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BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAI'I

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Ko'olauloa District, Island of O'ahu, Hawai'i	Case No. BLNR-CC-17-001 APPLICANT NA PUA MAKANI POWER PARTNERS, LLC'S **EXCEPTIONS** TO THE HEARING OFFICER'S RECOMMENDED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER (MINUTE ORDER NO. 11); EXHIBITS "1"- "3"; CERTIFICATE OF SERVICE

APPLICANT NA PUA MAKANI POWER PARTNERS, LLC'S EXCEPTIONS TO THE HEARING OFFICER'S RECOMMENDATION

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APPLICANT NA PUA MAKANI POWER PARTNERS, LLC'S
EXCEPTIONS TO THE HEARING OFFICER'S RECOMMENDATION

Pursuant to Hawai'i Administrative Rules ("**HAR**") § 13-1-42 and Minute Order Nos. 11 and 12, Applicant Na Pua Makani Power Partners, LLC ("**Applicant**" or "**NPM**") submits exceptions ("**Exceptions**")[1] to the Hearing Officer's ("**HO**") Recommended Findings of Fact, Conclusions of Law, and Decision and Order dated November 1, 2017 ("**Recommendation**") related to Applicant's Habitat Conservation Plan ("**HCP**" submitted as Ex. A-1) for the proposed 25 megawatt wind energy generating facility in Kahuku on the Island of O'ahu ("**Project**").

Pursuant to HAR § 13-1-45(b), Applicant requests that the Board of Land and Natural Resources ("**Board**") render its decision upon the record after oral argument (1) reversing the Recommendation to not approve Applicant's HCP, and (2) accepting the HCP submitted to the Board for approval on October 28, 2016, as recommended by the Endangered Species Recovery Committee ("**ESRC**") on February 25, 2016, and as further clarified in these Exceptions. Alternatively, the Board can consider reopening the docket to take further limited evidence, or to allow Applicant to cure any remaining clarifications or concerns on an expedited basis, pursuant to HAR § 13-1-45(b)(3) (or make such other disposition that is necessary under the circumstances).

I. POINTS OF ERROR

Without a single finding that the ESRC's prior recommendation for approval of the HCP to this Board was arbitrary or erroneous, and without properly addressing Applicant's significant

[1] References to specific findings of fact ("**FOF**") or conclusions of law ("**COL**") are denoted by the applicable FOF or COL number (e.g., FOF 1, COL 1). The specific FOF or COL referenced from the Recommendation are denoted by "HO FOF" or "HO COL". The specific FOF or COL that are referenced from Applicant's Proposed Findings of Facts, Conclusions of Law, and Decision and Order, filed on September 11, 2017 ("**NPM FOF/COL**") are denoted by "NPM FOF" or "NPM COL". A copy of the NPM FOF/COL is attached hereto as Exhibit 1. References to exhibits refer to the exhibits admitted as part of the record. *See* HO FOF 27.

expert and lay evidence presented during the contested case, the Recommendation summarily rejected the HCP based on the following six areas:

1. Applicant's use of data primarily from the adjacent Kahuku Wind Farm project to support Applicant's Hawaiian hoary bat take estimate. The Kahuku Wind Farm, situated immediately adjacent to Applicant's Project was clearly the best project to compare based on geographic location, topography, vegetation, winds, actual fatalities, and other factors. Such factors were analyzed to conservatively estimate the potential take for the Project;

2. The height of the wind turbine generators ("**WTGs**"). No evidence such as expert testimony, study, or science was presented demonstrating that the take estimate in connection with the proposed maximum height for the WTGs was not appropriate or that the WTG height alone should be factored in the take estimation. In any event, Applicant's conditions voluntarily agree to reduce the maximum permitted turbine height from 200 meters (656 feet) to 173 meters (570 feet) based on current equipment design and product availability, so as to reduce any remaining uncertainty, concern or doubt;

3. Implementing Low Wind Speed Curtailment ("**LWSC**") at a cut-in speed of 5 meters per second ("**m/s**") instead of 6.5 m/s. No evidence such as expert testimony or scientific study was presented demonstrating that LWSC above 5.0 m/s (to a maximum of 6.5 m/s) was required or necessary for this Project to meet the estimated bat take in the HCP. In addition, the Recommendation ignored the HCP's adaptive management plan, which provides that if, after advances in scientific research, there is evidence that an increased cut-in speed is necessary, that additional incremental adjustments to LWSC may later be appropriate. As the evidence showed (a 1-year study on O'ahu documented that bat activity was more likely when mean wind speeds were less than 4.6 m/s), bat activity is most frequent during wind speeds of less than 5.0 m/s, thereby justifying the initial agency approval of a 5.0 m/s LWSC;

4. Mitigation and measures of success for the Hawaiian hoary bat. The Endangered Species Recovery Committee Hawaiian Hoary Bat Guidance Document ("**ESRC Bat Guidance**") (Ex. A-44) established the appropriate mitigation policy applicable for the Hawaiian hoary bat based on the best available science. Applicant's significant funding of millions of dollars for conducting focused research, and implementing and managing restoration at Poamoho Ridge was considered, and approved as appropriate, by the Agencies, for bat mitigation requirements based on the current state of scientific understanding;

5. Measures of success for Hawaiian Waterbirds.[2] Measures of success for Hawaiian Waterbirds are highlighted in the HCP. No evidence such as expert testimony or scientific study was presented demonstrating any better measure of success.

[2] "Hawaiian Waterbirds" as referenced herein and in the HCP refer to the Hawaiian duck, Hawaiian stilt, Hawaiian coot, and Hawaiian moorhen). *See* Ex. A-1 at 70.

Unsubstantiated concern or doubts alone are insufficient to reject the existing scientific studies and agency guidance and otherwise ignores how adaptive management can adjust for changing conditions over time; and

6. Implementation of adaptive management and how it works. Adaptive management will in fact be utilized to adjust operations over time based on ongoing monitoring efforts that will be implemented by the Applicant over the life of the Project, and to supplement and thereby ensure the success of mitigation activities. The manner in which adaptive management would be incorporated into Project operation and implementation of the HCP was ignored in the Recommendation. To remove any doubt, how adaptive management will be implemented and confirmed is further clarified and committed to in Applicant's conditions below. Ultimately, it is the Applicant's and Project's obligation not to exceed the take authorized under the ITL. To the extent it appears that the conservative Tier 2 take limit might be exceeded in the future, Applicant would need to alter operations as necessary to ensure that the take limit is not exceeded.

II. BACKGROUND

These Exceptions primarily address the findings and conclusions related to the Hawaiian hoary bat (*'ōpe'ape'a*) in the Recommendation. Applicant has no objections to the Recommendation as it applies to the other seven Covered Species (as defined in the HCP), except with respect to the "measurement of success" for the Hawaiian Waterbirds.

These Exceptions will describe how the Recommendation applied standards and policy decisions that do not exist in Hawai'i Revised Statutes ("**HRS**") Chapter 195D and failed to properly address or consider how the ESRC-approved minimization and mitigation measures as well as proposed research and studies, will be implemented and adjusted through adaptive management. Adaptive management for this Project was designed and approved by the Department of Land and Natural Resources ("**DLNR**") Division of Forestry and Wildlife ("**DOFAW**"), U.S. Fish and Wildlife Service ("**USFWS**") and the ESRC (all of whom are collectively referred to herein as the "**Agencies**"). The very detailed and lengthy HCP was developed by Applicant and its consultant Tetra Tech, in connection with extensive consultation with the Agencies. The HCP appropriately considers the estimated incidental take of Covered Species and employs a system of checks and balances to allow for additional avoidance and

minimization measures to be considered during Project operations based on new advances in technology, research, and site-specific data from the Project's post-construction monitoring program.

The Recommendation identified points raised by the Project opponents, but there was virtually no discussion or reference to Applicant's extensive expert testimony and evidence that clarified and contradicted each of the opponents' points. Applicant's *prima facie* case, presented in the form of expert and lay testimony and documentary evidence, as well as the ESRC approval of the HCP, were entitled to a presumption of validity and deference. The evidence presented should have been more than sufficient to satisfy Applicant's burden of proof under a "preponderance of the evidence" standard. Instead, it appears that the standard employed in the Recommendation rejected any form of uncertainty or misunderstanding about how the actual process of mitigation and adaptive management operate. Indeed, the Recommendation's Conclusions of Law in effect applied a "beyond a reasonable doubt" standard applicable to a criminal proceeding, which clearly does not apply here. Some level of doubt is inherent in any future take estimate and the HCP used the very best available science to properly analyze the anticipated take and explain how to adapt to changed circumstances during operations through agency directed adaptive management.

The ESRC's recommendation for approval was made after more than 3 years of meetings and extensive consultation, evaluation, adjustments, and revisions to the HCP, as well as discussions and exchanges of information with Applicant, the Agencies, and the community. The final HCP document incorporated recommendations from the Agencies, including the ESRC's approval and recommendation that this Board accept the HCP as written. The Recommendation fails to identify any specific or credible basis to reject the ESRC's

recommendation of approval.

In addition, the Recommendation is premised on incorrect rationale and failure to address or consider significant evidence supporting approval of the HCP, including:

1. The ESRC's recommendation for approval of the HCP and testimony from the ESRC Chair, Mr. Scott Fretz, that he heard nothing at the hearing, and was unaware of any evidence, that would change his mind about the ESRC recommending approval of the HCP to the Board as written;

2. The HCP was developed through extensive years long consultation with the Agencies who are charged with the duty to develop such plans and have the necessary expertise to analyze the HCP's sufficiency for estimating take, providing adequate mitigation, use of appropriate data, and use of the best available science;

3. Current research on the effectiveness of LWSC in reducing bat fatalities has not shown conclusively that implementing a baseline cut-in speed of 6.5 m/s is more effective than a baseline cut-in speed of 5.0 m/s. Additionally, the standard cut-in speed for all existing Hawai'i wind farms that implement LWSC is 5.0 m/s. Furthermore, the evidence that since initiating implementation of LWSC at 5.0 m/s, only 1 observed bat fatality has been documented at the adjacent Kahuku Wind Farm, suggesting that 5.0 m/s is the appropriate baseline for the Project, was not considered by the Recommendation; and

4. The research component of the Hawaiian hoary bat mitigation and funding for habitat restoration and research are consistent with agency guidance (ESRC Bat Guidance; Ex. A-44) and is the best known method for providing mitigation, as coordinated through the agency-approved adaptive management program described in the HCP.

Each of these points was fully addressed in the HCP and citation to the best available science used to support the HCP, as well as in the expert testimony presented at the hearing. However, none of the detailed and lengthy explanation provided by Applicant in its proposed NPM FOF/COL was cited in the Recommendation. There is no basis to send the HCP back to the Agencies who recommended it for approval based on the state of the evidence in the record. No better science or existing study exists to demonstrate that the HCP's approach and take estimates are wrong or is not consistent with the best available science.

Applicant's position is that the HCP should be adopted as written, but to alleviate any concerns or worries articulated in the Recommendation (*i.e.*, about mitigation measures,

measures of success, or how adaptive management actually works), Applicant provides clarifying conditions be considered as part of the Board's approval process, including the following:

1. Limit the height of the WTGs based on presently commercially available WTGs, which will be limited to no more than 570 feet/173 meters (not the maximum 656 feet/200 meters considered in the HCP);

2. Reduce the total number of WTGs from 9 to 8; and

3. While already identified as a commitment in the HCP through adaptive management, Applicant confirms and commits to implementing additional minimization and mitigation measures if future scientific studies demonstrate that better measures should be used in lieu of or in addition to existing minimization and mitigation measures. The best available science and understanding includes the results from a 1-year study on O'ahu, which indicated that bat activity was most frequent when mean wind speeds were less than 4.6 m/s, *see* Ex. A-11 at 25 & Figure 19, supporting that a baseline cut-in speed for LWSC of 5.0 m/s is reasonable. If future studies are conclusive that LWSC at a cut-in speed greater than 5.0 m/s significantly minimizes impacts to bats and Tier 2 take estimates are likely to be exceeded during the ITL term, the Agencies can recommend Applicant to implement a higher cut-in speed at increments determined to be effective and necessary by the Agencies, or to use LWSC for a longer period of time, through Agency consultation with the Applicant. The Agencies can also have Applicant implement new technologies (such as deterrents) through adaptive management as such technologies become commercially available.

III. LEGAL STANDARDS

1. EXCEPTIONS

HAR § 13-1-42 provides in pertinent part:

> (a) Except as otherwise ordered by the chairperson, within twenty-one calendar days after service of the report and recommendation by the hearing officer, a party may file with the board, exceptions to the report together with a brief in support of such exceptions. . . .
>
> (b) The exceptions shall:
>
> (1) Set forth specifically the questions of procedure, fact, law, or policy, to which the exceptions are taken;
>
> (2) Identify that part of the hearing officer's report and recommended order to which objections are made; and
>
> (3) State all the grounds for exceptions to a ruling, finding, conclusion, or recommendation. The grounds not cited or specifically urged are waived.

2. HABITAT CONSERVATION PLANS

Applicant's HCP in this matter is analyzed under the standards set forth in HRS §§ 195D-21 and 195D-4(g). DOFAW is charged with evaluating and approving HCPs for the State of Hawai'i. Applicant's HCP was developed through consultation with DOFAW, USFWS, and the ESRC. The ESRC is the expert consultant to the Board and DLNR, specifically established by statute to review HCPs and Incidental Take Licenses ("**ITLs**") and to provide a recommendation to the Board. HRS § 195D-25; NPM FOF 113. The ESRC is comprised of technical experts, biologists and scientists from State and Federal agencies (such as representatives from the USFWS, DLNR, U.S. Geological Survey Biological Resources Division, and the University of Hawai'i Environmental Center, among others), non-governmental entities or independent experts. *See* HRS § 195D-25(a); Ex. A-1 at 11; Ex. A-31 (Cutbirth WDT) at ¶ 21; Ex. A-29 (Oller WDT) at ¶ 111. The members of the ESRC have expertise in threatened and endangered species conservation and use the best available science to evaluate HCPs. *Id.*

The ESRC is charged with reviewing all HCPs and ITLs and making:

> recommendations, based on a full review of the best available science and other reliable data and at least one site visit to each property that is the subject of the proposed action, and in consideration of the cumulative impacts of the proposed action on the recovery potential of the endangered, threatened, proposed, or candidate species, to the department and the board as to whether or not they should be approved, amended, or rejected[.]

HRS § 195D-25(b).

3. BURDEN OF PROOF

HAR § 13-1-35(k) provides:

> The party initiating the proceeding and, in the case of proceedings on alleged violations of law, the department, shall have the burden of proof, including the burden of producing evidence as well as the burden of persuasion. The quantum of proof shall be a ***preponderance of the evidence.***

(Emphasis added.)

4. BOARD ACTION

Under HAR § 13-1-45, the Board may:

> (a) In the event no statement of exceptions is filed, the board may proceed to reverse, modify, or adopt the recommendations of the hearing officer.
>
> (b) Upon the filing of the exceptions and briefs together with the briefs in support, the board may:
>
> > (1) Render its decision upon the record;
> > (2) If oral argument has been held, the board may render its decision after oral argument;
> > (3) Reopen the docket and take further evidence; or
> > (4) ***Make such other disposition of the case that is necessary under the circumstances.***

(Emphasis added.)

In *Feliciano v. Board of Trustees of Employees' Retirement System*, the Hawai'i Intermediate Court of Appeals ("**ICA**") described the "function and effect of the hearing officer's recommendations." 4 Haw.App. 26, 659 P.2d 77 (1983). Recommendations are "to provide guidance" and an agency is "not bound by those findings or recommendations." *Id.* at 34, 659 P.2d at 82. Indeed, an agency, after review of the reliable, probative and substantial evidence in the proceeding, may reject a hearing officer's recommendations and "ma[ke] its own findings and conclusions based on the same evidence." *Id.*

Therefore, the Board must determine whether the reliable, probative, and substantial evidence within the record as a whole supports approval or rejection of the HCP and ITL.

5. REVIEW OF BOARD ACTION

HRS § 91-14 provides for review of agency decisions. Subsection (g) provides that a reviewing court may:

> affirm the decision of the agency or remand the case with

instructions for further proceedings; or it may reverse or modify the decision and order if the substantial rights of the petitioners may have been prejudiced because the administrative findings, conclusions, decisions, or orders are:

(1) In violation of constitutional or statutory provisions;

(2) In excess of the statutory authority or jurisdiction of the agency;

(3) Made upon unlawful procedure;

(4) Affected by other error of law;

(5) Clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record; or

(6) Arbitrary, or capricious, or characterized by abuse of discretion or clearly unwarranted exercise of discretion.

IV. SPECIFIC EXCEPTIONS TO THE RECOMMENDATION

Applicant proposes the following Exceptions to the Recommendation for the reasons set forth below and as stated in Exhibit 2, attached hereto and incorporated herein:

A. DATA FROM THE ADJOINING KAHUKU WIND FARM PROJECT IS THE BEST AVAILABLE SCIENCE AND MOST RELIABLE FOR THIS PROJECT

In HO FOF 175, 176, 180, 181, 185, 190, 193 and 194, and COL 1.e, 5.e, 8.a, 11, 14, 18 & 21, the Recommendation faults the HCP for relying on data primarily from the Kahuku Wind Farm. Yet, inexplicably also admits the "fact that the Project is adjacent to the Kahuku Wind Farm and shares similar vegetative and topographical characteristics are appropriate," HO FOF 172, and in HO FOF 193: "It may be that the location of the Kahuku Wind Farm and the similarities in topography and vegetation are the most influential factors in estimating the Project's potential take of 'ope'ape'a." This incongruity demonstrates that the Recommendation did not outright reject using the Kahuku data as appropriate here and did not and could not conclude that the Kahuku data is not best available science to evaluate the likely conditions and estimated bat take for this Project.

The Recommendation also takes the position that Applicant did not provide a robust

analysis of the Hawaiian hoary bat take and that because of this, the Board is unable to adequately assess the cumulative impacts of the Hawaiian hoary bat take. *See* HO COL 5.e & 22.

1. HAWAIIAN HOARY BAT TAKE ESTIMATE

The Recommendation failed to consider or address the expert evidence about why data from the adjacent Kahuku Wind Farm presents very similar conditions, topography, and habitat to that of the Project site. *See* NPM FOF 140-145, 147. These FOF, among others in Applicant's FOF/COL and HO FOF 172, explain why the Kahuku Wind Farm is the best surrogate for the Project. As explained in NPM FOF 140:

> 140. The Kahuku Wind Farm was determined to be the best source of data to estimate the Hawaiian hoary bat take because it: (i) is adjacent to the Project; (ii) has the longest operational history on O'ahu; (iii) has a similar number of WTGs as the proposed Project; and (iv) is likely to be the most similar wind energy facility to the proposed Project because it is directly adjacent to the proposed Project and has similar vegetative and topographical characteristics. Id. at ¶ 34; Ex. A-1 at 41; Ex. A-27 (Snetsinger WDT) at ¶¶ 12-13; see also Ex. A-29 (Oller WDT) at ¶ 34. This HCP is well-informed because there is site specific information from the adjacent Kahuku Wind Farm. See Vol. 1, Tr. 08/07/17 at 41:19-23.

The Recommendation also ignored the actual evidence from the 2015 Kahuku Annual Report that demonstrates the Kahuku Wind Farm has consistently used LWSC with a cut-in speed of 5.0 m/s since April 2012 (with one year of non-operation) and has had ***only 1 observed bat fatality in the prior four (4) years***, and therefore represents a LWSC regime that would be similar to that proposed in the Project HCP. *See* Ex. A-55 at 8, 10 ("curtailment of all (12) turbines up to a wind speed of 5.0 m/s began April 27, 2012 and continues to be implemented between sunset and sunrise from April through November."). *See* NPM FOF 135. Should bat take at the Project occur at the rate which is currently occurring at the Kahuku Wind Farm,

Applicant's take should not exceed the Tier 1 take estimate. The Tier 1 estimate is the expected take for the Project during the life of the Project. The purpose of the Tier 2 take estimate is to account for any uncertainty in the estimates and to provide a conservative upper take limit in the event the Tier 1 estimate is exceeded. *See* Ex. A-27 (Snetsinger WDT) ¶ 17.

The Recommendation's position that Applicant's analysis of Hawaiian hoary bat take does not provide the Board with enough information to adequately assess the cumulative impacts of any potential Hawaiian hoary bat take (*see* HO COL 5.e & 22) is incorrect as it holds Applicant to a standard that is not applicable.

Applicant is not required to consider the cumulative impacts of take to the Hawaiian hoary bat by analyzing the population on *all* islands. As explained in Applicant's proposed FOF/COL:

> 282. Cumulative impacts to the Hawaiian hoary bat are discussed in the HCP with a more complete evaluation of potential impacts presented in the referenced FEIS. See Ex. A-1 § 5.6; Ex. A-12 at [4]-106 to 4-112. Population level impacts are discussed in Section 5.1.4 of the HCP. Cumulative impacts on the Hawaiian hoary bat are assessed on a population basis. ***The populations of the Hawaiian hoary bat on each island are assessed on an island-specific basis***. *See* HRS § 195D-21(b)(2)(C). ***Accordingly, it was appropriate for Applicant's HCP to consider and focus on the cumulative impacts to the Hawaiian hoary bat population on the island of O'ahu***. *See* Ex. A-12 at 4-106 to 4-112; Ex. A-1 at 55-56; *see also* Ex. A-12 at 4-5 to 4-6 & Table 4.2-1; Ex. A-53 (Snetsinger WRT) at ¶ 14.

NPM FOF 282 (emphases added); *see also* NPM FOF 188-203, 284-286.

The Agencies are required to make a "no jeopardy" determination prior to concurring with and/or approving a HCP. DOFAW and USFWS, by moving the HCP to the ESRC for approval, and the recommendation of the ESRC to the Board to approve the HCP, indicates that the Agencies are comfortable that the HCP meets the state and federal issuance criteria, including no jeopardy, and a sufficient analysis of cumulative impacts. *See* NPM FOF 96, 188-

203, 282, 284-286.

Accordingly, the HCP does include an analysis of cumulative impacts and provides the Board with sufficient information to adequately assess the cumulative impacts of potential Hawaiian hoary bat take from the proposed Project. *See* Ex. A-12 at 4-106 to 4-112; Ex. A-1 at 55-56; *see also* Ex. A-12 at 4-5 to 4-6 & Table 4.2-1; Ex. A-53 (Snetsinger WRT) at ¶ 14.

