

# Auwahi Wind HCP Amendment

## HRS Chapter 195D Requirements and Issuance Criteria

### (May 2019)

(\*\*note: for topics that were addressed in the original, approved HCP and have not changed since that time, the Amendment just cross-references relevant sections of the original HCP document – see HCP Amendment, Section 1.1, last paragraph\*\*)

<b>Requirement/Criteria</b>	<b>Auwahi HCP Amendment Provision(s)</b>
<b>A. HCP Document requirements</b> (195D-21(b)(2)). Each HCP shall:	
(A) Identify the geographic area encompassed by the plan, the ecosystems, natural communities, or habitat types within the plan area that are the focus of the plan; and the species reasonably expected to be present	Chapter 1: Project description; maps in Section 1.1 depict project and mitigation locations Chapter 3: regional location, land use, topography and geology, soils, hydrology and water resources, terrestrial flora, non-listed wildlife, listed wildlife (Amendment provides extensive updated information on Hawaiian hoary bat in Section 3.8.1), other resources Chapter 6: Tier 4, 5 and 6 mitigation locations are discussed in Sections 6.2.4 and 6.2.5
(B) Describe the activities to be undertaken with sufficient detail to allow DLNR to evaluate the impact on the particular ecosystems, natural communities, or habitat types	Chapter 1: project description Chapter 3: extensive updated discussion of Hawaiian hoary bat, including impacts of wind turbine operations Chapter 4: operational avoidance and minimization measures (Low Wind Speed Curtailment regime) (Section 4.2.7) Chapter 5: assessment of direct take of bats, indirect take, requested increase in amount of authorized take, potential for population-level impacts, cumulative effects (Section 5.1) Chapter 6: description of Tier 4, 5 and 6 mitigation (Sections 6.2.4 and 6.2.5)
(C) Identify the steps that will be taken to minimize and mitigate all negative impacts, including without limitation the impact of any authorized incidental take, with consideration of the full range of the species on the island so that cumulative impacts associated with the take can be adequately assessed; and the funding that will be available to implement those steps	Minimization: low wind speed curtailment regime (Section 4.2.7)  Mitigation: description of tiers of take (Section 5.1.4); tier 4 mitigation (protection and enhancement of 1,752 acres on Ulupalakua Ranch, Section 6.2.4); tier 5 and 6 mitigation (enhancement of 690 and 508 acres, respectively, on Kamehamenui Forest/Von Tempsky parcel, Section 6.2.5)  Full range of species on the island, and cumulative impacts: potential for population-level impacts, and

	<p>cumulative effects (Sections 5.1.3.1 and 5.1.3.2)</p> <p>Funding: dollar amounts, and form of financial assurance (Sections 6.2.7 and 9.4, and Appendix I)</p>
<p>(D) Identify those measures or actions to be undertaken to protect, maintain, restore or enhance the ecosystems, natural communities, or habitat types within the plan area; a schedule for implementation of the measures or actions; and an adequate funding source</p>	<p>Minimization measures: operational avoidance and minimization measures (Low Wind Speed Curtailment regime) (Section 4.2.7)</p> <p>Mitigation measures: Sections 5.1.4, 6.2.4 and 6.2.5 (summarized above)</p> <p>Schedule: Sections 6.2.4 and 6.2.5</p> <p>Funding: Sections 6.2.7 and 9.4, and Appendix I</p>
<p>(E) Be consistent with the goals and objectives of any approved recovery plan</p>	<p>Addressed in original HCP (see 1.4.1, 4.1.1, 6.2). Mitigation in the Amendment for tiers 4, 5 and 6 was informed by the Recovery Plan (Section 6.2).</p>
<p>(F) Provide reasonable certainty that the ecosystems, natural communities, or habitat types will be maintained in the plan area throughout the life of the plan, in sufficient quality, distribution, and extent to support within the plan area those species typically associated with the ecosystems, natural communities, or habitat types</p>	<p>The Amendment’s conservation program is based on the best scientific information available, and includes detailed minimization measures (Section 4.2.7), mitigation measures (Sections 5.1.4, 6.2.4 and 6.2.5), monitoring (Sections 7.1 and 7.2), and adaptive management requirements based on monitoring results (Section 7.4).</p> <p>The mitigation measures provide:</p> <ul style="list-style-type: none"> <li>• substantially more acreage for permanent protection and enhancement (29.2 acres per bat) than the bat core use area (20.3 acres) which DOFAW (and USFWS) have determined constitutes adequate mitigation;</li> <li>• increased length of edge habitat;</li> <li>• permanent legal protection and durable forest restoration which will benefit multiple generations of bats beyond the permit term;</li> <li>• egress structures from water troughs to prevent drowning; and</li> <li>• ponds which can be used for fire fighting to protect both the mitigation lands and adjacent bat habitat (Section 6.2.4.3).</li> </ul> <p>Financial assurances (Sections 6.2.7 and 9.4, and Appendix I) ensure implementation of the above. Collectively, these provide reasonable certainty.</p>

