency, that the new owner (La Maddalena, LLC) conveyed no interest in continuing its association with either State or Federal wildlife agencies. No activity was therefore conducted using KWP II funding in FY 2021, and no mitigation benefits were accrued in FY 2022.

In FY 2022, KWP II initiated planning efforts with DOFAW to move the wind farm's Nēnē mitigation to Haleakalā Ranch. KWP II assumed co-management of the ranch's release pen in FY 2023 concurrently with the KWP I Wind Project. KWP II plans to work with the

agencies to determine how to split the mitigation credit of the five Nēnē goslings with KWP I. DOFAW is working to determine nēnē credits for KWP II for the 2022 and 2023 breeding seasons.

Hawaiian Hoary Bat. Under the KWP II HCP, baseline mitigation for the Hawaiian Hoary Bat was implementing bat habitat improvement measures on at least 338 acres. Mitigation for Tier 1 and Tier 2 estimated bat take has been wholly funded and continues as vegetation out planting at the Kahikinui State Forest Reserve. Mitigation for Tier 3 was bat ecological research initially funded by USGS in FY18. In FY21, additional funds were provided to USGS to complete the study and fulfill mitigation obligations under Tier 3. This work is intended to inform future bat habitat restoration and conservation better and began in FY 2018 by the U.S. Geological Survey Hawaiian Hoary Bat research group. The project (KWP II) contribution to this contract was \$205,500 in FY 2021, which fulfilled its obligation to the contract. This mitigation project studies movements, roosting behavior, and diet of the Hawaiian Hoary bat and is expected to be completed in December 2023 with the submission of final publications, technical results, and data releases.

Pueo. Although the Pueo is not a listed species on Maui, KWP II included Pueo in their HCP and provided mitigation compensation of \$25,000 paid to DOFAW in FY 2013 to be directed toward Pueo research efforts on O'ahu. With these and other funds, DOFAW funded a Pueo research project in 2017 on O'ahu, which was completed in FY 2018 and can be viewed at <https://www.pueoproject.com>.

The ESRC made the following recommendations at the FY 2022 annual review meeting that were NOT incorporated in the FY 2023:

Please include a status update on the nēnē mitigation to the ESRC to provide continuous input for the various changes happening in terms of the nēnē mitigation. (DOFAW is still in the process of calculating nēnē credits)

ISSUES & CONCERNS

- **Nēnē: KWP II is also behind in nēnē mitigation credits and triggered planning for Tier 3 mitigation at their cumulative take estimate of 27 nēnē**
- **DOFAW Maui Site Visit to Makamaka'ole shows deteriorated and nonfunctional fencing; predations of 'a'o have occurred.**

Nēnē: DOFAW, USFWS, and KWP I are reviewing the development and implementation of adaptive management strategies for nēnē because Brookfield is behind on their mitigation credits for nēnē.

Makamaka'ole Seabird Mitigation and Management (same as KWP I submittal):

In December 2022, the USFWS and DOFAW issued a mitigation credit letter for 'a'o, Newell's Shearwater, to the licensee/permittee. During a site visit done by DOFAW Maui Branch personnel on March 30, 2023, as part of the transition process so DOFAW could assume management of this site, it was brought to the attention of the DOFAW HCP team that the predator-proof fence was in a significantly deteriorated state (Appendix 1). After the site visit, DOFAW reached out in an email correspondence dated April 6th, 2023, to let the licensee know of the deleterious conditions of the mitigation site and the lack of proper management to execute a smooth and effective handover of an intact predator-proof fence. In April and May of 2023, DOFAW was also notified by the Maui Nui Seabird Project of two predation events at the Makamaka'ole mitigation site by mongooses (Appendix 2). DOFAW HCP team continues to discuss the issue with the licensee and the Attorney General's office.

AGENCY RECOMMENDATIONS:

Nēnē: DOFAW is working with KWP on further mitigation actions to keep up with their level of take and for any future amendments. Brookfield might fund construction of another Haleakalā pen, and the credits are divided by KWP I and KWP II. DOFAW recommends that further adaptive management actions be taken to avoid and minimize take for nēnē.

Makamaka'ole Seabird Mitigation and Management:

DOFAW is reviewing the nonfunctioning and compromised fencing issue internally and is in consultation with our Attorney General; DOFAW will update the ESRC later. Please see the pictures below for the state of the fence and photos of the two 'a'o predation events that occurred in the spring of 2023.

If you have any questions, please contact Katherine Cullison, Protected Species Habitat Conservation Programmatic Coordinator at katherine.cullison@hawaii.gov.

Respectfully submitted,



DAVID G. SMITH
Administrator

Appendix 1. Photographs of the from Makamaka'ole Seabird Mitigation Site in March 2023 during the site visit by DOFAW Maui- shared with Brookfield in email correspondence in April 2023 in which grave concerns were expressed about Brookfield leaving the predator proof fence/ mitigation site in this condition. □







Appendix 2. Photographs of A 'o Predation Events at Makamaka'ole in Spring of 2023

Photo 1. 4/22/2023 Trail Camera Footage of predation of a'o by mongoose at burrow 22 in the enclosed Makamaka 'ole Mitigation Area



Photo 2. 5/10/2023 Trail Camera footage of predation of a'o at Burrow 22 by mongoose in the Makamaka 'ole Enclosed Mitigation Area