2. LWSC

Although some studies on the mainland have generally shown that there are reductions in collision risk associated with progressively higher levels of LWSC, it is widely accepted and recognized in publicly-available scientific reports that the effectiveness of LWSC is dependent on project-specific characteristics such as wind regime, bat species at risk, surrounding land uses, weather conditions, and other factors. The Arnett et al. 2013 study synthesized the results of 10 operational mitigation studies of LWSC effectiveness at wind projects in North America. *See* Ex. A-7; *see also* Ex. A-27 at 8. Data were derived from 2 studies published in scientific journals (Baerwald et al. 2009, Arnett et al. 2011), 6 studies reported in publicly-available reports (Good et al. 2012 (Ex. A-8), Young et al. 2011, 2012, 2013, Stantec Consulting Ltd. 2012, Martin et al. 2013, Tidhar et al. 2013), and 2 studies (anonymous location and ownership) conducted by some of those authors (WEST Inc., unpublished data). Based on these scientific studies, increasing cut-in speed between 1.5 and 3.0 m/s or "feathering" blades and slowing rotor speed up to the turbine manufacturer's cut-in speed would yield substantial reductions in fatality of bats, with at least a 50 percent reduction in bat fatalities documented when cut-in speed was raised 1.5 m/s above the manufacturers cut-in speed. *See* Ex. A-27 at 8. Among these studies, at the Casselman wind project in Pennsylvania, Arnett et al. (2011) found no significant differences in bat fatality rates between turbines with cut-in speeds raised to 5.0 m/s and 6.5 m/s. Whereas the Fowler Ridge wind project in Indiana, Good et al. (2012) found bat fatality rates were

different between cut-in speeds raised to 5.0 m/s versus turbines with cut-in speeds raised to 6.5 m/s. The reasons for the significant differences between these 2 facilities may be attributed to differences in the wind resources at the respective sites (*i.e.*, winds between 5 and 6 m/s may have been more prevalent at Fowler Ridge). *See* Ex. A-7 (Arnett et al. 2013).

These studies indicate that although there *may* be increased benefits to bats in reducing collision risk as cut-in speeds increase, ***there is no clear indication of greater effectiveness of a 5.0 m/s versus a 6.5 m/s cut-in speed***, particularly in the establishment of a baseline LWSC regime. The conclusion is that the effectiveness of LWSC is driven by numerous project-specific factors. Based on the divergent or ambiguous results from the studies synthesized by Arnett et al. (2013) and the significant differences in life history characteristics between the resident Hawaiian hoary bat and migratory mainland hoary bats, there is no evidence that was presented in this case that implementing a maximum cut-in speed of 6.5 m/s at the Project as the LWSC baseline would offer any measurable additional benefits in minimizing impacts to the Hawaiian hoary bat. This same rationale explains why the ESRC Bat Guidance (Ex. A-44) recommends a minimum cut-in speed of 5.0 m/s and why none of the operating wind farms in Hawai'i with HCPs, and virtually all wind farm projects on the U.S. mainland (which implement LWSC to reduce impacts to bats), have a LWSC cut-in speed set at 5.0 m/s as the baseline.

The ESRC Bat Guidance provides for LWSC at 5.0 m/s and all wind farms in Hawai'i with approved HCPs have implemented that standard to some effect. There is no precedent in Hawai'i to require Applicant to begin its operations with LWSC at 6.5 m/s when the best available science does not support that higher limit. To require Applicant to implement LWSC at 6.5 m/s at the outset of the Project life, particularly when the science does not support it, would have the effect of creating an HCP that is not consistent with all other wind farms in

Hawai'i with approved HCPs and is not supported by the best available science and that therefore does not meet the Chapter 195D requirements.

Finally, the Recommendation did not address the HCP safeguard: that adaptive management can provide for adjusting operations if further advances in science and research demonstrate that incremental adjustments in the 5.0 m/s to 6.5 m/s range are needed to reduce bat take during operation of the Project.

In sum, the best existing evidence for anticipated effectiveness of LWSC at 5.0 m/s is the existing adjacent Kahuku Wind Farm. That project is the best surrogate to analyze the potential for Hawaiian hoary bat take in the Project area, and provides observational data of the effectiveness of LWSC at 5.0 m/s in that area. Critically, evidence not cited in the Recommendation that was highlighted at the hearing showed that Kahuku has experienced only 1 observed bat fatality since implementation of LWSC in April 2012 (with approximately 1 year of non-operation). Ex. A-55 at 8, 10. Observational data from the Kahuku Wind Farm indicates that LWSC with a baseline cut-in speed of 5.0 m/s, as proposed in the HCP, in this area is effective. Therefore, LWSC beginning at 5.0 m/s is appropriate for this Project, and the Hawaiian hoary bat take estimate for this proposed adjacent Project is entirely reasonable and consistent with the best available science.

3. KAWAILOA PROJECT DATA

Applicant's HCP was developed with the benefit of actual data from the existing wind farms. Yet, petitioners consistently compared Applicant's estimates to older HCP estimates from facilities that did not have the benefit of available operating data to estimate take, for the proposition that Applicant's take estimate for the Hawaiian hoary bat must therefore be low. *See* NPM FOF 156, 288. While the Recommendation considers such arguments it fails to address or consider the strength and credibility of relying on the adjacent Kahuku Wind Farm data for this

Project and the fact that the original estimates at Kawailoa were low as a result of the fact that wind farm project, unlike this Project, did not have actual operating data from which to estimate take.

Kawailoa is a facility located approximately 4.5 miles away from the proposed Project, across the Ko'olau mountain range, with downslope trade winds and valley topography that is well away and very different from that found at the proposed Project site. It is clear why the Kahuku Wind Farm data is most important and reliable for this Project and why the distinctions made are most compelling and support the Applicant's and approving Agencies' HCP approach. *See* HO FOF 169, 177 & 180. An unsubstantiated worry or uncertainty about the take estimates is not an appropriate standard to apply here. Applicant's prima facie case was established by the data and studies it presented, the various experts, and recommendations from the Agencies. There was no credible evidence that clearly rebuts those conclusions. Simple doubts about the process are not the proper standard to apply to this HCP. The Tier 1 estimate is the expected take from the Project. The purpose of the Tier 2 estimate is to account for any uncertainty and provide a very conservative upper limit of take.

Applicant did not elect to ignore results from Kawailoa, and in fact data from that project was considered, but ultimately it was determined, in consultation with the Agencies, that the Kahuku Wind farm was a better surrogate and that data from the Kahuku Wind Farm would be the best available science for comparison. *See* Ex. A-1 at 41; NPM FOF 143, 144, 145, 193, 284. The better scientific conclusions, as set forth in proposed NPM FOF 143 and 193, clearly explain why data from Kawailoa were not the best available science for this particular Project, especially when actual data from an adjacent project in Kahuku with nearly identical site conditions and characteristics were readily available. Applicant's FOF/COL and the evidence

presented at the hearing clearly explain why the Kahuku Wind Farm data was and remains the best available science and was approved by the Agencies as the best surrogate for this Project. *See* NPM FOF 140, 143, 147; *see also* NPM FOF 120, 121. None of that evidence was appropriately cited, considered or weighed by the Recommendation. Furthermore, the Recommendation did not articulate any rationale as to why the Kawailoa fatality data is better suited to this Project. Accordingly, Applicant takes exception to HO FOF 177 & 180, and the corresponding HO COL 11 and requests the Board to reject consideration of those FOF and COL as they mischaracterize and inaccurately reflect the evidence in the record.

The Recommendation also fails to reference Kahuku Wind Farm results of only 1 observed bat fatality since LWSC was implemented at 5.0 m/s, supporting the proposed implementation of a baseline LWSC cut-in speed of 5.0 m/s for this Project. *See* NPM FOF 135; Ex. A-55 at 8, 10. That is close to four years' worth of operation and data (with approximately 1 year of non-operation) upon which Applicant based its take estimate for the Hawaiian hoary bat. However, even if consideration of other project bat fatality data might increase that take estimate, Applicant's estimate was conservatively estimated (at 150% of the actual expected take) which considered the inherent uncertainty of estimating precise future take for any specific project. *See* NPM FOF 78, 116, 120, 121, 126, 129, 141, 142, 146, 147, 169, 197, 198, 222, 286, 327. The 150% estimate also takes into account the effectiveness of LWSC at 5.0 m/s. *See* Ex. A-27 (Snetsinger WDT) ¶ 17. Even if Kawailoa data were used, in addition to or in place of the Kahuku bat fatality data, no evidence was presented to show that Applicant's take estimate here was inappropriate or wrong. Further, the Recommendation acknowledges that the Kahuku Wind Farm may be the best source of data for this Project. *See* HO FOF 193. The Recommendation also accepts that Kahuku Wind Farm as the best surrogate for the other Covered Species. *See,*

e.g., HO FOF 137. It is inconsistent and contradictory for the Recommendation to find that the use of Kahuku data was appropriate for analysis of some species, but not for the hoary bat. This contradictory approach demonstrates a failure to consistently apply the standard and burdens.

In sum, Applicant takes Exception to HO FOF 175, 176, 177, 180, 181, 185, 190, 193, & 194 and HO COL 1.e, 5.e, 8.a, 11, 14, 18, 21 & 22 because although the Recommendation agreed that the Kahuku Wind Farm has the best surrogate factors, the Recommendation ultimately appears to conclude that the Kahuku Wind Farm data is not the best available science because there *may* be other ways to estimate take and that LWSC at 6.5 m/s is warranted. These findings and conclusions mischaracterize and fail to fully understand the totality of the evidence presented by Applicant, the evidence and reasoning by the Agencies, and the best available science that was employed to develop the HCP and take estimates.

B. SCIENTIFIC STUDIES ARE AMBIGUOUS ON THE EFFECTS OF TURBINE BLADE HEIGHT ON TAKE

The second area that the Recommendation misapplied the standards for applying scientific studies involved the blade tip height and impacts on bat take. *See* HO FOF 185, 190 & 194, and HO COL 11.

The most recent scientific study evaluating bat fatalities in relation to turbine height was the Zimmerling & Francis study, Ex. A-10, which is cited to in the Recommendation, but given little attention even though it is a more recent and comprehensive study and therefore should be considered the best available science on the subject. Applicant explains the significance of this study and why it is the best available science according to the experts who testified on the subject, in proposed NPM FOF 152, 154 & 155. The evidence presented for this best existing science shows:

> 152. . . . [T]he Zimmerling & Francis study evaluated the most comprehensive number of studies encompassing the largest range

> of turbine size that Tetra Tech has been able to find. Results from that study suggest that earlier studies limited to smaller turbines were missing data points from larger turbines and would result in erroneous conclusions if their results were extrapolated outside of the scope of inference for their study. Although there are no studies to understand potential differences in risk to bats between turbines 127 – 200 meters tall, based on Zimmerling & Francis (2016), there is no evidence to conclude that turbines 100 – 135 meters tall would vary in the amount of bat take. *See* Ex. A-10 at 1364; Ex. A-53 (Snetsinger WRT) at ¶ 12. Therefore, there is also no evidence to conclude that turbines larger than 135 meters tall would vary in bat take either....
>
> 154. While taller turbines may have an increased impact on some species [*see* Vol. 1, Tr. 08/07/17 at 101:6-9], studies referred to by KNSC inappropriately extrapolate data from smaller turbines to larger turbines. Vol. 1, Tr. 08/07/17 at 103:1-12. The conclusions from these earlier studies related to migrating song birds and mainland bats. Adequate data about flight heights of bats or migrating birds in Hawai'i does not exist to develop or test such hypotheses. Furthermore, the more comprehensive and better developed recent studies have analyzed taller turbines and conclude that there is no clear relationship between turbine height and bat take. Vol. 1, Tr. 08/07/17 at 103:1-22; Ex. A-10. Based on the best science available when the HCP was prepared, Tetra Tech concluded that the number of turbines was the appropriate factor to consider. Vol. 1, Tr. 08/07/17 at 104:3-7.
>
> 155. While the HCP did not cite to Ex. A-10 when the plan was drafted, because the study did not exist at that time, its conclusions support the reasonableness of the assumptions about proposed height considerations in the existing HCP. Vol. 1, Tr. 08/07/17 at 105:11-16.

NPM FOF 152, 154 & 155.

The best available science at the time that the HCP was drafted supports the conclusion that there is no proven significant increase in bat take between turbine heights of 127 meters to 200 meters or any standardized method for adjusting per turbine fatality rates based on turbine height difference. There is no other study to Applicant's knowledge that definitively states otherwise. Zimmerling & Francis is the best available and definitive study and any concern or uncertainty about that take estimate is accounted for by the additional 50% included in the take

estimate. No evidence from any expert was presented to contradict the Applicant's testimony on these points and nothing was presented at the hearing to the ESRC Chair, Scott Fretz, that would change his mind about approving the HCP. Uncertainty or doubt about an outcome, without some credible evidence or proof, does not rebut Applicant's prima facie case and burden of proof by a preponderance of the evidence. The Recommendation misapplied the standard and changed it to one that would require removal of any doubt, akin to a criminal case. That simply is not the standard of proof required for this HCP.

Nevertheless, for purposes of this ITL, and to remove any uncertainty from a concern about additional height impact, Applicant agrees that if the HCP and ITL are approved, it will limit the maximum WTG height to 173 meters (570 feet), as set forth in the attached clarifying conditions of approval, which clarify these points.

For these reasons, Applicant takes exception to HO FOF 185, 190 & 194, and HO COL 11; and otherwise proposes to remove and moot any lingering concern about height impacts by agreeing to restrict the height of the WTGs, as set forth in the clarifying conditions.

C. THE BEST AVAILABLE SCIENCE DOES NOT SUPPORT IMPLEMENTING LWSC WITH A CUT-IN SPEED OF 6.5 M/S FOR THIS PROJECT

The third area to which Applicant takes Exception is the Recommendation that Applicant has not mitigated to the maximum extent practicable by proposing a LWSC cut-in speed of 5.0 m/s. The decision to implement LWSC at a cut-in speed of 5.0 m/s involved consideration of the best available science and consultation with Agencies. The analysis of the best available science and the Agencies' reasoning is set forth in the ESRC Bat Guidance, Ex. A-44. The Recommendation takes issue with Applicant's proposed cut-in speed for LWSC of 5.0 m/s because of assumptions made in *one* study from the mainland that compares a cut-in speed of 6.5 m/s. Specifically, the Recommendation provides:

> HRS § 1954(g)(1) requires the applicant to minimize and mitigate the impacts of the take to the maximum extent practicable. Although, studies to date are inconclusive as to whether there is a significant difference in minimizing bat fatalities when the cut-in speeds are increased from 5 to 6.5 m/s, there some evidence that it does. Conversely, there is no evidence that cut-in speed of 5 m/s is more effective in minimizing impacts to bats than cut-in speed of 6.5 m/s. Moreover, the inferences are that curtailing wind production at higher speeds could reduce bat take. Therefore, the best scientific knowledge currently available suggests that increasing cut-in speed to 6.5 m/s, rather than 5 m/s, would minimize impacts to the maximum extent.

HO FOF 208.

Once again, the majority of studies on LWSC effectiveness demonstrate that there is no statistically significant difference in the reduction of bat fatalities between cut-in speeds of 5.0 m/s and 6.5 m/s, and any generalized conclusions are ambiguous scientifically and otherwise influenced by a number of site-specific factors. A limited number of studies (*i.e.*, Ex. B-15) have shown a reduction when going from 5.0 to 6.5 m/s, but other studies have shown that simply feathering under 5.0 m/s has a beneficial effect (without even implementing LWSC). Overall, the results are ambiguous and 5.0 m/s is considered the industry standard baseline. Impacts will depend on the particular species at risk and project location, among other factors. There was no admissible evidence or scientific proof that a further cut will reduce take for this project and making assumptions about it without any proof is not sufficient to rebut the Applicant's prima facie case demonstrated by the existing expert and lay testimony and ESRC guidance.

The Recommendation also ignores that existing scientific studies from O'ahu show that bat activity is highest at wind speeds of 4.6 m/s and below. *See* Ex. A-11 (Gorreson et al. 2015) at 25 & Figure 19. The ESRC Bat Guidance recommends a standard cut-in speed of 5.0 m/s with consideration for adjusting that speed or duration over time as an adaptive management measure *because* the available studies do not make a strong case for requiring a cut-in speed of 6.5 m/s,

particularly in Hawai'i where no project curtails at this level. *See* Ex. A-44 at 7-8.[3] The HCP as written is consistent with the ESRC's recommendation for implementing a baseline LWSC cut-in speed of 5.0 m/s. If additional research or operational conditions suggest an adjustment to incrementally higher cut-in speeds, upon a showing that an increase in cut-in speed is significantly better, the adaptive management for this HCP will account for those circumstances and the Project will adjust accordingly.

Additionally, data from Ex. B-15 was included in the Arnett et al. (2013) study, filed as Ex. A-7. The ambiguity of Ex. B-15's results do not provide strong or clear evidence of a greater benefit from a cut-in speed of 6.5 m/s over 5.0 m/s. That conclusion is also inconsistent with DOFAW, USFWS, and the ESRC's Bat Guidance, Ex. A-44, of starting with a cut-in speed of 5.0 m/s then increasing cut-in speeds, ***if necessary***, through adaptive management. This is exactly what this HCP calls for here. The fallacy of the Recommendation's analysis is that adaptive management will apply once the project is operational and if studies demonstrate that a higher cut-in speed is warranted or will significantly reduce take. At that point, the Agencies can direct Applicant to modify its minimization measures, or to implement additional or new deterrents and/or minimization and mitigation measures, to reflect new science. This is also confirmed and clarified in the conditions attached hereto.

Because there is not an adequate sample size to assess the effectiveness of LWSC in Hawai'i, the best surrogate and available science were used, and that is the data from the Kahuku Wind Farm. As discussed above in Part IV.A.2, the best scientific evidence on the effectiveness of LWSC for this Project is the observational data from the Kahuku Wind Farm, that indicates that implementing LWSC at a cut-in speed of 5.0 m/s is effective, evidenced by the fact that the

[3] Pincites to Ex. A-44 refer to the PDF pagination as the document is unpaginated.

Kahuku Wind Farm has observed only 1 bat fatality since consistent implementation of LWSC in April 2012 (with approximately 1 year of non-operation). *See* Ex. A-55 at 8, 10. This evidence suggests that for this specific area in Kahuku, to which the proposed Project will be adjacent, LWSC with baseline a cut-in speed of 5.0 m/s is appropriate.

HO FOF 208 demonstrates the problem with the Recommendation's conclusion on this point. While acknowledging that studies to date have been *inconclusive* as to the effectiveness of curtailing above 5.0 m/s, the Recommendation nevertheless concludes that Applicant's HCP is inadequate on this point. Further, the inference would require Applicant to automatically increase its cut-in speed directly to 6.5 m/s, rather than even considering incremental cut-in speeds between 5.0 m/s and 6.5 m/s, and without any evidence that incremental cut-in speeds between 5.0 m/s and 6.5 m/s would not be equally as effective as a cut-in speed of 5.0 m/s or 6.5 m/s. The evidence in the record clearly shows that the science does not support a conclusion that 6.5 m/s would significantly alter take for the Project—rather, the evidence is inconclusive as to whether cut-in speeds over 5.0 m/s would make a difference on take estimates. *See* Ex. A-7. This is what the ESRC Bat Guidance acknowledges as well. Therefore, it is illogical to require Applicant to be held to a standard requiring a baseline LWSC cut-in speed of 6.5 m/s that has no precedent in Hawai'i, or on the U.S. Mainland, that has not been demonstrated by the best available science to be consistently effective for this Project (or any other in Hawai'i) in resulting in significant additional reductions in bat fatalities compared to a cut-in speed of 5.0 m/s, and that has not proven that LWSC at 6.5 m/s will alter the current take estimate.

Of course, not operating the Project at all, at any speed, would reduce all risk, but that would frustrate the purpose of the Project and significantly affect renewable energy production to benefit the State's initiative to generate 100% of its electricity from renewable energy

resources. The result of requiring removal of any uncertainty or doubt as a standard to stall a wind energy project will certainly chill and frustrate the purpose for acquiring any take license in this State. The Recommendation's interpretation of the statute is not in line with the Agencies' actual expertise in the area and how they interpret the statute. *See Paul's Elec. Service, Inc. v. Befitel*, 104 Hawai'i 412, 417, 91 P.3d 494, 499 (2004) ("To the extent that the legislature has authorized an administrative agency to define the parameters of a particular statute, that agency's interpretation should be accorded deference."). The Hawai'i Supreme Court has stated that deference to an agency's decision may not be warranted when an appellant makes a showing that the agency's "decision is invalid because it is unjust and unreasonable in its consequences," *id.* at 418, 91 P.3d at 500, and that an agency's decision is an abuse of discretion if it "clearly exceeded the bounds of reason or disregarded rules or principles of law or practice to the substantial detriment of a party litigant." *Id.* at 419, 91 P.3d at 501. The Recommendation's reasoning does just that.

Again, the HCP as written is consistent with the ESRC's recommendation for implementing a baseline LWSC cut-in speed that begins at 5.0 m/s. Ex. A-44 at 7-8. As a result, the Agencies approved Applicant's HCP, following the best available science and ESRC Bat Guidance, to implement LWSC during periods when winds are at or less than 5.0 m/s as well as to feather WTG blades below 5.0 m/s. *See* Ex. A-1 at 44. This guidance is based on the data that the best scientific studies have identified to date (including Ex. B-15 and Ex. A-7 that analyzed all studies), leading to a conclusion that there is no statistically significant difference in effectively reducing bat fatalities between cut-in speeds from 5.0 m/s to 6.5 m/s. Also, in any event, the HCP clearly provides for adaptive management that follows the ESRC Bat Guidance to increase the cut-in speed or duration, if necessary. Ex. A-44 at 7-8; Ex. A-1 at 86-87; NPM

FOF 116, 195, 221-226, 325-330.

The Agencies and Applicant agreed to set 150% of the expected take as the total requested take for the Hawaiian hoary bat (which includes both Tier 1 and Tier 2) in order to account for any lingering uncertainty or doubts in predicting future take. It is impossible to remove all doubt in a take estimate. That is why conservative assumptions are built into take estimates, using the best available science, and explains why adaptive management is not only necessary, but recommended by the Agencies to adjust operations over time as additional research in Hawai'i (some of which is being funded through mitigation by the Applicant and other operators) and on the U.S. Mainland, provide more data and a better understanding of the impacts, or new technology that further reduces impacts that is not currently available or viable is developed and becomes available. *See* Ex. A-44 at 5, 7-8.