<p>(G) Contain objective, measureable goals, the achievement of which will contribute significantly to the protection, maintenance, restoration, or enhancement of the ecosystems, natural communities, or habitat types; time frames within which the goals are to be achieved; provisions for monitoring, including periodic monitoring by representatives of DLNR or the ESRC or both; and provisions for evaluating progress in achieving the goals quantitatively and qualitatively</p>	<p>Objective, measureable goals:</p> <ul style="list-style-type: none"> <li>• Minimization: low wind speed curtailment minimization regime, consisting of specific, numeric wind cut-in speeds and timeframes (Section 4.2.7)</li> <li>• Mitigation: specific locations of on-ground mitigation actions; specific acreage amounts for each mitigation tier; specific on-ground mitigation measures (e.g., type and amounts of reforestation, water feature enhancements, installation of new ponds); specific success criteria (Tier 4 - Section 6.2.4; Tier 5 and 6 - Section 6.2.5)</li> </ul> <p>Time frames: for low wind speed curtailment regime for minimization (Section 4.2.7); for mitigation for Tier 4 (6.2.4.8) and Tier 5 (Sections 6.2.5 and 6.2.6)</p> <p>Monitoring: Monitoring of Tier 4 mitigation (acoustic, percent forest cover, thermal videography, insect, pond operation) (Section 6.2.4.5) and Tier 5 and 6 mitigation (Section 6.2.5); monitoring of direct and indirect take (Section 7.1), non-fatality monitoring (Section 7.2); DLNR compliance monitoring (Section 9.4 and Appendix I)</p> <p>Evaluation of progress: monitoring (see above) combined with adaptive management requirements (Section 7.4.1 for minimization measures, and Sections 6.2.4 and 6.2.5 for mitigation measures; <u>see also</u> Section 7.4.2 re mitigation measures)</p>
<p>(H) Provide for an adaptive management strategy that specifies the actions to be taken periodically if the plan is not achieving its goals</p>	<p>For minimization measures, adaptive management strategy includes criteria, monitoring, risk analysis, response measures, and time deadlines (Section 7.4.1). For Tier 4, 5 and 6 mitigation, adaptive management strategy includes success criteria, multiple forms of monitoring, response measures, and time deadlines (Sections 6.2.4 and 6.2.5)</p>
<p><b>B. Incidental Take License issuance criteria</b></p>	
<p>(1) The take is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity (195D-4(g))</p>	<p>Take is incidental to operation of a lawful wind energy facility (Section 1.1)</p>
<p>(2) The applicant shall minimize and mitigate the impacts of the take to the</p>	<p>Minimization: low wind speed curtailment regime (Section 4.2.7); demonstration of maximum extent</p>