Not only is LWSC at 6.5 m/s unnecessary at this time because the mitigation proposed by Applicant fully mitigates the anticipated take, adaptive management can increase it as needed. Nevertheless, curtailing operations of the wind energy farm at any speed above 5.0 m/s will obviously create a cost impact to generating energy and add cost to the Project without any material benefit to the Hawaiian hoary bat. Under the Project's power purchase agreement ("**PPA**") with Hawaiian Electric Company ("**HECO**"), the Project is required to produce a minimum amount of energy. Applicant recently performed the feasibility analysis and Applicant will be unable to meet its production requirements under the PPA with the certainty required by lenders and tax investors if Applicant is required to implement LWSC with a cut-in of 6.5 m/s throughout the entire ITL term.

For these reasons, Applicant takes Exception to HO FOF 208 & 210 and HO COL 1.e, 8.a, 11 & 14, and requests that the Board reject these findings and conclusions, as they fail to

properly apply the standards and best available science, and fail to properly address how adaptive management is utilized to minimize impacts to the Covered Species to the maximum extent practicable once operations are commenced.

D. MITIGATION AND MEASURES OF SUCCESS FOR THE HAWAIIAN HOARY BAT

Applicant further takes Exception to HO FOF 227 & 238 and HO COL 2.e, 6, 9.a, 9.f, 11, 18 & 21. In these findings and conclusions, the Recommendation takes issue with the specific mitigation and measures of success for the Hawaiian hoary bat.

First, it is unclear how the Recommendation concluded that mitigation measures and measures of success for the ʻōpeʻapeʻa are insufficient when HO COL 7.e explicitly found that the mitigation measures proposed by Applicant are in accord with the relevant state plans:

> 7.e. `Ope`ape`a. Mitigation proposed for `ope`ape`a includes contributing towards habitat improvement at Poamoho Ridge by providing annual funds to the KMWP and funding for research, FOF 213, 220, ***which accords with the Hawaiian Hoary Bat Recovery Plan and the State of Hawai`i Comprehensive Wildlife Conservation Strategy***, which recommend conservation of known occupied habitat, development and implementation of conservation plans that guide the management and use of forests to reduce negative known bat populations, and continued support for `ope`ape`a research. FOF 153.

(Emphasis added.) The Recommendation made no findings that the Hawaiian Hoary Bat Recovery Plan or the State of Hawai'i Comprehensive Wildlife Conservation Strategy are incorrect or not supported by the best available science.

The Recommendation finds fault with these proposed mitigation measures, but failed to consider that the mitigation and minimization measures proposed for the Hawaiian hoary bat, such as fencing and restoration at Poamoho, are precisely those measures that were recommended by the Agencies with experience and expertise in HCPs, including what is contained in the ESRC Bat Guidance.

The process and rationale for selecting Poamoho Ridge for Hawaiian hoary bat mitigation is described in the HCP. *See* Ex. A-1 at 59-60. The selection of Poamoho Ridge as the mitigation area for bats was based on discussions with the DLNR, Koʻolau Mountains Watershed Partnership ("**KMWP**"), Army Natural Resources, and Kamehameha Schools. Applicant concluded that it would be most effective to work in collaboration with these existing conservation partnerships to fund long-term forest restoration in an area where fencing efforts are already underway. DLNR's Poamoho Ridge was identified as the best candidate for Project mitigation efforts because it contains suitable, but degraded, bat habitat and the DLNR has already secured funding for fencing around two units that are 654 acres (265 hectares) and 653 acres (264 hectares), respectively. It is located above Wahiawa in the Ewa Forest Reserve, and is proposed to be part of the State Natural Area Reserve System. Habitat along Poamoho Ridge is steadily decreasing in quality due to the presence of invasive plant species are and feral pigs (M. Zoll, DLNR, pers. comm. 2014). Forest restoration and management activities conducted by NPMPP within the fenced units would foster the growth of additional bat roosting and foraging habitat, and would support a forested corridor connected with the Ahupuaʻa O Kahana State Park and forested habitat managed for conservation in neighboring military reservation areas. *See* Ex. A-1 at 59.

Therefore, as discussed in the HCP, mitigation measures that will be implemented as part of the Project, will provide for a net benefit for all Covered Species. *See* Ex. A-1 at 65.

Furthermore, the Recommendation's treatment of the standards for the measures of success for the ʻōpeʻapeʻa is different from the standard used for the other Covered Species (except Hawaiian Waterbirds, which is discussed below in Part IV.E). The Recommendation's treatment of measures of success for the Hawaiian hoary bat arbitrarily finds that the same or

similar measures of success that were acceptable for the other species are somehow unacceptable for the Hawaiian hoary bat. *Compare* HO COL 9.f *with* HO COL 9.b, 9.d & 9.e. The Recommendation gives no explanation for the additional requirements she attempts to impose for the Hawaiian hoary bat and no lay or expert testimony at the hearing supports the application of such standards.

Mitigation for the Hawaiian hoary bat follows the current ESRC Bat Guidance which requires a combination of research and land-based habitat restoration. *See* Ex. A-44 at 19-22. Note that Applicant has committed to initiating the development of the agency-approved Poamoho Ridge Management Plan at the commercial operation date ("**COD**") of the Project. *See* Ex. A-1 at F-1. An outline of this plan is included in Appendix E of the HCP. As shown in the Management Plan Outline, the management plan will include specific success criteria which will be used as decision points to determine what, if any, additional mitigation activities should be implemented. Specifically, Section III of the Management Plan Outline (Ex. A-1 at E-2) describes the types of ongoing monitoring that will be conducted in association with fence maintenance, feral pig removal, and invasive weed control to ensure mitigation effectiveness over the long-term. For example, for feral pig removal, the Management Plan Outline states that "[m]onitoring techniques may include game cameras, surveying with trained dogs, transect surveys, or other techniques. The amount of effort required to remove pigs from the fenced units, maintain these as pig-free environments, and monitor results is likely to vary over time." *Id.* Additionally, Section IV of the Management Plan Outline describes the types of adaptive management measure that will be developed in consultation with the USFWS and DOFAW as part of the Project's long-term mitigation strategy. *See* Ex. A-1 at E-3.

The components of the Management Plan Outline described above demonstrate that it is

Applicant's intent to adaptively manage mitigation activities at Poamoho Ridge through supplementary activities if monitoring indicates the need to do so. These details will be developed in collaboration with the USFWS and DOFAW and solidified once an ITP/ITL is issued and will be included in the agency-approved Management Plan. In response to the Recommendation, Applicant reaffirms that it will incorporate specific measures into the Poamoho Ridge Mitigation Area Management Plan to be implemented should restoration activities at Poamoho Ridge be deemed unsuccessful based on monitoring data, and including these measures in the Poamoho Ridge Mitigation Area Management Plan.

For these reasons, Applicant takes Exception to HO FOF 227 & 238 and HO COL 2.e, 6, 9.a, 9.f, 11, 18 & 21 and requests the Board to reject these findings and conclusions.

E. FINDINGS AND CONCLUSIONS RELATED TO MEASURES OF SUCCESS FOR HAWAIIAN WATERBIRDS

Applicant takes Exception to HO FOF 58,112 and 236 and HO COL 6, 9.a & 9.c.

HO COL takes issue with the measures of success proposed by Applicant with respect to Hawaiian Waterbirds:

> 9.c. Hawaiian Waterbirds. The HCP proposes to measure success by timely fence construction and funding for fence maintenance and a half-time staff biologist. FOF 111. These actions, however, cannot be cannot be said, when achieved, to contribute significantly to the protection, maintenance, restoration or enhancement of ecosystems, natural communities, or habitat types. Meaningful measures of success should include assessments of the (i) effectiveness of the fence in reducing predation or improving breeding habitat, (ii) staff biologist's engagement with the public regarding the protection of waterbirds, and (iii) whether monitoring activities contribute towards improving habitat for waterbirds. These types of measurements of success are not included in the HCP, FOF 112, and thus, are not compliant with HRS § 195D-21(b)(2)(G).

These FOF and COL are erroneous in light of the evidence in the record, and particularly, the numerous FOF that accept the science and mitigation measures for the Hawaiian Waterbirds.

See HO FOF 102 (accepting estimates for 4 Waterbird species based on uncertainty inherent in estimating frequency and magnitude of take); HO FOF 107 (accepting the information in the USFWS Recovery Plan for Hawaiian Waterbirds regarding biggest threats and appropriate habitat management measures to be taken for Hawaiian waterbirds); HO FOF 110 (accepting that proposed mitigation for Waterbirds will likely provide a net benefit to the species); *see also* Ex. A-46 (USFWS Hawaiian Waterbirds Recovery Plan) at 102 (providing that "fencing and trapping to control predators...are successful management techniques that have increased waterbird numbers.").

The mitigation fence proposed by Applicant is intended to create a boundary between the shopping center and the edge of the Hamakua Marsh mitigation area, control access to limit the illegal dumping of garbage, reduce the movement of Hawaiian Waterbirds into the parking lot, and eliminate the use of the marsh by dogs. Ex. A-1 at 73. In doing so, the fence will improve habitat quality for Hawaiian Waterbirds by reducing disturbance and habitat degradation by prohibiting unauthorized access to the marsh and reducing fatality risk in off-marsh areas. The part-time biologist will engage in public outreach to educate visitors about risks to Hawaiian Waterbirds associated with feeding, and to solicit their participation in fatality reporting. The HCP includes a related success criterion aimed at tracking the reduction in Hawaiian Waterbird fatalities after fence construction:

> Results of the funded management efforts are provided in the annual report to the agencies. These results will include reporting of the numbers of observed fatalities at Hamakua Marsh during the period that the ½-time biologist position is funded. Na Pua Makani Power Partners anticipates that the actual number of parking lot and other off-marsh related fatalities at the Hamakua Marsh mitigation site will be reduced during the 2-year mitigation commitment as a result of the fence construction and public outreach.

Ex. A-1 at 75. Therefore, the HCP does include a means for assessing the measures of success

that the Recommendation determined was not included. Yet, without further elaboration, the Recommendation inexplicably concludes that the same measures of success used for the other species are unacceptable for Hawaiian Waterbirds

Additionally, HO FOF 112 and 236 and HO COL 9.a and 9.c are not supported by the substantial evidence in the record. Applicant presented evidence that the Project area does not have suitable listed Hawaiian Waterbird breeding or that the foraging habitat is not found on the Project site when Hawaiian Waterbirds do not currently exist on the Project site. They were addressed in the HCP out of an abundance of caution, but lacking any evidence of involvement there can be no logical basis to reject the HCP on this point. Therefore, with respect to these species, Applicant is essentially providing mitigation for impacts that may never occur because there is no evidence of existing use on the Project. *See* NPM FOF 75; Ex. A-1; Ex. A-4; Ex. A-27 (Snetsinger WDT) at ¶ 8; Ex. A-29 (Oller WDT) at ¶ 10; Ex. A-53 (Snetsinger WRT) at ¶¶ 22-23; Vol. 1, Tr. 08/07/17 at 30:24-31:11, 146:10-12.

Thus, Applicant takes Exception to HO FOF 112 and 236 and HO COL 9.c. and requests the Board to reject these findings and conclusions as they inaccurately and inconsistently represent the evidence in the record. Nevertheless, to remove any lingering doubt, Applicant has proposed additional clarifying conditions below to address the Recommendation's concerns about proposed measures of success for Hawaiian Waterbirds. *See, e.g.*, Exhibit 3 - Clarifying Condition #18.

F. ADAPTIVE MANAGEMENT

A central flaw in the Recommendation is the failure to accurately explain and apply the adaptive management process. Instead of considering how adaptive management is intended to operate throughout the life of the HCP and ITL, the Recommendation was concerned that there was no formal requirement to make changes in minimization and mitigation measures if new

science reveals better methods and Applicant has not exceeded its take limits. *See* HO FOF 58, 227, 235 & 237 and HO COL 9.f. & 10. That understanding is incorrect.

There is nothing in HRS Chapter 195D that requires a permittee to adaptively manage if the permittee is not in violation of its HCP or ITL (*i.e.*, exceeding its take limits). *See* HRS § 195D-21(b)(H) (requiring an applicant to "[p]rovide for an adaptive management strategy that specifies the actions to be taken periodically ***if*** *the plan is not achieving its goals*"); HRS § 195D-21(d) (allowing the Board to revoke approval of a HCP if there are any breaches of the HCP or ITL); HRS § 195D-4(e)(5) (providing that it is unlawful to violate the terms of any HCP or ITL); *see also* Vol. 2, Tr. 8/8/17 at 43:13-20 (Fretz testifying that law enforcement is triggered when a permittee exceeds its take limit).

The entire purpose for adaptive management to exist in the HCP is to provide a way to adjust Project operations based on project-specific monitoring data and on ongoing research being funded by Applicant and other existing wind HCPs as part of the overall mitigation process. The research is also intended to provide new information on the effectiveness and viability of avoidance and minimization measures (*e.g.*, deterrents) as it becomes available. In sum, adaptive management is a mechanism for leveraging the results of ongoing and future existing wind HCPs to inform future mitigation efforts.

The Recommendation fails to consider that "[a]daptive management also includes, by definition, ***a commitment*** to change management practices when determined appropriate." Ex. A-2 at 3 (DOFAW Staff Report) (emphasis added). Adaptive management is ***the*** method by which future advances in scientific study will in fact be incorporated and adopted by the Project. Therefore, if future science reveals that certain deterrents that are commercially available and viable are, for example, more effective than LWSC, adaptive management provides the

mechanism by which those deterrents could be incorporated into the HCP and ITL requirements. *See* Ex. A-44 at 8-9.

Applicant takes Exception to HO FOF 58, 227 and HO COL 9.f. & 10 which state that the HCP's adaptive management is insufficient and that Applicant is not anticipated to provide different or additional mitigation even if biological measurements of success are not met. The Recommendation appears to ignore the statute and instead make its own policy determinations about how best to apply adaptive management.

The HCP and Ms. Oller's testimony at the hearing provide for adaptive management measures that may be implemented throughout the permit term. *See* Ex. A-1 at 86-87; Vol. 1, Tr. 8/7/17 at 61, 63 (providing that specific adaptive management can include changes to monitoring, and implementing LWSC for longer periods). As a practical matter, what specific measures will be needed to be implemented through adaptive management, if at all, will be determined during Project operation. The existing adaptive management process allows for this flexibility. The Recommendation fails to consider this point.

The Recommendation also did not consider or address any of the proposed conditions of approval submitted by Applicant in its proposed FOF/COL that clarify and confirm the applicability of ongoing research efforts and how adaptive management will be utilized to adjust Project operations or modify mitigation activities, if the research supports such adjustments or modifications. The DOFAW Staff Report further states that the HCP ***does*** outline "***detailed*** monitoring and reporting protocols to account for injury or mortality of the covered species, as well as to ensure avoidance, minimization, and mitigation measures are being accomplished and goals and objectives are being met." Ex. A-2 at 3; *see also* Ex. A-1 at App. A (Post-Construction Monitoring Plan).

Further studies being funded by the mitigation plan, as well as by other Hawaii wind farm HCPs, are designed to answer questions and reduce uncertainty about Hawaiian Hoary bats, their foraging and roosting habitat, and limiting factors. Applicant is funding millions of dollars for research and restoration and preservation of Hawaiian hoary bat habitat at Poamoho Ridge that has been recommended by the Agencies. *See* Ex. A-44 at 21-28. The Recommendation does not address the manner in which adaptive management will be applied based on the results of ongoing research that will be funded in part by Applicant. Denying the ITL is not the proper course, specifically where the Agencies involved understand how the HCP process works are cognizant of the uncertainties related to Hawaiian hoary bat ecology and are actively working to fill existing information gaps, and are the experts charged with protecting endangered species in the State.

The need for research going forward is important as well as requiring adaptive management to effect potential adjustments to operations and management from the results of the research. As testified to by Ms. Oller and Mr. Fretz, adjustments to HCPs are made through monitoring and annual reports filed by the permittees and reviewed by the ESRC, Agencies, and the Applicant. *See* NPM FOF 218, 224, 225; Vol. 1, Tr. 08/07/17 at 63:3-23; see also Vol. 2, Tr. 8/8/17 at 40:11-42:23 (Fretz testifying that recommendations for changes through adaptive management are presented to the ESRC and are the result of regular interactions between the agency staff and Applicant); see also HRS § 195D-26 (requiring Applicant to submit annual reports).

HRS Chapter 195D does not actually require an applicant to definitely show that a HCP will achieve a net gain in recovery of a species. HRS § 195D-30 provides that all HCPs and ITLs must "be ***designed*** to result in an overall net gain in the recovery of Hawaii's threatened or

endangered species." The statute does not require that the Applicant guarantee or prove that a net gain will actually be realized. As the Recommendation recognized:

> 25. Overall, the mitigation measures required under the HCP will provide net environmental benefits. HRS § 195D-4(g)(8). See COL 1.a through 1.e. Even though the benefit to `ope`ape`a may be uncertain, the Poamoho Ridge habitat improvement plan will provide a net environmental benefit to other native species.

HO COL 25. The Recommendation made no findings that the Hawaiian Hoary Bat Recovery Plan or the State of Hawai'i Comprehensive Wildlife Conservation Strategy are incorrect or not supported by the best available science.

> 7.e. `Ope`ape`a. Mitigation proposed for `ope`ape`a includes contributing towards habitat improvement at Poamoho Ridge by providing annual funds to the KMWP and funding for research, FOF 213, 220, ***which accords with the Hawaiian Hoary Bat Recovery Plan and the State of Hawai`i Comprehensive Wildlife Conservation Strategy***, which recommend conservation of known occupied habitat, development and implementation of conservation plans that guide the management and use of forests to reduce negative known bat populations, and continued support for `ope`ape`a research. FOF 153.

HO COL 7.e (Emphasis added.) Therefore, the evidence in the record supports a finding that the mitigation measures proposed in the HCP are sufficient and will likely benefit each of the Covered Species, including the Hawaiian hoary bat.

Accordingly, Applicant takes Exception to HO FOF 58 (last sentence only) 227, 235 & 237 and HO COL 9.f. & 10 as they inaccurately and incompletely represent the evidence in the record, and because they are used as a basis for the Recommendation to impose requirements on the Applicant that are not allowed by HRS Chapter 195D and are therefore in excess of DLNR's statutory authority.

Even though the Recommendation has imposed a standard requiring Applicant to provide for enforcement of additional mitigation and minimization measures absent a violation of its take

limits, any doubts or concerns raised by the Recommendation are otherwise addressed and made moot by the additional clarifications made in Applicant's clarifying conditions. Those conditions would allow for the Agencies to provide oversight in determining the need for Applicant to implement new or additional mitigation measures, if such a requirement is supported by the best available science. Applicant has confirmed and agreed to such conditions.

G. THE ESRC'S RECOMMENDATION

The Recommendation does not consider or address the ESRC recommendation that the Board approve the HCP.[4] The experts who appeared at the hearing testified that the HCP is compliant with the criteria of HRS Chapter 195D, as interpreted by the Agencies, and uses the best available science. This evidence and how the HCP works does not seem to be considered in the Recommendation. Petitioners presented no experts to contradict the Applicant's experts. Further, the Chair of the ESRC, after being questioned by Petitioners, affirmed unequivocally, that after hearing the same issues and evidence raised and addressed in the Recommendation here, that he would not change his recommendation to the Board to approve the HCP. *See* NPM FOF 332 & 333.

Nevertheless, the Recommendation simply ignores the ESRC's determination about the HCP requirements, ignored the ESRC recommendation, and admits the HO's own uncertainty yet offers no other proof or scientific study. This HCP, as further enhanced and clarified by the conditions herein, are entirely reasonable and appropriate for the proposed Project. Applicant consulted with ESRC about the HCP for years. The Recommendation's failure to consider the ESRC's recommendation, ignoring parts of the Applicant's expert evidence and testimony, and

[4] As discussed above in Part III.2, the members of the ESRC were specifically appointed for their expertise in areas of science related to HCPs and evaluating such plans. Mr. Scott Fretz, Chair of the ESRC, testified that based on the evidence in the record, the ESRC's recommendation to the Board approve the HCP should not change. NPM FOF 330-333; HO FOF 218.

not properly analyzing the best available science that Applicant had at its disposal with respect to actual expected take at the Project site (*i.e.*, the 1 observed bat take at the Kahuku Wind Farm since implementation of LWSC), violates Applicant's due process rights. Further, the failure to make any findings or provide any evidence as to why the ESRC's recommendation to the Board was wrong or not based upon substantial evidence in the record, is arbitrary and capricious.

The Agencies, including the ESRC, are required to be comfortable with a "no jeopardy" determination before they recommend to the Board that the HCP be approved. At the hearing, the Chair of the ESRC testified that he stood by the ESRC's recommendation and that no revisions to the HCP were warranted, therefore suggesting that the ESRC is comfortable with the Hawaiian hoary bat take estimate for this Project. *See* NPM FOF 332-333. Accordingly, Applicant takes Exception to the Recommendation,[5] including HO COL 14 (stating there is not enough information in the HCP for the Board to make an informed decision). Clearly, DOFAW and the ESRC would not have recommended the HCP for approval if they believed that the HCP did not have enough information for the Board to make an informed decision on the HCP.

H. THE RECOMMENDATION USED IMPROPER STANDARDS TO EVALUATE THE HCP

Applicant takes exception to HO FOF 194 and HO COL 9.a, 9.c, 9.f & 12 on the basis that the Recommendation used improper standards to evaluate the HCP. Under HAR § 13-1-35(k), Applicant must prove that the HCP meets the criteria of HRS Chapter 195D by a preponderance of the evidence. In various instances, particularly as related to the Hawaiian hoary bat portions of the HCP, the Recommendation holds Applicant to a much higher standard, requiring Applicant to remove any doubts or uncertainties by essentially requiring proof beyond

[5] Applicant understands that under HAR § 13-1-42(b), Applicant is required to identify the specific FOF or COL to which it takes exception. However, the Recommendation lacks a single FOF or COL providing any reason for her disagreement with the ESRC's recommendation, which is precisely what Applicant objects to.

a reasonable doubt.

For example, HO COL 12 provides:

> 12. Because of the less than robust analysis of anticipated take of `ope`ape`a by the Project, combined with the limited information available about `ope`ape`a populations on Oahu and statewide, it cannot be determined ***with confidence*** whether the Project will jeopardize the continued existence of `ope`ape`a. HRS § 195D-21(c)(1). FOF 194.

HRS § 195D-21(c)(1) states that the Board shall not approve an HCP if the plan "[i]s ***likely*** to jeopardize the continued existence of any endangered, threatened, proposed, or candidate species identified in the plan area." Not knowing something "with confidence" and showing that a plan is "likely" to jeopardize a species are not synonymous and require a different analysis and result.

The Recommendation's self-imposed "with confidence" standard (i.e., beyond a reasonable doubt) directly conflicts with the preponderance of the evidence standard set forth in the Board's rules. It also conflicts with HRS Chapter 195D. For example, as discussed above, with respect to the requirement of a HCP to show a net gain in recovery of species, HRS § 195D-30 provides that all HCPs and ITLs must "be designed to result in an overall net gain in the recovery of Hawaii's threatened or endangered species." The statute does not require that the Applicant guarantee or prove that a net gain will actually be realized.

As discussed above in Parts IV.D and IV.E, the Recommendation's conclusions in HO COL 9.c and 9.f with respect to the measures of success for the Hawaiian Waterbirds and the Hawaiian hoary bat were not evaluated using the same standard as what was used for the other Covered Species. There is no rationale for this inconsistent application of standards. The Recomendation's uncertainty about net benefits is merely a method to reject the Agencies' guidance and recommended proposed mitigation. It does not demonstrate a reasoned analysis of

all the evidence for and against the HCP.

For these reasons, Applicant takes Exception to HO FOF 194 and HO COL 9.a, 9.c, 9.f, 12.

V. CONCLUSION

A. APPLICANT'S CLARIFYING CONDITIONS OF APPROVAL

Applicant's first position is that the HCP should be approved outright as written. Applicant's proposed FOF/COL and conditions are entirely reasonable and realistic for the site conditions of this Project. In addition, the clarifying conditions should ameliorate any concerns raised in the Recommendation regarding height of the WTGs, existing take estimates, mitigation and minimization measures, measures of success, and adaptive management. All are consistent with how adaptive management actually works based on the evolution of new studies and advancements in science. Any adjustments needed for cut-in speed, which is already provided for through the HCP's adaptive management, are again confirmed and clarified as being included within the adaptive management process. While the best available science does not currently support any significant difference in the impact of a cut-in speed of 6.5 m/s versus 5.0 m/s, for purposes of this matter, the Board can condition the ITL to apply specific adaptive management measures to determine, through further research or study, whether or not incremental cut-in speed above 5.0 m/s up to 6.5 m/s is warranted, thereby appropriately addressing any concerns in the Recommendation.

As presented in Applicant's proposed FOF/COL, Applicant respectfully requests that the Board approve the HCP and ITL, subject to the clarifying conditions set forth below and in the proposed form ITL set forth in Exhibit 3. Applicant takes the position that approval of the HCP and ITL with these conditions fully address the Recommendation's concerns to the extent practicable. These clarifying conditions can be modified as the Board deems appropriate.

1. GENERAL CONDITIONS

1. This license only authorizes the permittee to conduct incidental take of the Covered Species on the lands owned or otherwise controlled by Applicant on the Island of O'ahu, Hawai'i at the time this license is issued pursuant to the "Na Pua Makani Wind Energy Project Habitat Conservation Plan" dated March 2016 (the "HCP").

2. This license is valid only if Applicant abides by the terms and conditions of the HCP and ITL for the duration of the license.

3. This license is valid for species protected by federal law only if accompanied by proper federal permits. The permit number for the required permit must be provided to the Division of Forestry and Wildlife ("DOFAW") when it is obtained.

4. This license shall become valid upon completion of the following:

a. A legal representative of Applicant has acknowledged understanding and agreement to abide by its conditions.

b. Both copies of the signed license must be returned to DOFAW. Upon approval by the Chairperson of the Board of Land and Natural Resources, a copy of the license will be returned to the applicant.

5. The take authorization contained in this license is not effective until Na Pua Makani Power Partners provides DOFAW with an executed copy of the letter of credit (or other approved financial tool) containing terms reasonably acceptable to DOFAW. Upon triggering Tier 2 mitigation, financial assurances for an additional $894,000 will be provided to ensure funding for Tier 2 mitigation. If triggered, funding assurances for Tier 2 will be provided before the Tier 1 take threshold is exceeded. An estimate of the costs for implementing the HCP is provided in Appendix F to the HCP.

6. The Board may suspend or revoke this license if the HCP is suspended or revoked. The Board may also suspend or revoke this license in accordance with applicable laws and regulations in force during the term of the license.

7. Persons in violation of the terms and conditions of this license and/or related or appropriate laws may be subject to criminal and or administrative penalty under §§183D-5, 183D-21, 195D-9, and 195D-27, Hawai'i Revised Statutes, and §124-8, Hawai'i Administrative Rules, or as otherwise provided by law, and/or revocation of this permit.

8. Applicant shall submit an annual report to DLNR by August 1 of each fiscal year ending June 30, that includes a description of activities and accomplishments, analysis of the problems and issues encountered in meeting or failing to meet the objectives set forth in the HCP, areas needing technical advice, status of funding, and plans and management objectives for the next fiscal year, including any proposed modifications thereto.

2. SPECIAL CONDITIONS

9. No more than 8 wind turbine generators with a maximum height of 570 feet (173 meters) each will be developed as part of the Project.

10. The allowable incidental take authorized by this license for the Covered Species includes observed, unobserved, direct, and indirect take as defined in the HCP.

11. The estimation of incidental take for the Covered Species will be calculated according to adjustments made to the observed direct take according to methods detailed in the HCP, including adjustments to include unobserved and indirect take.

12. The incidental take authorized by this license for the Hawaiian hoary bat is defined by two tiered levels, each of which is identified in the HCP. In the event that the take level for the Hawaiian hoary bat for tier 1 is reached, incidental take at the tier 2 level is authorized, provided that Applicant abides by the terms and conditions of the HCP.

13. DLNR will be notified within 24 hours, and a written incident report filed within 3 business days, of any mortalities, injuries, or disease observed on the property. Injured individuals or carcasses will be handled according to guidelines in the HCP and DLNR/USFWS guidance. Agency guidance for reporting incidents may change over the life of the permit and will be modified accordingly.

14. The minimization and mitigation measures set forth in the HCP shall be incorporated into this ITL and implemented by the Applicant.

15. If, during the term of the ITL, the DOFAW, ESRC, and Board determine that additional or alternative reasonable avoidance, minimization or mitigation measures are required, as supported by the best available scientific research being funded by the existing HCP efforts and other best available science, the Applicant shall work with DOFAW, the ESRC, and the Board to implement, through its Adaptive Management efforts, any reasonable additional avoidance, minimization or mitigation measures that will improve the survivability and recovery of the Covered Species. The Board shall not require Applicant to implement any measures (a) that impact Applicant's energy production or prejudice its ongoing operations, (b) significantly increase any additional funding requirements, or (c) upon which Applicant has not first been consulted. Implementation of Adaptive Management measures to reduce the risk of take shall not require an amendment to the HCP so long as there are no proposed major amendments to existing take limits.

16. Adaptive management will be used to implement advances in scientific knowledge to the extent conclusions can be reasonably drawn, based on credible scientific studies to be undertaken in the future through funding provided in mitigation, that adjustments in wind turbine cut-in speed to wind speeds up to 6.5 m/s during certain time periods of activity is necessary and demonstrated to reduce the rate of take within the two tiers of take.

17. The funding commitments set forth in the HCP shall be complied with through the issuance of a letter of credit to support those funding obligations set forth in Section 9.4 of the HCP.

18. During the 2-year mitigation commitment for Hawaiian Waterbirds, the part-time biologist will conduct periodic monitoring, to be determined in collaboration with USFWS and DOFAW. In addition to reporting the number of observed Hawaiian Waterbird fatalities at Hamakua Marsh after fence construction, the part time biologist will also document public engagement activities. Results of monitoring will be included in the HCP Annual Reports, along with any adaptive management necessary to maintain mitigation effectiveness.

B. ALTERNATIVE

If the Board still has concerns about the Recommendation not to approve the HCP, Applicant respectfully requests that the Board allow the Applicant to cure any remaining clarifications or concerns on an expedited basis, pursuant to HAR §13-1-45(b)(3) (or make such other disposition that is necessary under the circumstances), or to reopen the docket for the Board to consider limited clarifying evidence needed to address any of these points:

A. Applicant's use of data primarily from the adjacent Kahuku Wind Farm project to support the Hawaiian hoary bat take estimate;

B. The height of the WTGs;

C. LWSC at a cut-in speed of the agency approved 5.0 m/s instead of 6.5 m/s;

D. Mitigation and measures of success for the Hawaiian hoary bat;

E. Measures of success for Hawaiian Waterbirds; and

F. Adaptive management.

Considering clarifying evidence or conditions is warranted in light of HO COL 25, concluding that the HCP mitigation measures are sufficient and will provide net benefits. HO COL 25 ("Overall, the mitigation measures required under the HCP will provide net environmental benefits. HRS § 195D-4(g)(8). See COL 1.a through 1.e. Even though the benefit to ʻopeʻapeʻa may be uncertain, the Poamoho Ridge habitat improvement plan will provide a net environmental benefit to other native species.").

As presented and further clarified in these Exceptions, the HCP, with the clarifying conditions presented here, should appropriately respond to any concerns in the Recommendation. Accordingly, Applicant respectfully requests that the Board approve the HCP, and further

requests that the Board issue the ITL in the proposed form set forth in Exhibit 3, which includes the clarifying conditions proposed above.

DATED: Honolulu, Hawai'i, December 7, 2017.

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BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAI'I

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Ko'olauloa District, Island of O'ahu, Hawai'i	Case No. BLNR-CC-17-001 APPLICANT NA PUA MAKANI POWER PARTNERS, LLC'S **[PROPOSED] FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER**; APPENDICES "A" – "B"; CERTIFICATE OF SERVICE

APPLICANT NA PUA MAKANI POWER PARTNERS, LLC'S [PROPOSED] FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER

Pursuant to Hawai'i Administrative Rules ("**HAR**") § 13-1-38, and as directed by the Hearing Officer, Applicant Na Pua Makani Power Partners, LLC submits these [PROPOSED] FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER.

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[PROPOSED] FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION AND ORDER

This contested case hearing involves the Habitat Conservation Plan ("**HCP**") and Incidental Take License ("**ITL**") for the proposed Na Pua Makani Power Partners, LLC ("**Applicant**") wind energy generating facility in Kahuku on the Island of O'ahu ("**Project**"). The following Findings of Fact ("**FOF**"), Conclusions of Law ("**COL**"), and Decision and Order ("**D&O**") are based on the records maintained by the Department of Land and Natural Resources ("**DLNR**") concerning the HCP and ITL, and the admitted exhibits and witness testimonies presented during the contested case evidentiary hearing held on August 7 and August 8, 2017.

Unless otherwise explicitly indicated or clear from the context, "**DLNR**" shall mean the Department of Land and Natural Resources; "**Board**" or "**BLNR**" shall mean the DLNR Board of Land and Natural Resources; and "**Chairperson**" shall mean the Chairperson of the Board; "**DOFAW**" shall mean the DLNR Division of Forestry and Wildlife; "**USFWS**" shall mean the U.S. Fish and Wildlife Service; "**Agencies**" shall collectively mean DLNR, Board, DOFAW, and USFWS.

If any statement designated as a COL is more properly considered a FOF, then it should be treated as a FOF; and if any statement designated as a FOF is more properly considered a COL, it should be treated as a COL.

Certain facts set forth within specified criteria addressed below may apply to one or more criteria, issue, or legal standard. To the extent such facts or findings are addressed within a particular heading or section does not limit it to that heading or section, but instead all such facts or findings are incorporated by reference for each applicable criteria section, as if specifically set forth within that heading or section.

The Hearing Officer considered the testimony of all witnesses in their Written Direct

Testimonies ("**WDT**") and at the evidentiary hearings and all exhibits received into evidence. The mere fact that a particular witness testimony or exhibit may not be specifically referred to below does not and shall not be construed to mean that said testimony or exhibit was not considered. Rather, specific reference to said witness testimony or exhibit was excluded because, after due consideration of said testimony or exhibit, it was determined to be; (i) immaterial, (ii) irrelevant, (iii) contrary to law, (iv) less credible or persuasive, and/or (v) cumulative of other testimonies or exhibits specifically referred to below.

FINDINGS OF FACT

I. THE PARTIES

1. Na Pua Makani Power Partners, LLC ("**Applicant**") is a Delaware limited liability company and the Applicant of the HCP and ITL in the above-captioned matter. During the contested case proceeding, Applicant was represented by Carlsmith Ball LLP.

2. Keep the North Shore Country ("**KNSC**") is a 501(c)(3) Hawai'i non-profit organization operated by its President, Gil Riviere ("**Riviere**"), and represented by counsel Maxx E. Phillips, Esq. and David Kimo Frankel, Esq.

3. Elizabeth Rago ("**Rago**") is an individual who resides in Kahuku. During the contested case proceeding, Rago represented herself *pro se*.

4. KNSC and Rago are collectively referred to herein as the "**Petitioners**".

II. PROCEDURAL HISTORY

A. PRE-HEARING

5. This contested case proceeding is before the Board pursuant to Hawai'i Administrative Rules ("**HAR**") § 13-1-29.[1]

6. On October 28, 2016, the Board first considered the HCP and ITL at its regular meeting. Decisionmaking on the HCP and ITL was deferred.

7. The HCP and ITL were again presented to the Board at its November 10, 2016 meeting. At this meeting, KNSC—for the first time—voiced opposition to the HCP and orally requested a contested case hearing. Mr. Kent Fonoimoana also requested a contested case

[1] The contested case hearing was granted over Applicant's written objection, filed with the Board on December 8, 2016, that Petitioners were not entitled to a contested case hearing under HRS Chapter 195D or any administrative rule.

hearing at this meeting. The Board consequently deferred decisionmaking on the HCP and ITL once again.

8. Following its verbal request for a contested case hearing, KNSC filed a written petition on November 19, 2016.

9. On November 21, 2016, the Board received four additional written petitions for a contested case hearing—one from Rago, and three separate petitions from Kent Fonoimoana, one each on behalf of himself individually, as President of Kahuku Community Association ("**KCA**"), and as President of Makani Pono 'O Kahuku ("**MPK**") (Fonoimoana, KCA and MPK are collectively referred to herein as the "**Fonoimoana Petitioners**").

10. On December 9, 2016, over the written objections from Applicant as to the lack of statutory jurisdiction and precedent to conduct a contested case hearing on a HCP and ITL, the Board considered and approved, by a vote of four to three, KNSC's petition for a contested case. The Board also withdrew the request for approval of the HCP and ITL pending the outcome of the contested case proceeding. Ex. A-41 at 15 (12/09/16 BLNR Minutes).

11. On January 13, 2017, the Board considered and granted the Rago, Fonoimoana, KCA, and MPK petitions for a contested case hearing and voted to consolidate the four petitions with KNSC's contested case hearing. Ex. A-42 at 9 (01/13/17 BLNR Minutes).

12. On February 14, 2017, the Board issued Minute Order No. 1 (a) selecting Yvonne Y. Izu, Esq. as the Hearing Officer in this proceeding; and (b) setting the deadline of February 28, 2017 to object to the appointment of the Hearing Officer.

13. On March 9, 2017, the Board issued Minute Order No. 2, extending the deadline to object to the selection of the Hearing Officer to March 16, 2017. No objections were received.

14. On April 6, 2017, the Hearing Officer issued Minute Order No. 3 setting the date for (i) objections to standing; and (ii) the first pre-hearing conference. No objections to standing were made. *See* Minute Order No. 4.

15. On April 27, 2017, the Fonoimoana Petitioners, through counsel James Wright, Esq., formally withdrew as parties to the contested case proceeding. Ex. A-43.

16. On April 27, 2017, the Hearing Officer held a pre-hearing conference to discuss the parties, schedule, and the issues in the contested case proceeding.

17. On April 27, 2017, following the pre-hearing conference, the Hearing Officer issued: (a) Minute Order No. 4, addressing standing of the parties; (b) Minute Order No. 5, setting the pre-hearing schedule for filings, including substantive motions and requests for subpoenas; and (c) Minute Order No. 6, setting the issues in the contested case proceeding and deadlines for filing objections to Minute Order No. 6.

18. The deadline to file exceptions to the issues set forth in Minute Order No. 6 was May 5, 2017. No exceptions were filed. On May 12, 2017, the Hearing Officer issued Minute Order No. 7, confirming that no exceptions or objections were made to the issues set forth in

Minute Order No. 6.

19. On June 7, 2017, the Hearing Officer issued the Notice of Contested Case Hearing.

20. On June 26, 2017, Applicant filed its: (a) Opening Brief; (b) Witness List and Submission of Written Direct Testimony of Michael Cutbirth, Alicia Oller, and Thomas Snetsinger; (c) Exhibit List; and (d) Exhibits A-1 through A-52.

21. On July 13, 2017, KNSC filed a Request for Subpoenas for Scott Fretz, Dr. Frank Bonaccorso, Marcos Gorreson, Corinna Pinzari, Andre Raine, and Jay Penniman.

22. On July 17, 2017, Applicant filed an Objection to Keep the North Shore Country's Request for Subpoenas, Filed July 13, 2017.

23. On July 17, 2017, KNSC filed its: (a) Responsive Brief; (b) Witness List and Submission of Written Direct Testimony of Gil Riviere; (c) Exhibit List; and (d) Exhibits B-1 through B-37.

24. On July 17, 2017, Rago filed her: (a) Responsive Brief; (b) Witness List and Submission of Written Direct Testimony of Elizabeth J. Rago and Tevita Ka'ili ("**Ka'ili**"); (c) Exhibit List; and (d) Exhibits C-1 through C-4.

25. On July 18, 2017, KNSC filed its Response to Applicant's Objections to the Request for Subpoenas.

26. On July 20, 2017, the Hearing Officer issued Minute Order No. 8, denying KNSC's Request for Subpoenas.

27. On July 21, 2017, KNSC filed (a) Notice of Appearance of David Kimo Frankel, Esq.; and (b) a Motion for Reconsideration of Minute Order No. 8. The Motion for Reconsideration amended KNSC's original request for subpoenas of six persons, and agreed to waive their request for the others, except one: Mr. Scott Fretz ("**Fretz**").

28. On July 24, 2017, Applicant filed its Response to KNSC's Motion for Reconsideration of Minute Order No. 8.

29. On July 25, 2017, Applicant filed its: (a) Reply Brief; (b) Reply Witness List and Submission of Written Reply Testimony ("**WRT**") of Thomas Snetsinger; (c) Reply Exhibit List; and (d) Exhibits A-53 through A-58.

30. On July 25, 2017, KNSC filed its Reply to Applicant's Response to the Motion for Reconsideration of Minute Order No. 8.

31. By email dated July 26, 2017 and Minute Order No. 9 dated August 7, 2017, the Hearing Officer granted KNSC's Motion for Reconsideration of Minute Order No. 8 and permitted the issuance of a subpoena for the appearance of Fretz at the hearing. Vol. 1, Tr. 08/07/17 at 8:17-21.

32. By email dated July 31, 2017, and as confirmed by counsel at the hearing on August 7, 2017, KNSC filed Exhibit B-38. Vol. 1, Tr. 08/07/17 at 92:21-22.

33. By emails dated August 4, 2017 (a) KNSC requested that witnesses be excluded from the hearing room; and (b) Applicant objected to the request.

B. EVIDENTIARY HEARING

34. On August 7, 2017, immediately preceding the evidentiary hearing, the Hearing Officer held a second pre-hearing conference and addressed the request for witness exclusion from the proceedings. Arguments were heard by KNSC and Applicant. The Hearing Officer ruled that witnesses would not be excluded from the hearing room during the proceedings. Vol. 1, Tr. 08/07/17 at 7:3-8:16.

35. The evidentiary hearing for this contested case proceeding commenced on August 7, 2017.

36. Testimony was taken and all proposed exhibits were received on August 7 and August 8, 2017.

37. On August 7, 2017, Applicant offered Michael Cutbirth (**"Cutbirth"**), Alicia Oller (**"Oller"**), and Thomas Snetsinger (**"Snetsinger"**) as witnesses; KNSC offered Riviere as a witness; and Rago offered herself and Ka'ili as witnesses. Vol. 1, Tr. 08/07/17 at 10:25-11:1, 73:10-11, 28:20-21, 150:5-9, 156:12, 167:13-14.

38. Cutbirth, Oller, and Snetsinger each submitted a WDT and each were cross-examined by KNSC and Rago. Exs. A-27, A-29, A-31; Vol. 1, Tr. 08/07/17 at 11-149. Oller was also questioned by the Hearing Officer. Vol. 1, Tr. 08/07/17 at 59-65.

39. Oller was offered as an expert in biology and the requirements to prepare a HCP and ITL in compliance with HRS Chapter 195D. Vol. 1, Tr. 08/07/17 at 32:14-23; *infra* FOF 72.

40. Snetsinger was offered as an expert in biology with a special emphasis on avian biology and the scientific literature and studies which relate to the HCP. Vol. 1, Tr. 08/07/17 at 73:17-20; *infra* FOF 73.

41. Applicant's exhibits A-1 through and including A-58 were moved and admitted into evidence, with no objections. Vol. 1, Tr. 08/07/17 at 149:9-150:2.

42. At the conclusion of Snetsinger's cross-examination, Applicant rested its direct case. Vol. 1, Tr. 08/07/17 at 149:5-8.

43. Riviere was cross examined by Applicant. Rago declined to cross-examine Riviere. Vol. 1, Tr. 08/07/17 at 150-154.

44. Rago was cross-examined by Applicant and KNSC. Ka'ili was cross-examined by KNSC. Applicant reviewed Ka'ili's representations in his WDT, but had no additional cross-examination questions. Vol. 1, Tr. 08/07/17 at 156-174.

45. On August 8, 2017, Fretz appeared pursuant to the subpoena requested by KNSC. Vol. 2, Tr. 08/08/17 at 182:17. Fretz is the Branch Manager for DOFAW, Maui, as well as the Chair of the ESRC. Previously, he was the Wildlife Program Manager from 2001-2012 in the Honolulu office. Fretz has a Bachelor's in Ecology and Evolution and a Ph.D. in Zoology and Conservation Biology, including study of Hawaiian forest birds. Vol. 2, Tr. 08/08/17 at 183.

46. Fretz was cross-examined by KNSC and the Applicant, and was questioned by the Hearing Officer. Vol. 2, Tr. 08/08/17 at 183-229.

47. No other witnesses were called or scheduled for testimony by the parties other than those set forth above. Vol. 2, Tr. 08/08/17 at 67:4-6.

48. At the conclusion of witness testimony, KNSC, Applicant, and Ka'ili, on behalf Rago, made closing arguments. Vol. 2, Tr. 08/08/17 at 53-67.

49. The evidentiary portion of the contested case hearing was closed on August 8, 2017. Vol. 2, Tr. 08/08/17 at 67:4-6.

C. POST-HEARING

50. Following the close of the evidentiary proceedings, the Hearing Officer set September 8, 2017 as the deadline for parties to submit proposed findings of fact, conclusions of law and decisions and orders.

51. On August 23, 2017, KNSC filed a Motion for Extension of Deadline, requesting a three-week extension of the deadline to file its proposed findings of fact, conclusions of law and decision and order.