<p>maximum extent practicable (195D-4(g)(1))</p>	<p>practicable is provided by analysis of full nighttime shutdown and year-round curtailment alternatives (Sections 8.1, 8.2 and 8.3)</p> <p>Mitigation: on-ground habitat protection and enhancement in specified locations and acreage amounts, for Tier 4 (Section 6.2.4) and Tiers 5 and 6 (Section 6.2.5); demonstration of maximum extent practicable is provided by demonstration of take offset and net benefit (Tier 4 - Section 6.2.4.3 ; Tiers 5 and 6 - Section 6.2.5; see also the analysis of potential for population-level impacts, and cumulative effects - Sections 5.1.3.1 and 5.1.3.2); also, the estimated cost of Tier 4, 5 and 6 mitigation is \$66,884 per bat, which exceeds by 34% the ESRC appropriate estimated cost for bat mitigation (ESRC Hawaiian Hoary Bat Guidance Document (2015), pp. 18-19: “appropriate estimated cost for mitigating take of one bat is \$50,000”)(Section 9.4 and Appendix I)</p>
<p>(3) The applicant shall guarantee that adequate funding for the HCP will be provided (195D-4(g)(2))</p>	<p>Calculation of required dollar amounts, and form of financial assurance (Sections 6.2.7 and 9.4, and Appendix I)</p>
<p>(4) The applicant shall post a bond, irrevocable letter of credit, or provide other similar financial tools or provide other means approved by the Board, adequate to ensure monitoring of the species by the State and to ensure the applicant takes all actions necessary to minimize and mitigate the impacts of the take (195D-4(g)(3))</p>	<p>Calculation of required dollar amounts, and form of financial assurance (Sections 6.2.7 and 9.4, and Appendix I)</p>
<p>(5) The HCP shall increase the likelihood that the species will survive and recover (195D-4(g)(4) and (195D-21(b)(1)(B))</p>	<p>The project, including its minimization and mitigation measures (summarized above), will result in a net benefit to the species, and will increase the likelihood that the species will survive and recover (see Section 5.1.3.1 re potential for population-level impacts; Section 5.1.3.2 re cumulative effects; Sections 6.2.4 and 6.2.5 re net benefit of Tier 4, 5 and 6 mitigation measures which include success criteria, monitoring and adaptive management requirements; and Section 6.2.4.3 re demonstrating reasonable certainty).</p>
<p>(6) The plan takes into consideration the full range of the species on the island so that cumulative impacts associated with the take can be adequately assessed (195D-4(g)(5))</p>	<p>The Amendment analyzes Hawaiian hoary bat distribution and population, including the full range of the species on Maui, in Section 3.8.1.1. It then assesses both direct take and indirect take from the project (Sections 5.1.1 and 5.1.2), and analyzes the potential for</p>

	population-level impacts and cumulative effects, both on Maui and statewide (Sections 5.1.3.1 and 5.1.3.2).
(7) The measures required under 195D-21(b) shall be met and DLNR has received any other assurances that may be required so that the HCP may be implemented (195D-4(g)(6))	<u>See above</u> re 195D-21(b) requirements. Auwahi Wind has consulted extensively with DLNR in the preparation of this HCP Amendment and in so doing has provided the assurances which DLNR has required.
(8) The activity does not involve the use of submerged lands, mining or blasting (195D-4(g)(7))	N/A
(9) The cumulative impact of the activity provides net environmental benefits (195D-4(g)(8) and 195D-21(c))	<u>See</u> Section 5.1.3.2 (cumulative effects; conclusion of net benefit). <u>See also</u> Sections 6.2.4 and 6.2.5 (analyses of net benefit of the Tier 4, 5 and 6 mitigation programs)
(10) The take is not likely to cause the loss of genetic representation of an affected population of any endangered, threatened, proposed, or candidate plant species (195D-4(g)(9))	The small amount of take relative to extremely conservative estimates of the localized and Maui populations show that the project is not likely to cause the loss of genetic representation (Section 5.1.3.1)
(11) The HCP will further the purposes of Chapter 195D by protecting, maintaining, restoring, or enhancing identified ecosystems, natural communities, or habitat types upon which endangered, threatened, proposed, or candidate species depend within the area covered by the HCP (195D-21(b)(1)(A))	The mitigation programs for Tier 4 (Section 6.2.4) and Tiers 5 and 6 (Section 6.2.5) will protect, maintain, restore and enhance bat habitats in specific locations on Maui and in specific amounts. In addition, other native species (which include endangered, threatened, proposed or candidate species) will also benefit from the proposed habitat protection and restoration actions (Section 6.2.4.2 Reforestation of Hedgerows, and Section 6.2.5.1, Site Description)
(12) Implementation of the HCP is not likely to jeopardize the continued existence of any endangered, threatened, proposed, or candidate species identified in the plan area (195D-21(c)(1))	Addressed in the analysis of potential for population-level impacts (Section 5.1.3.1) and cumulative effects (5.1.3.2)
(13) Implementation of the HCP is not likely to cause any native species not endangered or threatened at the time of plan submission to become threatened or endangered (195D-21(c)(2))	Not applicable as no unlisted native species will be adversely affected by the project
(14) The HCP shall be designed to result in an overall net gain in the recovery of Hawaii's threatened and endangered species (195D-30)	"Recovery" is defined in relation to the number of individuals of a species (195D-2). The project will result in a net benefit to the species and an increase in the number of individuals, and will increase the likelihood that the species will survive and recover (see Section 5.1.3.1 re potential for population-level impacts; Section 5.1.3.2 re cumulative effects; Sections 6.2.4 and 6.2.5 re net benefit of Tier 4, 5 and 6 mitigation measures).