52. On August 25, 2017, Applicant filed its Objection to KNSC's Motion for Extension of Deadline.

53. On August 25, 2017, KNSC filed its Reply to Applicant's Objection to KNSC's Motion for Extension of Deadline.

54. On August 28, 2017, the Hearing Officer issued Minute Order No. 10, denying KNSC's Motion for Extension of Deadline, but extending the deadline for the parties to submit proposed findings of fact, conclusions of law and decisions and orders to September 11, 2017.

III. THE ISSUES

55. The issues in this contested case proceeding were set by Minute Order No. 6 based on the criteria set forth in HRS §§ 195D-21 and 195D-4(g).[2] *See* Appendix A.

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[2] References to the specific issues addressed in Minute Order No. 6, Roman numerals I through IX, are identified by the prefix "MO6" followed by the number assigned to the issue Minute Order No. 6 (*e.g.*, MO6I, etc.).

IV. DESCRIPTION OF THE PROPOSED PROJECT

56. The proposed Project is a 25 megawatt wind generating facility sited on approximately 706.7 acres in Kahuku on the North Shore, Ko'olauloa District, Island of O'ahu, identified by Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018 ("**Project Site**"). Ex. A-1 at 1, 4; *see also* Ex A-12 at 1-3.

57. Approximately 254.7 acres of the Project Site are State of Hawai'i lands managed by DLNR. Ex. A-1 at 4.

58. The remaining lands that will be used for the Project (451.9 acres) are privately owned. *Id.*

59. The Project originally proposed to develop 13 wind turbine generators ("**WTGs**"), however, after extensive consultation, meetings over several years with and input from the local community and other stakeholders, the number of turbines was reduced to consist of up to nine (9) WTGs, a permanent meteorological tower ("**Met Tower**"), access roads, operation and maintenance facilities ("**O&M**"), electrical collection and interconnection infrastructure, including an electrical substation, a temporary laydown area, and associated infrastructure. Ex. A-1 at 4-5; Ex. A-31 at ¶ 8 (Cutbirth WDT).

60. The footprint for the permanent O&M building, storage, and parking area will be approximately one (1) acre. Ex. A-1 at 5; Ex. A-31 at ¶ 8 (Cutbirth WDT). Figure 2 of the HCP demonstrates the proposed Project layout. Ex. A-1 at 3; Ex. A-31 at ¶ 8 (Cutbirth WDT).

61. The maximum blade tip height is anticipated to range from 427 feet (130 meters) to 656 feet (200 meters) above ground level. Ex. A-1 at 5; Ex. A-31 at ¶ 9 (Cutbirth WDT). At present, there are no commercially available turbines that are 656 feet (200 m). Vol. 1, Tr. 08/07/17 at 18:16-19. The Met Tower will be approximately 262 feet tall. Ex. A-1 at 6; Ex. A-31 at ¶ 10 (Cutbirth WDT).

62. The use of fewer, but taller WTGs was selected in response to state agency comments as well as community concerns about visual impacts. Vol. 1, Tr. 08/07/17 at 22:8-12. A visual impact analysis of the wind turbines at 656 feet tall was done. Vol. 1, Tr. 08/07/17 at 22:18-20; Ex. A-12 § 4.16.

63. During construction, approximately four (4) acres (which includes the 1 acre permanent site) will be used for temporary storage and laydown area, refueling, and waste collection. Ex. A-1 at 5; Ex. A-31 at ¶ 10 (Cutbirth WDT). Staging areas disturbed during construction but not needed for permanent operations will be revegetated with non-invasive resident species compatible with Project operations. Ex. A-1 at 6; Ex. A-31 (Cutbirth WDT) at ¶ 10.

64. The anticipated life of the Project is 21 years (1 year for construction and 20 years of commercial operation). Ex. A-12 at 2-29; *see also* Ex. A-1 at 4; Ex. A-31 at ¶ 11 (Cutbirth WDT). After that time, Applicant will re-evaluate whether to continue operating the Project, or to decommission it. Ex. A-12 at 2-29; Ex. A-31 (Cutbirth WDT) at ¶ 11. If the Project operation is extended beyond the initial 21-year period, the facilities may be upgraded, with appropriate

lease, modifications, permits, and approvals, as required. Ex. A-12 at 2-29.

65. If the Project is decommissioned, the power generation equipment and associated Project infrastructure will be removed and the site will be returned to a condition that is as close to its pre-construction state as practicable. Ex. A-1 at 4. The decommissioning process is anticipated to take approximately 1 year and will be done in accordance with the provisions of Applicant's lease with the DLNR, lease with private landowner, and the Power Purchase Agreement ("**PPA**") with Hawaiian Electric Company ("**HECO**"). *Id.*

66. The proposed Project will generate clean, renewable energy, and will be beneficial to the State of Hawai'i in achieving a number of its goals, among them: (a) to reduce and stabilize the cost of electricity for its residents; (b) for 100% of electricity to be generated from renewable energy; and (c) to reduce Hawai'i's dependence on imported foreign oil. The Project will also provide lease revenues to the State and make use of land that is not suitable for agricultural use. Vol. 1, Tr. 08/07/17 at 12:1-17; Ex. A-31 (Cutbirth WDT) at ¶ 12-14; Ex. A-12 at 3-7.

67. The Project will also provide a number of benefits to the Hawai'i workforce and community in the form of construction and long-term jobs as well as a community benefit fund of approximately $2 million over the life of the Project. The fund will help the community address needs that are currently underfunded. Vol. 1, Tr. 08/07/17 at 12:17-23; Ex. A-31 (Cutbirth WDT) at ¶ 14.

V. DEVELOPMENT OF THE HCP

A. AGENCY AND COMMUNITY CONSULTATION

68. The overall planning for the Project began in 2009 by a local developer. Applicant acquired the rights to the Project in October 2012, and initiated biological field surveys at the proposed Project Site. Ex. A-29 (Oller WDT) at ¶¶ 7, 10; Ex. A-31 (Cutbirth WDT) at ¶¶ 3, 15; Vol. 1, Tr. 08/07/17 at 11:21-25, 13:7-9.

69. The Project lead and Applicant representative is Cutbirth, a former Director of the American Wind Energy Association. Cutbirth has approximately 20 years of experience in the wind energy industry, including permitting, development, and financing of more than a dozen wind energy projects totaling approximately 800 megawatts. Ex. A-31 (Cutbirth WDT) at ¶ 5, 15; Ex. A-32; Vol. 1, Tr. 08/07/17 at 11:16-20.

70. Applicant selected Tetra Tech, Inc. ("**Tetra Tech**") as the expert consultant to prepare the HCP because of its experience in developing HCPs in Hawai'i, and nationwide. Ex. A-31 (Cutbirth WDT) at ¶ 4; Vol. 1, Tr. 08/07/17 at 13:3-6.

71. Tetra Tech has over 27 years of experience working in Hawai'i. Ex. A-53 (Snetsinger WRT) at ¶ 2. Oller and Snetsinger were the primary authors of the HCP. Vol. 1, Tr. 08/07/17 at 30:17-23.

72. Oller is the Vice President for Pacific Rim Environmental and Energy Programs with Tetra Tech. She has a Bachelor of Arts in Biology from Maryville College and a Master of

Science in Ecology from the University of Tennessee. Oller's professional experience includes a focus on avian species. Vol. 1, Tr. 08/07/17 at 34:20-24. Oller has approximately 28 years of professional experience as a biologist and project manager. Oller has more than 10 years of experience working in Hawai'i dealing with threatened and endangered species issues, management and conservation plans, and environmental permitting at the county, state and federal levels. Nationwide, Oller has managed or supported more than 30 HCPs, HCP amendments, management plans, and ITLs. Vol. 1, Tr. 08/07/17 at 29:8-30:9; Ex. A-29 (Oller WDT) at ¶ 4 at 3[3]; Ex. A-30. Oller has also testified as an expert witness in a Florida proceeding involving wetlands and other environmental issues. Ex. A-29 (Oller WDT) at ¶ 4 at 4.

73. Snetsinger is a senior biologist for Tetra Tech and has worked with the company for six and one half years. He has a Master of Science in Structural Engineering from Purdue University and a Bachelor of Civil Engineering from Johns Hopkins University. He has approximately 25 years of experience in the biology profession. Snetsinger's professional experience with Tetra Tech focuses on permitting and compliance for different facilities, development of HCPs, eagle conservation plans, post-construction mortality monitoring plans, conducting endangered species consultations with federal and state agencies, and preparing project documents at the state and federal levels. Snetsinger has made significant contributions to preparing seven HCPs, HCP amendments, and incidental take permit applications, and assisted two Hawai'i wind farms with compliance and reporting for HCPs. Prior to working with Tetra Tech, Snetsinger was an avian research biologist, whose work included 7 years in Hawai'i. Snetsinger Ex. A-27 (Snetsinger WDT) at ¶ 4; Ex. A-28; Vol. 1, Tr. 08/07/17 at 73:24-75:2.

74. The analysis of survey results, publicly available information, and technical consultation with DOFAW and USFWS suggested the following eight (8) Federal and State-listed threatened or endangered species as having the potential to occur or pass through at the Project Site and be incidentally impacted by the Project: 'a'o (Newell's shearwater – *Puffinus newelli*), ae'o (Hawaiian black-necked silt –*Himantopus mexicanus knudseni*), 'alae ke'oke'o (Hawaiian coot – *Fulica alai*), 'alae 'ula (Hawaiian moorhen – *Gallinula chloropus sandvicensis*), koloa maoli (Hawaiian duck – *Anas wyvilliana*), nēnē (Hawaiian goose – *Branta sandvicensis*), pueo (Hawaiian short-eared owl – *Asio flammeus sandwichensis*), and the 'ōpe'ape'a (Hawaiian hoary bat – *Lasiurus cinereus semotus*) (collectively referred to as the **"Covered Species"**). Ex. A-1 at 1; Ex. A-3 at 1; Ex. A-27 (Snetsinger WDT) at ¶ 8.

75. While some of the Covered Species, including the Hawaiian goose, Hawaiian coot, Hawaiian moorhen, Hawaiian stilt, and Hawaiian duck, do not currently exist on the Project Site, they were still included in the HCP out of an abundance of caution because the species are present at the James Campbell National Wildlife Refuge. The decision to include these species in the HCP was made through consultation with DOFAW and USFWS. *See* Ex. A-1; Ex. A-4; Ex. A-27 (Snetsinger WDT) at ¶ 8; Ex. A-29 (Oller WDT) at ¶ 10; Ex. A-53 (Snetsinger WRT)

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[3] Applicant notes that there are errors in the numbering of the paragraphs for Oller's WDT (Ex. A-29)—the numbering for paragraph 4 appears twice: once on page 3 and once on page 4. For ease of reference and to avoid confusion by changing each of the subsequent paragraph numbers in Ex. A-29, citations to Ex. 29 paragraph 4 on page 3 shall appear as: Ex. A-29 (Oller WDT) ¶ 4 at 3, and to paragraph 4 on page 4 Ex. A-29 (Oller WDT) ¶ 4 at 4. The numbering of the subsequent paragraphs remain the same.

at ¶¶ 22-23. Applicant included these species to be conservative in covering and mitigating impacts that may occur from the Project. Thus, Applicant may well mitigate for impacts to Covered Species that might never occur as a result of the Project. Ex. A-53 (Snetsinger WRT) at ¶ 23; Vol. 1, Tr. 08/07/17 at 30:24-31:11, 146:10-12.

76. Because the Project has the potential to result in an incidental take of Covered Species, the HCP and ITL were developed in accordance with HRS Chapter 195D for the State-listed species, and a HCP and incidental take permit ("**ITP**") under Sections 7 and 10 of the Endangered Species Act ("**ESA**") and its implementing regulations, 50 Code of Federal Regulations ("**CFR**") § 17. *See* Ex. A-29 (Oller WDT) at ¶ 9. The Applicant prepared a joint Federal and State HCP to cover both governmental permitting and approvals processes. *See* Ex. A-1.

77. The requested take for each of the Covered Species is as follows:

Common Name	**Scientific Name**	**Tier**	**Requested Authorization 21-year limit**	**TMK**
ʻōpeʻapeʻa (Hawaiian hoary bat)	*Lasiurus cinereus semotus*	Tier 1	34 bats	(1) 5-6-008: 006 and (1) 5-6-006: 008
		Tier 2	51 bats	
ʻaʻo (Newell's shearwater)	*Puffinus newelli*	Not applicable	4 adults / immatures and fledglings and 2 chicks/eggs	
nēnē (Hawaiian goose)	*Branta sandvicensis*	Not applicable	6 birds	
koloa maoli (Hawaiian duck)	*Anas wyvilliana*	Not applicable	4 birds	
aeʻo (Hawaiian black-necked silt)	*Himantopus mexicanus knudseni*	Not applicable	4 birds	
ʻalae keʻokeʻo (Hawaiian coot)	*Fulica alai*	Not applicable	8 birds	
ʻalae ʻula (Hawaiian moorhen)	*Gallinula chloropus sandvicensis*	Not applicable	8 birds	
pueo (Hawaiian short-eared owl	*Asio flammeus sandwichensis*	Not applicable	4 adults / fledged young and 4 chicks/eggs	

Ex. A-2 at 2; Ex. A-1 at 41-55.

78. As explained in the HCP and at the evidentiary hearing, Applicant is requesting take of a total of 51 Hawaiian hoary bats based on two tiered levels. *See* Ex. A-1 at 43-44 & Table 7; FOF 77, *infra* 197-198. The Tier 1 estimate in the HCP requests a maximum take of 34 Hawaiian hoary bats. The Tier 1 request of 34 bats is the ***anticipated and expected total take of the Hawaiian hoary bat over the course of the 20 year ITL term***. As explained during the

hearing, there is inherent uncertainty in take estimates for the Hawaiian hoary bat for wind energy projects due to the limited data about the Hawaiian hoary bat. *See, e.g., infra* FOF 116, 120, 121, 126, 129, 141, 142, 146, 147, 169, 197, 198, 222, 286, 327. To account for that uncertainty, a second tier of incidental take was identified which includes an additional 17 bats, that *may* be taken if, for example, minimization measures such as LWSC, are not as effective in reducing Hawaiian hoary bat take as predicted. *See infra* FOF 197-198. Thus, the Tier 1 estimated take of 34 Hawaiian hoary bats represents the actual estimated take for the Project over the ITL term, while Tier 2 provides for a conservative maximum. *See* Ex. A-1 at 41-44.

79. On January 22, 2013, Applicant had its first meeting with USFWS and DOFAW regarding the HCP process and began working closely with USFWS and DOFAW to develop an HCP that satisfies both Federal and State requirements. Ex. A-31 (Cutbirth WDT) at 16. Significant agency input, guidance, and recommendations were incorporated throughout the HCP development process, including (1) baseline survey protocols for birds and Hawaiian hoary bats, (2) approaches to estimating the take of the Covered Species, (3) the mitigation strategy for each of the Covered Species, and (4) Adaptive Management. Ex. A-29 (Oller WDT) at ¶ 11. The consultation and revision efforts with the various agencies were extensive and lengthy, as summarized below.

80. In accordance with agency recommendations, bat acoustic monitoring was conducted to confirm bat presence and understand seasonal patterns of bat activity on and around the proposed Project Site. Project-specific acoustic monitoring data (quantified as bat passes per detector night) in combination with other available data from the adjacent Kahuku Wind Farm, indicated similar, low levels of bat use. *See* Ex. A-1 at 19; Ex. A-27 (Snetsinger WDT) at ¶ 23; Ex. A-53 (Snetsinger WRT) at ¶ 19.

81. As recognized by DOFAW and USFWS, peer-reviewed research has shown that pre-construction bat acoustic monitoring data are poor predictors of post-construction bat mortality risk. *See* Ex. A-52; Ex. A-54 at 11-15 (Hein et al. 2013); Ex. A-27 (Snetsinger WDT) at ¶¶ 18-19, 24; Ex. A-53 (Snetsinger WRT) at 20. As such, these data were not used to quantify mortality risk or estimate Hawaiian hoary bat take associated with Project operation. Ex. A-1 at 41. Given that DOFAW and USFWS agreed that the best available science indicates baseline acoustic data should not be used to estimate take, a more extensive acoustic monitoring effort was not warranted. DOFAW and USFWS recommended that bat acoustic activity at the Project be monitored to determine the seasonality of bat activity at the Project. Ex. A-53 (Snetsinger WRT) at ¶ 20. The study designed to gather data on the seasonality of bat activity at the Project was determined to be appropriate by the agencies. Therefore, the use of two acoustic monitors was an appropriate level of effort to assess seasonal patterns when combined with information from post-construction mortality monitoring at the Kahuku Wind project and results from their acoustic monitoring data. Ex. A-53 (Snetsinger WRT) at ¶ 21.

82. After numerous consultation meetings and discussions with DOFAW, USFWS, species experts, and potential mitigation partners, Applicant submitted a first working draft HCP to DOFAW and USFWS for review on January 27, 2014. *See* Ex. A-29 (Oller WDT) at ¶ 12. Significant consultation efforts occurred between Applicant and its consultant, TT, with the various agencies in order to develop the initial working draft HCP. Consultation efforts and Project benchmarks during this period included:

- February 6, 2013 – Meeting with DOFAW on HCP
- May 14, 2013 – Meeting with DOFAW and USFWS
- June 2013 – Initiation of bat acoustic monitoring at Project
- June 6, 2013 – Conference call with DOFAW and USFWS
- June 24, 2013 – Site visit to Hamakua Marsh (proposed waterbird mitigation site) with DOFAW
- August 5, 2013 – Meeting with Ko'olau Mountain Watershed Partnership ("**KMWP**"), DLNR, Army Natural Resources, Kamehameha Schools regarding potential bat mitigation
- August 6, 2013 – Visit to Poamoho Ridge proposed mitigation area
- August 7, 2013 – Meeting with DOFAW and USFWS
- August 28, 2013 – Meeting with DOFAW and USFWS
- September 17, 2013 – Conference call with DOFAW and USFWS
- September 24, 2013 – Conference call with DLNR and KMWP regarding mitigation.
- October 24, 2013 – Conference call with USFWS and DOFAW
- January 27, 2014 – Submittal of revised working draft HCP to USFWS and DOFAW

Ex. A-29 (Oller WDT) at ¶ 12.

83. Following the various consultation efforts, Applicant received comments from DOFAW and USFWS on the initial working draft HCP in February 2014. Between February and May 2014, Applicant continued to consult with DOFAW and USFWS. Additional revisions to the HCP were made at the request of the agencies. In May 2014, Applicant submitted a revised working draft HCP to DOFAW and USFWS. The revisions addressed agency comments related to: the Project description, take and mitigation section descriptions, take estimates, mitigation approaches, and measures of success. Ex. A-29 (Oller WDT) at ¶13.

84. Applicant continued to actively engage with DOFAW and USFWS on the requirements for the HCP, as well as dialogue with potential mitigation partners. Consultation and Project benchmarks that took place during this period, included:

- February 18, 2014 – Meeting with USFWS and DOFAW to discuss draft HCP comments.
- February 19, 2014 – Meeting with KMWP regarding Hawaiian hoary bat mitigation
- March 6, 2014 – Conference call with DLNR and KMWP about Hawaiian hoary bat mitigation
- March 11, 2014 – Conference call with DOFAW and USFWS
- March 13, 2014 – Meeting with USFWS Regional Office
- April 22, 2014 – Deployment of a Hawaiian hoary bat detector at the Poamoho Ridge proposed mitigation area

- May 27, 2014 – Conference call with KMWP regarding Hawaiian hoary bat mitigation
- May 30, 2014 – Submittal of revised working draft HCP to USFWS and DOFAW

Ex. A-29 (Oller WDT) at ¶13.

85. In June 2014, DOFAW and USFWS submitted to Applicant additional comments on the draft HCP. *Id.* at ¶ 14. Applicant continued its active engagement with DOFAW and USFWS, made an informational presentation to the Endangered Species Recovery Committee ("**ESRC**") to solicit general guidance, continued dialogue with potential mitigation partners, and conducted site visits to potential mitigation sites. *Id.* Based on those requests, Applicant submitted a revised draft HCP to DOFAW and USFWS in July 2014. The revised draft HCP addressed additional agency comments and discussion related to the Project description, Covered Species, avoidance and minimization, levels of take, tiers, mitigation approaches, measures of success, and post-construction morality monitoring plan. *Id.*

86. Those consultation efforts and Project benchmarks included:

- June 12, 2014 – Meeting with DOFAW and USFWS
- June 13, 2014 – Meeting with DLNR and KMWP regarding bat mitigation
- June 30, 2014 – Meeting with DLNR and KMWP regarding bat mitigation
- July 2, 2014 – Informational presentation to ESRC
- July 9, 2014 – Removed bat detector from Poamoho Ridge proposed mitigation area
- July 18, 2014 – Submittal of revised working draft HCP to USFWS and DOFAW

Id.

87. After submittal of the July 2014 draft HCP, Applicant received further comments from USFWS. *Id.* at ¶ 15. After this submittal, the Applicant revised the HCP to include edits requested for the implementation section. *Id.* After consultation efforts and agency redline edits from July 18, 2014, and a site visit with DOFAW and USFWS on July 24, 2014, a further revised draft was submitted to the agencies on August 1, 2014. *Id.*

88. Thereafter, Applicant received additional comments from DOFAW. In October 2014, comments were received from USFWS on the working draft HCP. *Id.* at ¶ 16. Applicant revised the working draft HCP to include updates to the Project description and additional details related to tier triggers, as well as clarifying edits throughout the document. *Id.* A further revised working draft was submitted to DOFAW and USFWS in December 2014, based on their comments and recommendations. *Id.*

89. During this period, Applicant continued to consult with both DOFAW and USFWS, on the following dates:

- October 21, 2014 – Conference call with USFWS
- October 30, 2014 – Conference call with USFWS regarding Regional Office comments
- December 15, 2014 – Submittal of working draft HCP to USFWS and DOFAW

Id.

90. In January 2015, DOFAW and USFWS submitted further comments on the working draft HCP. *Id.* at ¶ 17. Based on these comments and recommendations, the Applicant revised and finalized the draft HCP for publication as part of the State approval process. *Id.* The notice of the draft HCP was published by the Office of Environmental Quality and Control's ("**OEQC**") in the *Environmental Notice* on March 8, 2015. *Id.*

91. On June 4, 2015, DLNR held a formal public hearing on the HCP at the Kahuku Community Center. *Id.*; Ex. A-2 at 3-4.

92. The HCP was made available for public review and comment for a 90-day period from March 8, to June 8, 2015, which exceeds the required 60-day period by 30 days, as provided under HRS § 195D-21(a). *Id.*

93. During this 90-day public review period, Applicant continued its discussions with the USFWS Solicitor and Regional Office and submitted the draft HCP for publication in the Federal Register in April 2015. *Id.* at ¶ 18. The public review period on the Federal side was 60 days from June 12 to August 11, 2015. *Id.* The draft HCP published in the Federal Register included some slight language refinements that were not included in the version published in the *Environmental Notice* to account for separate federal comments. *Id.* Applicant continued active engagement with DOFAW and USFWS, participated in the State's ESRC Hawaiian Hoary Bat Workshop, and complied with the State public review process with an ESRC site visit and associated public meetings to review and critique the draft joint HCP. *Id.*

94. The following consultation and approval efforts took place during this period:

- January 28, 2015 – Conference call with USFWS regarding Solicitor comments
- February 17, 2015 – Submittal of draft HCP for publication in OEQC's *Environmental Notice.*
- March 8, 2015 – Publication of draft HCP in OEQC Environmental Bulletin
- March 30, 2015 – ESRC site visit
- March 31, 2015 – ESRC meeting review of draft HCP
- April 13, 2015 – Conference call with USFWS Regional Office, Field Office, and Solicitor
- April 14 to 15, 2015 – Participation in ESRC Hawaiian Hoary Bat Workshop
- April 23, 2015 – Submittal of redline revised working draft HCP to USFWS for review
- April 28, 2015 – Submittal of draft HCP for publication in Federal Register
- June 4, 2015 – DLNR Public meeting on draft HCP
- June 12, 2015 – Publication of Notice of Availability for NEPA draft EIS and draft HCP in Federal Register (minor changes from OEQC version in response to Solicitor comments)
- June 23, 2015 – Public open house on draft EIS and draft HCP

Id.

95. Following the closing of the State and Federal comment time periods, Applicant met with proposed mitigation partners and regrouped with DOFAW and USFWS to discuss appropriate modifications to the HCP to address public comment on the following dates:

- September 15, 2015 – Conference call with DOFAW and USFWS on response to public comments
- October 1, 2015 – Submittal of revised draft final HCP to DOFAW and USFWS

Id. at ¶ 19.

96. On October 1, 2015, Applicant submitted a draft final HCP to DOFAW and USFWS for review. *Id.* at ¶ 20. The draft final HCP was revised to include updates to the Project description, expanded description of potential impacts to culturally important species, clarifying edits throughout the document, expanded avoidance and minimization measures, revisions to take estimation, expansion of cumulative impacts analysis, updates to the status of the Hawaiian goose, and updates to Hawaiian hoary bat mitigation based on results of an ESRC workshop held in April 2015. *Id.*

97. Applicant then received additional comments from DOFAW and USFWS on the proposed HCP in November 2015. *Id.* at 21. Applicant further revised the HCP to include clarifying edits in response to additional agency comments. A revised final draft was submitted in November 2015. This draft final HCP was reviewed by the State's ESRC in December 2015. *Id.*

98. During this period, Applicant continued active engagement with DOFAW and USFWS, including:

- October 29, 2015 – Conference call with DLNR and KMWP regarding Hawaiian hoary bat mitigation
- November 10, 2015 – Conference call with DOFAW and USFWS to discuss DOFAW comments on HCP
- November 13, 2015 – Conference call with DOFAW and USFWS to discuss DOFAW comments on HCP
- November 19, 2015 – Submittal of draft final HCP to DOFAW and USFWS for ESRC review
- December 17, 2015 – ESRC meeting to review draft final HCP

Id.

99. After the public meeting held on December 2015, the ESRC requested that Applicant revise the proposed HCP to incorporate additional requirements of the ESRC and resubmit the HCP for additional review by the ESRC. *Id.* at ¶ 22. Applicant revised the HCP in accordance with DOFAW and USFWS guidance as well as ESRC requests. *Id.* A revised proposed final HCP was submitted to DOFAW, USFWS, and ESRC on January 25, 2016. *Id.* The revisions included expansion of avoidance and minimization measures, revision of population-level impacts discussion, expansion of measures of success, addition of agency and

ESRC approval requirements, revision to the post-construction mortality monitoring plan, and the addition of a commercially viable bat deterrent technology as a changed circumstance. *Id.*

100. At the public meeting held on February 25, 2016, two (2) years after filing its initial draft HCP, Applicant presented the proposed final HCP to the ESRC. The ESRC unanimously recommended that the HCP be approved by the Board with only minor edits. Ex. A-36 at 5-6 (ESRC Meeting Minutes); Ex. A-29 at ¶ 23 (Oller WDT). The President of KNSC was present at the final ESRC meeting and made no comments on or objections to the HCP. Ex. A-29 at ¶ 23 (Oller WDT); Ex. A-31 at ¶ 21 (Cutbirth WDT). Applicant made the requested revisions and submitted the final HCP to DOFAW and USFWS on March 1, 2016. On July 12, 2016, a Notice of Availability for the NEPA final EIS and the final HCP was published in the Federal Register. Ex. A-29 at ¶ 23 (Oller WDT). Consultation and Project benchmarks during this period included:

- February 23, 2016 – Meet with KMWP regarding Hawaiian hoary bat mitigation
- February 25, 2016 – ESRC recommendation for approval of final HCP
- March 1, 2016 – Final HCP submitted to DOFAW and USFWS
- July 12, 2016 – Publication of Notice of Availability for the NEPA final EIS and final HCP in Federal Register

Id.

101. Based on ESRC's recommendation to the Board to approve the final HCP and ITL, Applicant submitted the HCP and ITL to the Board for approval at its October 28, 2016 meeting.

B. HCP COMMITMENTS

102. The HCP includes a number of mitigation commitments to improve the habitat and survivability of the Hawaiian hoary bat and other Covered Species, including: (i) more than $4 million in mitigation funding to include bat restoration activities (hiring two full-time staff to manage pig and invasive plant removal, maintain the ungulate fencing, and other restoration actions), as well as additional research funds; (ii) protective fence installation at James Campbell National Wildlife Refuge to benefit the Hawaiian goose; (iii) management activities at Hamakua Marsh to reduce impacts and fatalities of water birds going in and out of the marsh and parking area; (iv) management of and research associated with Hawaiian short-eared owl on O'ahu through DOFAW's Endangered Species Trust Fund and Newell's shearwater on Kaua'i through the National Fish and Wildlife Foundation ("**NFWF**"). Vol. 1, Tr. 08/07/17 at 146:2-23. KMWP is the mitigation partner for the Hawaiian hoary bat mitigation described in the HCP, and will hire at least 2 full-time staff to conduct monitoring and maintain the ungulate fence, remove pigs, and conduct invasive species control for 8 years as required under the tier 1 mitigation. Vol. 1, Tr. 08/07/17 at 147.

103. The avoidance and minimization measures and mitigation commitments by Applicant are detailed more particularly as follows:

a. Operations lighting shielded; no barbed wire on perimeter fences; nacelle

lighting only as required by FAA with flashing red lights, as permitted by FAA; collection line underground to maximum extent practicable; above-ground power lines for Project will use APLIC-compliant line-marking devices. Ex. A-1 at 39.

b. No clearing of potential bat roost trees June 1 - September 15; bat acoustic monitoring to be performed at site; speed limits of 25 mph during the day and 10 mph at night unless Hawaiian goose use the Project area; if Hawaiian goose uses Project area, daytime limit drops to 10 mph; stormwater management designed to avoid potential for accumulating standing water on turbine pads and roads. Ex. A-1 at 39.

c. Disturbed areas replanted with non-invasive resident species; minimize creation of Hawaiian goose nesting habitat; maximize daytime construction during the seabird breeding season, including peak fledging season; maximize use of shielded lights and non-white lights during construction if nighttime construction required; biological monitor in construction area during nighttime construction; construction activity and lighting will be shut down if a Covered Species is observed; lower construction cranes at night, when practicable; establish fire safety-related construction and O&M requirements, response protocols, and responsibilities; coordinate with Oahu Invasive Species Committee to identify and implement measures to minimize the risk of introducing chromolaena to the Project area. Ex. A-1 at 40.

d. Implement low wind speed curtailment ("**LWSC**") with a cut-in speed of 5 m/s and feathering of blades below cut-in speed between sunset and sunrise, March – November (in accordance with the ESRC Hawaiian Hoary Bat Guidance Document, dated December 2015 (DOFAW 2015) ("**ESRC Bat Guidance**") (Ex. A-44), and as otherwise necessary and determined to be appropriate through Adaptive Management. Ex. A-1 at 44.

e. Implement bat habitat restoration; fund and report results of bat research project; fund research and management of Newell's shearwater through NFWF fund; construct fence or predator traps/monitoring supplies at James Campbell National Wildlife Refuge; Design and install fence and public information signs at Hamakua Marsh; support public education through the funding of a part-time biologist position at Hamakua Marsh; provided funding to support research and management of the Hawaiian short-eared owl through the Endangered Species Trust fund. Ex. A-1 at 57.

f. Planning trigger for implementation of Tier 2 bat mitigation within 60 days of reaching 75 percent of authorized take in Tier 1; initiation of Tier 2 bat mitigation prior to Tier 2 take occurring. Ex. A-1 at 58.

g. Funding 8 years of bat mitigation described for Tier 1 and 4 years of bat mitigation described for Tier 2, if warranted. Ex. A-1 at 64.

h. Should habitat acquisition be used as an alternative mitigation measure, parcel selection requires consolation with and approval by USFWS, DOFAW, and ESRC. Additionally, an agreement would be executed to conserve the parcel in perpetuity. Ex. A-1 at 65-66.

i. Completion of research plan within 1 year of the commercial operation date ("**COD**"); research plan initiated within 6 months of approval by USFWS, DOFAW, and ESRC; completion of Poamoho Ridge management plan within 1 year of construction assuming timely review by USFWS, DOFAW, and the ESRC; acoustic bat monitoring conducted throughout the mitigation commitment; research plan designed to provide robust results; removal of pigs/goats achieved; invasive plant species targeted for management have been reduced. Ex. A-1 at 65-66.

j. Funding provided to NFWF account for benefit of Newell's shearwater. Ex. A-1 at 67.

k. Funding to NFWF provided for Newell's shearwater mitigation; reporting of biological measures provided in annual report with results scaled to proportional funding of project by Na Pua Makani. Ex. A-1 at 68.

l. For the Hawaiian goose, funding within 6 months of COD; fence construction or alternative mitigation approach initiated within 2 years of COD; reporting provided including measures of Hawaiian goose activity in mitigation area, documentation of pig/dog activity within mitigation area. Ex. A-1 at 70.

m. Fence design expert available for public meeting for Hawaiian waterbirds; fence design approved within 2 years of COD; fence maintenance budget and personnel funding paid annually for mitigation commitment of 2 years; number of fatalities reported at the parking lot for 2 years. Ex. A-1 at 75.

n. Funding to Endangered Species Trust Fund provided for Hawaiian short-eared owl mitigation; reporting of biological measures provided in annual report. Ex. A-1 at 76-77.

o. Annual reporting completed and consultation with the agencies as needed; Covered Species fatalities reported to USFWS and DOFAW within 24 hours, with incident report completed within 3 days. Ex. A-1 at 79.

p. Meet with USFWS and DOFAW as needed to provide updates on plan implementation, including the status of monitoring and mitigation efforts and observed levels of incidental take. USFWS and DOFAW may request additional meeting to address questions of concerns. Ex. A-1 at 81.

q. Funding assurances in amount of $3,736,050 provided within 6 months of issuance of ITP and ITL; however, take not authorized until funding assurances have been executed. Tier 2 funding assurances will be provided prior to take occurring in Tier 2. Ex. A-1 at 85.

r. Consult with USFWS and DOFAW if take occurs outside of period of LWSC or take estimates are higher than anticipated. Ex. A-1 at 86-87.

s. USFWS, DOFAW, and BLNR must approve any proposed amendments that may affect a federal or state-listed species; a request for an extension of the existing

HCP, ITP, and ITL without major amendments should be submitted at least 6 months prior to the expiration of the ITP and ITL. Ex. A-1 at 87.

t. Fatality monitoring protocol changes would require USFWS and DOFAW approval; transition to interim monitoring would require approval of the ESRC. Ex. A-1, App. A at 1.

u. Standardized carcass searches initiated upon COD. Ex. A-1, App. A at 1.

v. Carcass searches will be conducted at all Project turbines approximately weekly, but schedule may be adaptively managed. Ex. A-1, App. A at 2.

w. Searchers will collect information as described in the agency downed wildlife protocol. Ex. A-1, App. A at 4.

x. Project will use an approved approach to estimating direct take. Ex. A-1, App. A at 12.

y. The implementation of interim monitoring, as described in the HCP, requires approval of USFWS, DOFAW, and the ESRC. Ex. A-1, App. A at 12.

z. No major changes in the post-construction mortality monitoring protocols without approval of USFWS, DOFAW, and the ESRC. Ex. A-1, App. A at 14.

aa. Reporting requirements described for the annual report. Ex. A-1, App. A at 15.

VI. ENVIRONMENTAL REVIEW FOR THE PROPOSED PROJECT

104. Because the proposed Project will utilize State lands, an extensive Final Environmental Impact Statement ("**FEIS**") was prepared and approved for the Project. Exs. A-12 through A-26.

105. The FEIS was accepted by the BLNR on July 22, 2016, and notice of the acceptance was published in the OEQC *Environmental Notice* on August 8, 2016. Ex. A-13; Ex. A-39 at 4; Ex. A-40 at 5-7.

106. The deadline to challenge the legal sufficiency of the FEIS expired on October 7, 2016. *See* HRS § 343-7. Therefore, the State environmental review process for the proposed Project is complete. *See* Ex. A-13; Ex. A-31 at ¶ 18.

VII. THE HCP SATISFIES THE CRITERIA OF HRS CHAPTER 195D

A. THE HCP FURTHERS THE PURPOSE OF HRS 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 PLAN (MO6 I)

107. This first criterion asks: will the HCP further the purposes of HRS 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 plan? HRS § 195D-21(b)(1)(A)

108. The HCP was developed after lengthy, extensive, and very involved consultation with DOFAW and USFWS, as well as members of the public and mitigation partners. Ex. A-29 (Oller WDT) at ¶ 27; Vol. 1, Tr. 08/07/17 at 13:7-21; 14:12-20; 331:12-22.

109. The HCP was driven by the requirements of HRS § 195D-21 and to further the purposes of HRS Chapter 195D through mechanisms and a plan to protect, maintain, mitigate, restore, or enhance identified ecosystems, natural communities, or habitats related to the Hawaiian hoary bat and all Covered Species in the HCP. Ex. A-29 (Oller WDT) at ¶ 27.

110. The HCP commits to avoiding and minimizing impacts to species and habitats through a variety of measures. *See* Ex. A-1, § 4 Ex. A-1 at 56-77; Ex. A-29 (Oller WDT) at ¶ 28; Vol. 1, Tr. 08/07/17 at 75:8-77:13. Applicant has budgeted $4.6 million for monitoring, as well as mitigation to enhance habitat and provide research for study and improving the survivability of the Covered Species, and with particular consideration for the Hawaiian hoary bat. Vol. 1, Tr. 08/07/17 at 14:7-9; *see also* Ex. A-1 at 85-86.

111. The mitigation measures proposed by the HCP, combined with Adaptive Management, will benefit the Covered Species by preventing habitat degradation. Ex. A-1 at 56-77; Ex. A-29 (Oller WDT) at ¶ 66; Ex. A-53 (Snetsinger WRT) at ¶ 8; Vol. 1, Tr. 08/07/17 at 63:11-64:10. 112:14-20.

112. The mitigation for the Hawaiian hoary bat is based on two estimated tiers of take; Tier 1 mitigation for the Hawaiian hoary bat will be implemented upon the development of the Project. Ex. A-1 at 65-67. Tier 2 mitigation for the Hawaiian hoary bat will be implemented prior to reaching the Tier 1 take estimate if it is determined that the limits of Tier 1 may be exceeded before the 20 year term of the ITL. Vol. 1, Tr. 08/07/17 at 76:14-77:7; Ex. A-1 at 44; Ex. A-1 at 65-67; Ex. A-27 (Snetsinger WDT) at ¶ 16. The mitigation measures for the remaining seven Covered Species are not tiered but will be implemented once the Project is operational. Ex. A-1 at 56-77.

113. Hawaiian hoary bat mitigation efforts, in particular, emphasize restoration and preventing on-going degradation of currently known Hawaiian hoary bat habitat. Ex. A-1 at 59; Ex. A-53 (Snetsinger WRT) at ¶ 8. Such measures involve the removal of invasive species and pigs to provide an improved natural habitat and additional food resources for the Hawaiian hoary

bat. Mitigation measures also prevent the degradation of forest that support roosting activities. Another element of mitigation is providing funding for research. Vol. 1, Tr. 08/07/17 at 112:14-113:5; Vol. 2, Tr. 08/08/17 at 202:22-203:7, 224:10-13.

114. KNSC asserted that research is not a valid mitigation measure because the results of such research are unknown. However, the substantial credible evidence in the record shows that research is not only an acceptable form of mitigation as part of an HCP, but also a desired measure. In 2015, the ESRC adopted mitigation guidance for the Hawaiian hoary bat, as formalized in the ESRC Hawaiian Hoary Bat Mitigation Guidance Document, dated December 2015 (DOFAW 2015) (Ex. A-44). Through this document, the ESRC identified gaps in information on the Hawaiian hoary as the key driver for adopting this approach where information would be gained through research to inform and benefit future mitigation. The research will resolve some of the unanswered questions related to mitigation. The research will inform and benefit future mitigation efforts and that knowledge will be integrated into ongoing and future operations of wind farms in Hawai'i. Vol. 1, Tr. 08/07/17 at 113:19-114:5; Vol. 2, Tr. 08/08/17 at 202:22-203:7, 207:10-208:1, 208:8-18, 224:10-13.

115. The ESRC Bat Guidance includes support for research targeted at improving our knowledge of the Hawaiian hoary bat so that future mitigation projects can leverage results to improve the efficacy of mitigation efforts. Ex. A-27 (Snetsinger WDT) at ¶ 29. Similarly, based on agency recommendations, funding for Newell's shearwater and Hawaiian short-eared owl mitigation efforts supports specific management and research to benefit those individual species. Because impacts to these species, if they occur at all, are expected to be minimal, supporting existing research and management efforts for these species was determined by the Agencies to maximize the value of the mitigation funding. Ex. A-53 (Snetsinger WRT) at ¶ 9.

116. The HCP takes into account uncertainty, including the results of future research, by incorporating Adaptive Management as a component of the HCP. Ex. A-1 § 9.5. Among other goals, Adaptive Management allows for flexibility to adopt and implement improvements in mitigation and minimization plans or avoidance and minimization measures by adjusting approaches to take advantage of the latest research studies and technologies. Such flexibility allows for HCPs to incorporate current best science approaches to mitigation and reduction of impacts. For example, if new research results point to increased reductions of Hawaiian hoary bat fatalities by including other weather variables in curtailment triggers, Applicant could adjust the approved strategy in consultation with DOFAW and USFWS to further reduce impacts. KNSC ignores this aspect of the HCP, which allows Applicant and the HCP to react to new information throughout the permit term. (Adaptive Management is explained in more detail below in Part VII.C.8.)

117. Fretz acknowledged that the Agencies do not know what the research will reveal before it is completed, but that the ESRC has spent a considerable amount of time working on research projects that it believes it needs and has made some very specific recommendations to make sure that the Agencies have the best research being supported. Vol. 2, Tr. 08/08/17 at 202:22-203:7.

118. Fretz testified that the Bat Guidance is the ESRC's position with regard to various issues with respect to bats. Vol. 2, Tr. 08/08/17 at 187:13-17.

119. Existing factors that affect the Hawaiian hoary bat include predation, lack of food, and lack of habitat. KNSC argues that the HCP contains no measures that decrease bat predation from other animal species. The mitigation measures designed in the HCP provide for habitat improvement and to prevent degradation of existing Hawaiian hoary bat habitat at Poamoho Ridge. Contrary to KNSC's evidence, documentation of the Hawaiian hoary bat use in upland areas, tied to seasonality, makes it important that upland areas such as Poamoho are preserved and protected to support the Hawaiian hoary bat. *See* Ex. A-11 (finding that elevation significantly correlated to probability of detection and describing an earlier study that found seasonal use of higher elevation areas on Hawai'i Island); Ex. B-19 (finding that bats often forage above the inversion layer). By removing invasive species, fencing to limit predators, removing pigs, and maintaining and improving the existing known habitat on Poamoho Ridge, Applicant is providing an improved natural habitat for bats which should provide additional food resources, thereby improving Hawaiian hoary bat survival and productivity and contributing to an increased likelihood of the survivability of the species. Vol. 1, Tr. 08/07/17 at 111:23-112:24.

120. Due to the lack of information available for the Hawaiian hoary bat, Applicant used surrogate measures to determine what would be appropriate mitigation for the Hawaiian hoary bat based on guidance from the Agencies as well as based on the ESRC Bat Guidance. Vol. 1, Tr. 08/07/17 at 118:16-20. Such measures include fencing of habitat, fence maintenance, invasive weed control, and native reforestation, employee field observation and site maintenance functions which are expected to achieve a net benefit to the Hawaiian hoary bat by providing a sustained area of native high quality ecosystem. Vol. 1, Tr. 08/07/17 at 117:21-118:20; Ex. A-29 (Oller WDT) at ¶¶ 28-32, 95-97.

121. KNSC concludes that this lack of information means that bat mitigation measures do not work, however, this conclusion is not supported by evidence in the record. Bat mitigation measures are still in their early stages and are being implemented, and monitoring is ongoing. Therefore, it is premature to conclude that the proposed mitigation measures will not benefit the Hawaiian hoary bat. Vol. 1, Tr. 08/07/17 at 124:1-7. For this reason, surrogate measures were used, together with measures of success and research, to provide mitigation for the Hawaiian hoary bat and determine whether or not such measures will benefit the bat population. Using the best available information and science, mitigation measures were designed to inform and allow adaption and management of mitigation in the future to achieve the best success possible. Vol. 1, Tr. 08/07/17 at 125:4-19; *see also* Ex. A-29 (Oller WDT) at ¶¶ 28-34.

122. KNSC's focus on the benefits to the Hawaiian hoary bat also incorrectly narrows the goal of the HCP to benefit one of the Covered Species, instead of all of the Covered Species. Mitigation guidance based on the best available information suggests that improvements in habitat should benefit the Hawaiian hoary bat and substantial evidence in the record supports a finding that the mitigation measures that are part of this HCP will benefit the ecosystem as a whole, including providing benefits to other Covered Species. Ex. A-29 (Oller WDT) at ¶ 95.

123. The HCP measures prevent degradation of native forests that would diminish Hawaiian hoary bat roosting activities. Vol. 1, Tr. 08/07/17 at 113:2-5.

124. The Agencies have explicitly asked for research as part of the mitigation measures in the ESRC Bat Guidance and otherwise to allow the Agencies to better understand

and better mitigate habitat degradation and improve Hawaiian hoary bat survival and productivity in the future, and to determine the effectiveness of existing mitigation measures. *See* Vol. 2, Tr. 08/08/17 at 202:22-203:7, 207:10-208:1, 208:8-18, 224:10-13. In particular, Fretz testified that the research component is appropriate because:

> [W]e [ESRC] had developed this bat guidance and carried out an RFP process, so myself and other on the committee had spent a lot of time talking about this issue and the questions and concerns we had about the bat mitigation and how to get better information so we could understand what kind of mitigation would be the best benefit for bats. And so we went through a very deliberative process to get that information and to come up with a process to assemble a set of research projects and to consider research and habitat management. So speaking for myself, I was more comfortable at the end of that process with a research – with a habitat management project like this that was accompanied by a research component.

Vol. 2, Tr. 08/08/17 at 207:10-208:1.

125. The mitigation measures to be completed at Poamoho, such as removal of feral pigs, helps native forests, including native plants, birds and other species. Vol. 1, Tr. 08/07/17 at 116:15-18. Fence maintenance keeps feral pigs out which stops the forest from degrading and should improve the habitat and survivability of the Hawaiian hoary bat. Vol. 1, Tr. 08/07/17 at 118:4-8. These mitigation measures are supported by DOFAW, USFWS, and the ESRC. *See* Ex. A-44.

126. Although Fretz acknowledged that there is no existing definitive data that shows fence maintenance, restoration of native forests, invasive species removal, pig removal will directly increase the bat population, the actions set forth in the HCP are expected to increase the likelihood of Hawaiian hoary bat survivability through the habitat management projects. Vol. 2, Tr. 08/08/17 at 203:14-204:11. Fretz emphasized that the purpose of mitigation and continued research is that there are a lot of unknowns about the Hawaiian hoary bat so the Project is required to employ ongoing monitoring. It is plausible that the measures called for in the HCP may support an increase in bats in the area so that must also be monitored. The element of preventing further degradation of the forest is important because an intact forest supports a certain amount of bats. On the other hand, doing nothing to prevent habitat degradation will very likely result in a decline in the biodiversity of the forest and negatively impact the number of Hawaiian hoary bat the forest supports. *See* Vol. 2, Tr. 08/08/17 at 204:19-205:14.

127. Fretz was cross-examined by KNSC regarding the study of removal of axis deer and goats from the Kahikinui Forest Reserve and Nakula Natural Area Reserve. *See* Ex. B-20. KNSC offered that the study concluded that there were fewer bats as a result of the removal. Fretz clarified that KNSC was implying that there was a causal relationship, and that was not accurate. The study found only that there was a correlation between the two. Vol. 2, Tr. 08/08/17 at 205:15-206:2. Snetsinger clarified that Exhibit B-20 refers only to herding animals, cattle, goats, and deer, rather than pigs, which are typically more solitary and may have different effects. Vol. 1, Tr. 123:10-124:7.

128. Fretz acknowledged that even though the benefit of the mitigation restoration efforts proposed at Poamoho to the Hawaiian hoary bat may not be easy to measure, the mitigation measures will prevent the bat habitat from getting worse. Vol. 2, Tr. 08/08/17 at 206:21-25. When asked by KNSC whether or not the ESRC received statistical data that demonstrated that the bat population is likely to increase with the HCP, Fretz answered no, and acknowledged that such studies have not been done or do not exist. However, the ESRC has performed additional planning that will allow for better confidence that the measures proposed in this HCP are appropriate under the current conditions and scientific knowledge. Vol. 2, Tr. 08/08/17 at 207:3-9.

129. Fretz elaborated that there is not much evidence from the existing wind energy projects on whether or not the mitigation measures used by those projects have increased the bat population. Because gathering this type of data and associated habitat management are long-term efforts, results will take time to manifest. Therefore, even if results are not readily apparent, the ESRC wants to continue the management measures for another 5, 10, or 20 years to allow for analysis of such results and measures. These projects are being carried out because the agencies expect to get a result over the long term, and when the future results are apparent, the agencies want to understand the effect and apply it to ongoing and future mitigation strategies. Vol. 2, Tr. 08/08/17 at 208:8-18.

130. Fretz testified that the funding that Applicant will provide will be in part for scientific research that will ultimately benefit the survivability of the Hawaiian hoary bat. Vol. 2, Tr. 08/08/17 at 224:10-13.

131. For those impacts that cannot be avoided, the HCP also commits to mitigation that protects, maintains, restores, and enhances habitats that support other species, including the Covered Species. Ex. A-29 (Oller WDT) at ¶¶ 28-32, 95-97.

132. The minimization measures proposed by the HCP are set forth in Section 4.2 of the HCP include:

a. The three Project temporary guyed met towers were fitted with bird flight diverters and/or white poly tape (1-in [2.5 cm]) to increase visibility and, as a result, the likelihood of avoidance by Covered Species.

b. The Project plans to install an un-guyed, free-standing permanent met tower to maximize the detectability of all features of the structure for birds and bats and minimize the risk of collision. This permanent tower would replace one temporary guyed met tower, and the remaining temporary met towers would be removed before the commercial operation date.

c. The majority of the wind facility is sited in disturbed agricultural habitat, which minimizes impacts to most native species.

d. The Project area does not have suitable listed waterbird breeding or foraging habitat thereby minimizing Hawaiian duck, Hawaiian stilt, Hawaiian coot, and Hawaiian moorhen use of the Project area and minimizing potential Project impacts to these species.

e. To minimize potential impacts to wildlife, on-site lighting at the O&M building and substation will be shielded and/or directed downward, triggered by a motion detector, and fitted with non-white light bulbs. Lighting is only expected to be used when workers are at the site at night. Most operations and maintenance activities are expected to occur during daylight hours. Nighttime activity during construction is addressed in Section 4.2.2.

f. Barbed wire will not be used on perimeter fences required to secure Project infrastructure to avoid the risk of entangling bats.

g. Nacelle lighting will not be used except as required by FAA standards. Flashing red lights have been shown to not be attractive to birds and will be used in accordance with FAA requirements.

h. The collection line will be placed below ground to the maximum extent practicable, thereby reducing the risk of collision of the Covered Species.

i. New above-ground portions of power lines associated with the Project will use line marking devices to improve visibility to birds and follow Avian Protection Plan Guidelines (APLIC 2012).

j. Hawaiian hoary bats roost in non-native and native woody vegetation that is at least 15 ft. (4.5 m) or taller. To minimize potential impacts to the Hawaiian hoary bat, woody plants greater than 15 ft. (4.5 m) tall will not be removed or trimmed between June 1 and September 15 during the installation and ongoing maintenance of the Project structures.

k. Na Pua Makani Power Partners will implement LWSC to reduce potential impacts to Hawaiian hoary bats. Proposed implementation will include increasing manufacturer's recommended cut-in speeds to 16 feet per second (ft/s; 5 meter per second [m/s]) and feathering WTG blades into the wind below 16 ft/s (5 m/s). LWSC will be instituted March – November between sunset and sunrise. In addition to the intended benefit of reducing bat fatalities, LWSC will reduce the risk to Newell's shearwaters, which could transit the Project at night April – November.

l. Na Pua Makani Power Partners will deploy bat acoustic monitors at the Project to document bat acoustic activity for a period during operations. Results from this monitoring may potentially be used to adaptively manage implementation of LWSC to reduce observed and unobserved bat fatalities.

m. A daytime speed limit of 25 miles per hour (mph; 40 kilometers per hour [kph]) and a nighttime speed limit of 10 mph (16 kph) will be observed on Project area roads to minimize the potential for vehicle collisions with Covered Species.

n. Should the Hawaiian goose begin to use the Project area for foraging or nesting, Na Pua Makani Power Partners will reduce daytime speed limits to 10 mph (16 kph) to minimize the potential for vehicle collisions.

o. Stormwater management on the Project including the WTG tower pads and roads will be designed to avoid the potential for accumulating standing water, which could serve as an attractant to waterbird species.

p. As appropriate to control erosion or other site-specific concerns, disturbed areas will be replanted with non-invasive resident species that are compatible with Project operations, such as being suitable for post-construction mortality monitoring within search areas. To the extent practicable, Na Pua Makani Power Partners will minimize the creation of suitable Hawaiian goose nesting habitat (shrubs adjacent to low-growing grass) in developing post-construction monitoring search plots.

q. Trash will be collected in lidded receptacles and removed from the construction area on a weekly basis to avoid attraction of ants and other animals such as mongooses, cats, and rats that may negatively affect the Covered Species or Na Pua Makani Power Partners' ability to detect fatalities of the Covered Species.

r. Na Pua Makani Power Partners will maximize the amount of construction activity that can occur in daylight during the seabird breeding season including the peak fledging period (approximately October 15 – November 23).

s. Should nighttime construction be required, Na Pua Makani Power Partners will use shielded lights and maximize the use of non-white lights if construction safety is not compromised to minimize the attractiveness of construction lights to wildlife. Na Pua Makani Power Partners will also have a biological monitor in the construction area to watch for the presence of Covered Species at all times during nighttime construction. Should a Covered Species be observed, the monitor will stop construction activities and shut down construction lighting until the individual(s) move out of the area.

t. When not in use, construction cranes will be lowered at night, when practicable, to minimize the risk of bird collisions.

u. To address concerns about fire safety, Na Pua Makani Power Partners will establish fire safety-related construction and O&M requirements (including landscaping considerations), response protocols, and responsibilities. This information will be included in the Project EIS.

v. An invasive species, *chromolaena* (*Chromolaena odorata*), occurs on the nearby Kahuku training area. Na Pua Makani Power Partners will coordinate with the Oahu Invasive Species Committee to identify and implement measures to minimize the risk of introducing chromolaena to the Project area. Approaches to minimize risk may include periodic site inspections by qualified personnel to search for the presence of plants and cleaning of equipment used in Project areas.

Ex. A-1 at 38-40.

133. Based on the best available science low wind speed "[c]urtailment is currently the primary minimization measure implemented by wind farms in the U.S., including those here in Hawai'i," Ex. A-44 § IV.c. at PDF page 7, for reducing incidental take risks, and is a wind

industry best management practice highly effective at minimizing bat take. Vol. 1, Tr. 08/07/17 at 14:21-25.

134. Minimization and mitigation measures for each of the Covered Species is addressed in the HCP. *See* Ex. A-1 §§ 6.1.3 (Hawaiian hoary bat), 6.2.2 (Newell's shearwater), 6.3.2 (Hawaiian goose), 6.4.2 (Hawaiian stilt, Hawaiian coot, Hawaiian moorhen, Hawaiian duck), and 6.5.2 (Hawaiian short-eared owl); Ex. A-29 (Oller WDT) at ¶ 29. These sections of the HCP describe how the planned mitigation efforts provide a net benefit to each of the Covered Species. Ex. A-29 (Oller WDT) at ¶ 29. Mitigation efforts are targeted locally to the maximum extent practical (*i.e.*, to be able to achieve a net benefit for the species on O'ahu). Ex. A-29 (Oller WDT) at ¶ 30. Each of the above-identified species' ranges extend throughout the main Hawaiian Islands (except for the O'ahu population of the Hawaiian short-eared owl) and other areas on O'ahu outside of the Project. Ex. A-29 (Oller WDT) at ¶ 28.

135. Throughout the proceeding, KNSC questioned Applicant's take estimates for the Hawaiian hoary bat by arguing that Applicant's proposed LWSC measures are not effective. For example, KNSC argued that the LWSC cut-in speed should be 6.5 m/s instead of 5 m/s, as proposed in the HCP and ESRC Bat Guidance. Contrary to that assertion, Applicant presented evidence that since the implementation of the ESRC recommended cut-in speed of 5 m/s LWSC at the Kahuku Wind Farm in April of 2012, or during an actual operational period of almost 4 years, only 1 bat fatality has been observed, with no other listed bird fatalities observed. Ex. A-55 at 8, 10. Additionally, utilizing LWSC with a 5 m/s cut-in speed is the operational guidance the Applicant received from the Agencies and is provided for in the ESRC Bat Guidance. Ex. A-44.

136. The construction and operation of the Project's WTGs and associated infrastructure will not have a substantial impact on the overall habitat of each of the Covered Species because the actual habitat for these species do not exist on the Project Site or are present in a very limited manner. Ex. A-29 (Oller WDT) at ¶ 31.

137. Potential impacts to Covered Species will be offset by improving survival, productivity, or other appropriate mechanisms described in the HCP at locations where Covered Species' nesting, roosting, or foraging habitats can be developed, restored, or enhanced in order to achieve a net benefit. Ex. A-29 (Oller WDT) at ¶ 31. Enhancement of habitat areas or survivability in combination with results of research activities will offset or mitigate the impacts expected by operations on the Project and any harm to Covered Species that may pass through the Project Area's airspace. *Id.*

138. Restoration or enhancement of Covered Species' habitats is an important part of the Project's mitigation effort, which is designed to benefit the Covered Species. Ex. A-29 (Oller WDT) at ¶ 32. For the Hawaiian hoary bat, habitat restoration will occur mauka of Ka'a'awa at Poamoho Ridge. *Id.* Habitat restoration at Poamoho Ridge will occur as described in the HCP and is targeted to improve native bat roosting and foraging habitat that will generate a net benefit and support bat survivability past the life of the Project. *Id.* at ¶ 32. These mitigation plans were based on agency consultation and technical advice from DOFAW and USFWS. *Id.*; *see also* Ex. A-44; Ex. A-45.

139. To locate mitigation areas and assess potential impacts on the Covered Species, the Applicant relied on input from DLNR, DOFAW, USFWS, ESRC, land managers, and conservation organizations to develop appropriate mitigation plans. *See* Ex. A-29 (Oller WDT) at ¶ 32; Ex. A-4; Ex. A-45; Vol. 2, Tr. 08/08/17 at 222:7-16. Applicant relied on the information generated and discussed with those agencies as well as current studies and scientific literature. *Id.*; *see also* Ex. A-1 at 12; Exs. A-3 through A-9, A-44 through A-49, A-52, A-55,A-56. The take estimates and mitigation plans for the Covered Species presented in the HCP are based on the best available scientific information. Ex. A-29 (Oller WDT) at ¶ 33. This includes fatality data from the adjacent Kahuku Wind Farm which were evaluated to gauge the potential for Project-related impacts to the Covered Species, including the Hawaiian hoary bat. *Id.*

140. The Kahuku Wind Farm was determined to be the best source of data to estimate the Hawaiian hoary bat take because it: (i) is adjacent to the Project; (ii) has the longest operational history on O'ahu; (iii) has a similar number of WTGs as the proposed Project; and (iv) is likely to be the most similar wind energy facility to the proposed Project because it is directly adjacent to the proposed Project and has similar vegetative and topographical characteristics. *Id.* at ¶ 34; Ex. A-1 at 41; Ex. A-27 (Snetsinger WDT) at ¶¶ 12-13; *see also* Ex. A-29 (Oller WDT) at ¶ 34. This HCP is well-informed because there is site specific information from the adjacent Kahuku Wind Farm. *See* Vol. 1, Tr. 08/07/17 at 41:19-23.

141. KNSC argued that Applicant should not have included the months that the Kahuku wind project was only partially operational. Snetsinger, however, testified that it is reasonable to include the 5 months where Kahuku was partially operational as long as those are generally consistent with the operations that are ongoing at the turbines when bats are at risk and additional conservative assumptions are included in the estimate to account for uncertainty. Vol. 1, Tr. 08/07/17 at 90:3-12; *see also* Ex. B-38; Ex. A-55; Exs. A-8 & A-9. Furthermore, the Kahuku Wind Farm annual report states that during the 5 month period when Kahuku was partially operational up to all permitted turbines occurred when wind speeds were low, which is the time that bats are most vulnerable to collision. Vol. 1, Tr. 08/07/17 at 94:14-18; *see also* Ex. B-38 at 8.

142. Applicant and Tetra Tech developed conservative estimates of take in Tier 1, based on existing known Kahuku data estimates using LWSC and included additional sources of uncertainty in its Tier 2 estimates. Vol. 1, Tr. 08/07/17 at 89:21-90:17. It was reasonable to include the data from the time Kahuku was not fully operational as searches were still going on; and bats are most active and forage in low wind conditions, and therefore at those low wind speeds, is the likely period of greatest risk to bats. Vol. 1, Tr. 08/07/17 at 94:11-18. Additionally, the Kahuku operational period was not the only factor considered in determining that Kahuku was the best surrogate. Other factors included the number of turbines, turbine height, topography and habitat. Ex. A-29 (Oller WDT) at ¶ 34; Vol. 1, Tr. 08/07/17 at 98:6-13; Vol. 2, Tr. 08/08/17 at 196:4-7.

143. KNSC argued that Tetra Tech refused to use Kawailoa data. Applicant presented convincing evidence that it did not refuse to use the Kawailoa data. Such data was considered and based on the surrogate criteria described in FOF 140, including the topographical and vegetative characteristics of the most similar and adjacent site to conclude that the bat data from the Kahuku project is more reflective of what to expect at this Project. Vol. 1, Tr. 08/07/17 at

108:18-109:1.

144. Fretz testified that Applicant's use of the Kahuku Wind Farm data was a plausible comparison as it was the closest comparison to the proposed Project. Vol. 2, Tr. 08/08/17 at 196:4-7.

145. The Kahuku Wind Farm provides the best available data for estimating potential Project-related take of Hawaiian hoary bats because it is located immediately adjacent to the proposed Project. Thus, the Kahuku Wind Farm possesses topographical and vegetative characteristics that make it most similar in habitat and probable use by Hawaiian hoary bats to the adjacent proposed Project. Evidence from the island of Hawai'i supports that patterns of use and occupancy of the Hawaiian hoary bat are associated with elevation and the amount of mature forest. Ex. A-1 at 17-18, 41; Ex. A-27 (Snetsinger WDT) at ¶ 12.

146. The Hawaiian hoary bat take estimate in the HCP was calculated using the per turbine fatality rate observed at the Kahuku Wind Farm and a conservatively high assumed value for unobserved take (based on Kahuku Wind Farm data), and adjusted for the potential effectiveness of LWSC in reducing collision risk. The level of effectiveness of LWSC used here was based on the estimated effectiveness of LWSC from mainland studies. To account for the uncertainty associated with the effectiveness of this measure in Hawai'i, a very conservative 150 percent of the estimated take was used to develop the total requested take limit. When combined with the conservative assumption associated with unobserved take,[4] effectiveness of LWSC may be as low as 36 percent for the Project to remain below the requested authorized take limit. Ex. A-27 (Snetsinger WDT) at ¶ 17.

147. It is unknown whether the relationship between bat deaths and the number of turbines is linear. It is not something that has been studied closely. The data is analyzed under the assumption that the number of turbines to bats killed is proportional to the amount of fatalities. However, there could be factors associated with bigger projects can change relative to bats. This is why comparable surrogate projects are used that are both similar in scope and scale, as well as in terms of habitats, close proximity, and other site specific characteristics that should more reasonably inform bat use in the area. Vol. 1, Tr. 08/07/17 at 97:12-100:2.

148. KNSC and Rago argue that the HCP take estimate for the Hawaiian hoary bat is insufficient because the take estimate did not increase when the WTG height increased. The take estimate did not change because the impacts to the Covered Species did not change based on the difference in height, and more recent studies indicate no direct correlation between turbine height and take. Vol. 1, Tr. 08/07/17 at 54:15-24; 72:4-11; *see* Ex. A-10.

149. Although the ESRC Bat Guidance recognizes that turbine height may be a factor that influences bat mortality, the best scientific studies have not found a conclusive relationship

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[4] Data from the Kahuku Wind Farm suggest that using full-sized search plots, one can expect approximately 1.5 unobserved fatalities per observed fatality. *See* Ex. A-55 (Kahuku Wind Power, LLC HCP Annual Report FY 2015). By assuming 2 unobserved fatalities per observed fatality in developing the estimate, estimated take is approximately 20 percent higher than would be calculated using the actual Kahuku Wind Farm data.

between turbine height and bat deaths. Vol. 1, Tr. 08/07/17 at 100:11-101:5; Ex. A-10.

150. For purposes of estimating take, Applicant looked at the tallest turbines that might be commercially available to estimate impact. Vol. 2, Tr. 08/08/17 at 191:18-24; Ex. A-34 at 31; Vol. 1, Tr. 08/07/17 at 18:16-19. KNSC infers that this means that if turbines are smaller, the impacts are less. Vol. 2, Tr. 08/08/17 at 191:25-192:3. Fretz, however, testified that he would not draw that conclusion from that statement. The height of the turbine is not the only thing that affects impacts. Vol. 2, Tr. 08/08/17 at 192:6-25. Fretz testified that although the turbines proposed for the Project are taller than those at the Kahuku Wind Farm, height is not necessarily the only factor that could affect take. Vol. 2, Tr. 08/08/17 at 194:10-13.

151. KNSC argued that Exhibits B-1 and B-7 found a positive relationship between turbine height and rotor diameter, respectively, and that bat fatalities at several wind farms in the U.S. mainland and Canada showed that taller turbines are associated with larger rotor swept areas which presumably contribute to greater fatality rates. Vol. 2, Tr. 08/08/17 at 188:24-189:15. Exhibits B-1 and B-7, however, are not the best available science. Exhibits B-1 and B-7 do not include the more recent and comprehensive Zimmerling & Francis study data, Ex. A-10, likely because Exhibit B-1 was published in the same year and probably not available at the time of Exhibit B-1's publication. Exhibit B-7 is a much older study, includes fewer studies (21 versus 47 used in the analysis presented in Ex. A-10), and does not include turbines as tall as the maximum included in Ex. A-10. Ex. A-10 presented by Applicant is therefore a more current and comprehensive study. Ex. A-53 (Snetsinger WRT) ¶¶ 11-13.

152. Among studies on the effects of turbine size on bat fatality rates, the Zimmerling & Francis study evaluated the most comprehensive number of studies encompassing the largest range of turbine size that Tetra Tech has been able to find. Results from that study suggest that earlier studies limited to smaller turbines were missing data points from larger turbines and would result in erroneous conclusions if their results were extrapolated outside of the scope of inference for their study. Although there are no studies to understand potential differences in risk to bats between turbines 127 – 200 meters tall, based on Zimmerling & Francis (2016), there is no evidence to conclude that turbines 100 – 135 meters tall would vary in the amount of bat take. *See* Ex. A-10 at 1364; Ex. A-53 (Snetsinger WRT) at ¶ 12. Therefore, there is also no evidence to conclude that turbines larger than 135 meters tall would vary in bat take either.

153. The HCP adapted the analysis presented in its Appendix B. Exhibit A-1 at App. B. Tetra Tech used methodology presented in this study to estimate risk, but updated the analysis based on an array of 9 WTGs with a maximum blade tip height of 656 feet (200 meters) and a rotor diameter of 427 feet (130 meters). *See* Ex. A-1 at 40-57. Tetra Tech also used radar data for shearwater-like targets (which likely included species that were not Newell's shearwaters), assumed 99% avoidance, and used the mean of the frontal and size approach risks. This is fully described and the results presented in Table 8, Section 5.2.1 of the HCP. Ex. A-1 at 45; Ex. A-53 (Snetsinger WRT) at ¶ 13.

154. While taller turbines may have an increased impact on some species [*see* Vol. 1, Tr. 08/07/17 at 101:6-9], studies referred to by KNSC inappropriately extrapolate data from smaller turbines to larger turbines. Vol. 1, Tr. 08/07/17 at 103:1-12. The conclusions from these earlier studies related to migrating song birds and mainland bats. Adequate data about flight

heights of bats or migrating birds in Hawai'i does not exist to develop or test such hypotheses. Furthermore, the more comprehensive and better developed recent studies have analyzed taller turbines and conclude that there is no clear relationship between turbine height and bat take. Vol. 1, Tr. 08/07/17 at 103:1-22; Ex. A-10. Based on the best science available when the HCP was prepared, Tetra Tech concluded that the number of turbines was the appropriate factor to consider. Vol. 1, Tr. 08/07/17 at 104:3-7.

155. While the HCP did not cite to Ex. A-10 when the plan was drafted, because the study did not exist at that time, its conclusions support the reasonableness of the assumptions about proposed height considerations in the existing HCP. Vol. 1, Tr. 08/07/17 at 105:11-16.

156. KNSC asserted that the data from the Auwahi HCP, Ex. B-5 at 3-78, is evidence that the Hawaiian hoary bat take estimate of this HCP is inaccurate. Every HCP uses the best available science when it is drafted. With each new project, the more monitoring that occurs at each project, the more data becomes available. Sometimes there is an overestimate of take, sometimes an underestimate. Vol. 1, Tr. 08/07/17 at 43:25-44:5, 61:16-62:5 (discussing Kaheawa HCP decreasing the amount of seabird take because they overestimated take). The HCP for this Project had the benefit of evaluating additional monitoring data and the experiences of the existing wind farms, including Auwahi, lending a more improved understanding of the potential impacts of this Project. *See* Vol. 1, Tr. 08/07/17 at 41:19-44:5.

157. KNSC also attempted to suggest that take at all of the projects permitted in Hawai'i was the sum of the 80% upper credible limit values that agencies report as presented in Exhibit B-12 (*i.e.*, the total observed and unobserved take). This is wrong and results in an inflated estimate of the cumulative impact of these projects on the Hawaiian Hoary bat. *See* Vol. 1, Tr. 08/07/17 at 81:11-20; 109:2-18. Exhibit B-12 highlights the use of 80% upper credible limit as the agency-approved mechanism to provide an upper limit to estimate take.

158. It is well-established that "where the information is not readily available, [the courts] cannot insist on perfection: The best scientific data available, does not mean the best scientific data possible." *San Luis & Delta Mendota Water Authority v. Jewell*, 747 F.3d 581,602 (9th Cir. 2014) (internal quotations, citations, brackets, ellipses omitted). As detailed in the HCP, the Applicant used the best scientific information available and did not disregard superior evidence. *See id.* ("The best available data requirement merely prohibits an agency from disregarding available scientific evidence that is in some way better than the evidence it relied on.") (internal quotations, citations, and brackets omitted). No additional scientific information presented at the hearing changes or undermines the rationale contained in the existing HCP assumptions about estimated take for the Project based on the proposed height of the turbines.

159. The reliable probative evidence supports a finding that the HCP relies on the best information that was available when it was drafted and that has become available. That new information does not warrant a change in the HCP or remand to the ESRC. Vol. 1, Tr. 08/07/17 at 145:11-16.

160. The Applicant also updated the HCP throughout the agency and public review process to reflect new relevant information, including new information from the ESRC Hawaiian

Hoary Bat Workshop that was formalized in the ESRC Bat Guidance. *See* Ex. A-1 at § 6.1.1.1; Ex. A-29 (Oller WDT) at ¶ 35.

161. The mitigation commitments in the HCP are summarized below and more particularly described in FOF 103.

- Applicant has committed to protecting, restoring, and enhancing the habitat for the Hawaiian hoary bat within the Poamoho Ridge mitigation area. Mitigation includes working in cooperation with DLNR and KMWP to remove feral pigs and invasive plant species, which should promote the restoration of the native forest environment used by the Hawaiian hoary bat. Ex. A-1 at §§ 6.1.1 – 6.1.2. In addition to benefiting the Hawaiian hoary bat, this mitigation will also benefit other native plant and animal species that inhabit the mitigation area. *Id.* at § 6.1.3.
- Applicant has committed to protecting potential nesting areas for the Hawaiian goose at James Campbell National Wildlife Refuge from depredation by feral dogs and pigs by funding the construction of a fence barrier. *Id.* at § 6.3.1. The fencing will also protect habitats used by the endangered Hawaiian stilt, Hawaiian coot, Hawaiian moorhen, Hawaiian duck, and other native species. *Id.* at § 6.3.2.
- Applicant has committed to protecting nesting and foraging habitat for the Hawaiian stilt, Hawaiian coot, Hawaiian moorhen, and Hawaiian duck at Hamakua Marsh Wildlife Sanctuary. *Id.* at § 6.4.1. Mitigation includes funding the construction of a fence barrier at the wildlife sanctuary boundary to reduce the potential for wildlife interactions with urban threats, aid in enforcement of access rules at the marsh, reduce disturbance and predation by dogs, and reduce trash in the wildlife sanctuary. *Id.* at § 6.4.2.
- Applicant has committed to providing funding to a NFWF to benefit the Newell's shearwater consistent with a Newell's shearwater conservation plan. *Id.* at § 6.2.1. NFWF funding will support habitat management and predator control at known Newell's shearwater colonies; refinement of methods to identify new Newell's shearwater colonies, which could then be protected; development of techniques to establish new Newell's shearwater colonies; and improvement of predator control and habitat management techniques. *Id.* at § 6.2.2.
- Applicant has committed to providing funding to the State Endangered Species Trust Fund to benefit the Hawaiian short-eared owl. USFWS and DOFAW recommended that funding the trust fund as the most appropriate mitigation action available for the Hawaiian short-eared owl. *Id.* at § 6.5.1. Funding will support conservation actions that, among other goals, are designed to develop habitat management approaches that reduce the impact of limiting factors, and improve predator control and habitat management techniques. *Id.* at § 6.5.2.

162. Through their recommendations and oversight, DOFAW and the ESRC have determined that these commitments by Applicant, when implemented, will be sufficient to further the purposes of the mitigation commitments contemplated by HRS Chapter 195D. Ex. A-29 at ¶ 37 (Oller WDT). These commitments will protect, maintain, restore, or enhance the identified ecosystems, natural communities, or habitat types as related to the Covered Species.

Id.

163. Therefore, the HCP furthers the purposes of HRS 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.

B. THE HCP WILL INCREASE THE LIKELIHOOD OF RECOVERY OF THE ENDANGERED OR THREATENED SPECIES THAT ARE THE FOCUS OF THE HCP (MO6 II)

164. This second criterion asks: will the HCP increase the likelihood of recovery of the endangered or threatened species that are the focus of the HCP? HRS § 195D-21(b)(1)(B).

165. As discussed above in Part VII.A, the mitigation commitments set forth in the HCP will increase the likelihood of recovery and survivability of the Covered Species and is consistent with the recovery plans of the Covered Species. *See* HRS § 195D-21(b)(1)(B).

166. Mitigation actions specifically identified for the Hawaiian hoary bat are: (a) consistent with the Hawaiian Hoary Bat Recovery Plan (USFWS 1998) (**"Bat Recovery Plan"**) objectives; (b) consistent with the ESRC Bat Guidance; and (c) based on extensive consultation and recommendations from DOFAW, USFWS, and the ESRC, the agencies charged with oversight and recovery of the Covered Species. *See* Ex. A-29 (Oller WDT) at ¶ 40; Ex. A-44. Mitigation plans for each of the other Covered Species were developed similarly, relying on recovery plans, available species-specific biological information, and DOFAW, USFWS, and ESRC guidance. Ex. A-29 (Oller WDT) at ¶ 40.

167. The assessments in the HCP for take estimates and mitigation are considered "conservative" or cautious because the regulatory agencies employ compliance standards established to provide a high level of confidence that mitigated take will exceed the actual number of fatalities that may occur. *Id.* at ¶ 41.

168. To measure compliance for Hawaiian hoary bat take at Hawai'i wind farms, DOFAW and USFWS estimate the take (and associated mitigation requirement for this take) at an 80% upper credible limit. Ex. A-1 at 40-56; Ex. A-12 at 4-109 to 4-122. That is, regulatory agencies are 80% confident that Applicant (and each other wind farm) will mitigate for more bats than it will take. Vol. 1, Tr. 08/07/17 at 81:11-20; 109:2-18.

169. Because the mitigation is designed to compensate for an inherently conservative estimate of take (an 80% upper credible limit estimate), the effective implementation of those mitigation efforts are expected to compensate for more take than what is estimated, if take actually occurs. *See* Ex. A-29 (Oller WDT) at ¶ 41; Ex. A-12 at 4-109 to 4-122; Ex. B-12 at 5, 9, 13, 16, 19; Ex. A-53 (Snetsinger WRT) at ¶ 10. Because of inherent uncertainty in any future event, the risk assessment and mitigation efforts proposed and approved here by the Agencies, based on the best available science, is a reasonable and realistic projection to achieve a net benefit for the survivability and habitat enhancement of the species that may be involved. Ex. A-53 (Snetsinger WRT) at ¶ 10. To require absolute crystal ball precision for any future take event would essentially prohibit any wind farm development if it has any potential to impact the

Hawaiian hoary bat or other threatened or endangered species. This is contrary to the one of the purposes of HRS Chapter 195D, which permits the take of such species so long as the take is incidental to an otherwise lawful permitted use. The best one can do is conservatively estimate the take based on a reasonable assessment of the conditions and best available scientific study assessments.

170. During the hearing, KNSC questioned Applicant's take estimate for bats. Snetsinger testified that KNSC misconstrued the data, interpreting it to assert that all of the Hawai'i wind farms have taken more bats than predicted. It is inaccurate to say all of the existing wind farms have taken more bats than predicted because none of the existing wind farms have exceeded their overall take estimates. The existing data reveals only that bats have been taken at a faster rate than predicted. Vol. 1, Tr. 08/07/17 at 84:6-10.

171. Although actual take at a project will not be precisely known because even under the most intensive monitoring efforts, not all fatalities can be located. The probability that a fatality is available to be found when the search takes place and, even if the fatality is available, the probability that the searcher actually observes the fatality affects the proportion of actual fatalities that are documented. Therefore, take is approximated using statistical estimators that account for factors that could lead to fatalities at a project not being detected. Ex. A-12 at 4-109 to 4-122. USFWS and DOFAW evaluate the statistical results of this analysis conservatively in order to achieve an 80 percent confidence level that actual take would be less than the estimated take. *See* Ex. B-12 at 5, 9, 13, 16, 19; Ex. A-53 (Snetsinger WRT) at ¶ 10.

172. Habitat for the Hawaiian hoary bat will benefit as a result of the habitat protection and restoration efforts at the mitigation area (Poamoho Ridge), as identified in the HCP. *See* Ex. A-1 at § 6.1; Ex. A-29 (Oller WDT) at ¶ 42. In addition, information developed through research [as prioritized in the Bat Recovery Plan and ESRC Bat Guidance] will contribute to the knowledge base, improving the efficacy of future mitigation efforts. *See* Exs. A-44 & A-45; Ex. A-29 (Oller WDT) at ¶ 42.

173. The likelihood of recovery of the Hawaiian goose will be increased by supporting the probability of long term establishment of a population of Hawaiian goose on the Island of O'ahu through protection of nesting and foraging habitat at James Campbell National Wildlife Refuge. *See* Ex. A-1 at § 6.3; Ex. A-29 (Oller WDT) at ¶ 43. These actions are designed to contribute to improved reproductive success and survival of the Hawaiian goose on O'ahu, thereby increasing the current very small population of two known to exist on O'ahu. *Id.*

174. The likelihood of recovery of the Hawaiian moorhen, Hawaiian coot, Hawaiian stilt, and Hawaiian duck will be increased through the combination of multiple mitigation efforts: (1) the designed mitigation project at Hamakua Marsh; (2) reducing fatalities as the result of collisions with vehicles in the adjacent parking lot, and (3) ancillary benefits to these species through the protection of waterbird habitat at James Campbell National Wildlife Refuge (mitigation for the Hawaiian goose). Ex. A-29 (Oller WDT) at ¶ 44. Furthermore, because the Hamakua Marsh mitigation project quantifies benefits based on reducing collisions of waterbird species in the parking lot, additional benefits further increase the likelihood of recovery of these species. *See* Ex. A-1 at § 6.4; Ex. A-29 (Oller WDT) at ¶ 46. In particular, mitigation actions also will likely improve the survival and nesting success of waterbirds in the Hamakua Marsh

through a combination of reducing predation and disturbance by dogs in the marsh, reducing trash at the site, and educating the public about how to help these native waterbird species. *Id.*

175. The likelihood of recovery of the Newell's shearwater will be increased through the implementation of funding efforts that will support the protection of nesting colonies, development of new colonies, improvement of predator management techniques, and/or improve population monitoring techniques, each a priority in the Shearwater Recovery Plan. *See* Ex. A-1 at § 6.2; Ex. A-48 (Shearwater Recovery Plan); Ex. A-29 (Oller WDT) at ¶ 46.

176. The HCP describes the basis for the assumption about high avoidance rates related to the Newell's shearwater. Ex. A-1 § 5.2.1 at 45-48 & App. B. As described in Appendix B to the HCP, studies that have documented interactions of Hawaiian petrels and Newell's shearwaters at stationary objects such as communications towers and transmission lines suggests they avoid these objects at nearly 100 percent. Likely causes for collision fatalities on Kaua'i, where the Newell's shearwater breeding population is concentrated, are the large population of breeding birds in combination with the parallel orientation of power lines relative to the coastline and the presence of power lines that are in strong relief relative to the surrounding topography and vegetation. *See* Ex. A-56 (Griesemer & Holmes 2011) at 14, 25, 41; Ex. A-53 (Snetsinger WRT) at ¶ 28. These conditions are not expected at the Project Site as Project power lines are approximately perpendicular to the coast (parallel to expected flight paths of Newell's shearwaters flying to and from potential breeding colonies in the Ko'olau Mountains) and existing tree lines should minimize relief of any above ground power lines. All potential Newell's shearwaters detected during radar surveys were flying more than 25 meters above the ground, well above the maximum height of the Project transmission line (15 meters). Ex. A-1 at 47; Ex. A-53 (Snetsinger WRT) at ¶ 29. Finally, Applicant has three avoidance and minimization measures targeted at minimizing risk to Newell's shearwaters colliding with stationary objects: 1) lower construction cranes at night, when practicable, to minimize the risk of bird collisions; 2) collection lines will be placed below ground to the maximum extent practicable and above ground portions of power lines associated with the Project will use line marking devices to improve visibility to birds; and 3) the Project met tower will be free-standing. See Ex. A-1 § 4.2 at 38-40; Ex. A-53 (Snetsinger WRT) at ¶ 30.

177. The likelihood of recovery of the Hawaiian short-eared owl is increased through the implementation of a project designed to (1) reduce the impact of limiting factors such as "sick owl syndrome" and vehicle collisions, (2) improve predator control and habitat management techniques, and (3) improve population monitoring techniques. Ex. A-29 at ¶ 47 (Oller WDT).

178. Each of these mitigation measures have been vetted by DOFAW, USFWS, and ESRC. Ex. A-29 (Oller WDT) at ¶ 48; Ex. A-44. Implementation of these mitigation measures will provide a net benefit to the Covered Species and be consistent with their respective recovery plans. Ex. A-29 (Oller WDT) at ¶ 48. Accordingly, the HCP increases the likelihood of recovery of the Covered Species and satisfies HRS § 195D-21(b)(1)(B).

C. THE HCP SATISFIES ALL THE REQUIREMENTS OF HRS CHAPTER 195D (MO6 III)

179. This third criterion asks: does the HCP satisfy all the requirements of HRS Chapter 195D? HRS § 195D-21(b)(1)(C).

1. THE HCP SATISFIES HRS § 195D-21(B)(2)(A) BY IDENTIFYING THE GEOGRAPHIC AREA ENCOMPASSED BY THE PLAN; THE ECOSYSTEM, NATURAL COMMUNITIES, OR HABITAT TYPES WITHIN THE PLAN AREAS THAT ARE THE FOCUS OF THE PLAN; AND THE ENDANGERED, THREATENED, PROPOSED, AND CANDIDATE SPECIES KNOWN OR REASONABLY EXPECTED TO BE PRESENT IN THOSE ECOSYSTEMS, NATURAL COMMUNITIES, OR HABITAT TYPES IN THE PLAN AREA (MO6 III.A)

180. This sub-criterion asks: does the HCP identify the geographic area encompassed by the plan; the ecosystems, natural communities, or habitat types within the plan areas that are the focus of the plan; and the endangered, threatened, proposed, and candidate species known or reasonably expected to be present in those ecosystems, natural communities, or habitat types in the plan area? HRS § 195D-21(b)(2)(A).

181. The scope of the HCP covers all activities, facilities, and affected areas during construction, operation, and maintenance of the Project that have the potential to result in the take of a Covered Species, as well as the proposed mitigation areas outside the Project Area. Figure 2 depicts the Project Area. Ex. A-1 at § 2.2; Ex. A-29 (Oller WDT) at ¶ 50. The HCP clearly identifies the areas covered by the plan with detailed maps and figures in the HCP and explains the types of species to be affected throughout. *See* Ex. A-1 at 13-37.

182. Specifically, the ITP and ITL will apply to lands leased by Applicant and used for construction, operation, and maintenance of the Project. Ex. A-29 (Oller WDT) at ¶ 51. Proposed mitigation areas are described in Section 6 of the HCP and include not only areas within the Project Site, but also mitigation areas outside the Project, for instance the Poamoho Ridge area where activities are planned to improve habitat areas of the Hawaiian hoary bat are planned for implementation. *Id.*; Ex. A-1 at 46-77; Ex. A-29 (Oller WDT) at ¶ 66. Section 3 of the HCP describes the environmental setting of the Project Area, including the occurrence of Covered Species within that area, or that have the potential to pass through the Project, based on Project studies and other publicly available information. Ex. A-29 (Oller WDT) at ¶ 52. The various Covered Species that may be impacted by the proposed Project are addressed in Section 3.8 of the HCP. *Id.*; *see also* Ex. A-1 at 13-37.

183. Therefore, the HCP identifies the geographic area encompassed by the plan; the ecosystems, natural communities, or habitat types within the areas that are the focus of the plan; and the endangered, threatened, proposed, and candidate species known or reasonably expected to be present in those ecosystems, natural communities, or habitat types in the plan area, in satisfaction of HRS § 195D-21(b)(2)(A). *Id.* at ¶ 53.

2. THE HCP SATISFIES HRS § 195D-21(B)(2)(B) BY DESCRIBING THE ACTIVITIES CONTEMPLATED TO BE UNDERTAKEN WITHIN THE PLAN AREA WITH SUFFICIENT DETAIL TO ALLOW DLNR TO EVALUATE THE IMPACT OF THE ACTIVITIES ON THE PARTICULAR ECOSYSTEMS, NATURAL COMMUNITIES, OR HABITAT TYPES WITHIN THE PLAN AREA THAT ARE THE FOCUS OF THE PLAN (MO6 III.B)

184. This sub-criterion asks: does the HCP describe the activities contemplated to be undertaken within the plan area with sufficient detail to allow DLNR to evaluate the impact of the activities on the particular ecosystems, natural communities, or habitat types within the plan area that are the focus of the plan? HRS § 195D-21(b)(2)(B).

185. Section 1.3 of the HCP describes the covered activities, including activities planned during construction and throughout the operation and maintenance period that could impact any of the Covered Species. Ex. A-1 at 4-8; Ex. A-29 (Oller WDT) at ¶ 54. The covered activities include the operation of up to 9 WTGs with rotating turbine blades that may come into contact with the Covered Species if they pass through the Project Area. *Id.* Section 5 of the HCP analyzes the potential direct and indirect impacts each of these activities could have on the Covered Species. Ex. A-1 at 40-56 & Table 6, § 7.1.2 at 78, and App. A at 12; Ex. A-29 (Oller WDT) at ¶ 55. The potential impacts assessment was refined over the course of more than 3 years of consultation with DOFAW and USFWS through regular meetings and communications. *See* Ex. A-29 at ¶ 56 (Oller WDT); Ex. A-31 (Cutbirth WDT) at ¶ 20. Section 1.3 addressed and incorporated new information and scientific advancements as they became available. Ex. A-29 (Oller WDT) at ¶ 56. Section 6 of the HCP describes the mitigation areas and activities that are planned in order to mitigate for impacts to the Covered Species, including their anticipated benefits to the Covered Species and/or their habitats. Ex. A-1 at 46-77; Ex. A-29 (Oller WDT) at ¶ 57.

186. All issues raised in this contested case hearing, including the height of the turbines, the cut-in speed of LWSC and mitigation measures, were discussed with the Agencies, including the ESRC. Vol. 1, Tr. 08/07/17 at 145:17-21.

187. Therefore, the HCP describes the activities contemplated to be undertaken within the HCP area with sufficient detail to allow the Board to evaluate the impacts of the proposed Project on the associated ecosystems, natural communities, or habitat types within the plan area, as contemplated by and in compliance with HRS § 195D-21(b)(2)(B). Ex. A-29 (Oller WDT) at ¶ 58.

3. THE HCP SATISFIES HRS § 195D-21(B)(2)(C) BY IDENTIFYING 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 (MO6 III.C)

188. This sub-criterion asks: does the HCP 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? HRS § 195D-21(b)(2)(C).

189. The HCP was prepared after consultation with the Agencies and identified potential impacts to certain threatened or endangered species that could occur at the Project Site. The analysis, which included results of surveys at the Project, interpretation of results from publicly available data from the vicinity of the Project, and consultation with USFWS and DOFAW determined the following eight (8) Federally and State-listed threatened or endangered species could occur on or near the Project Site and could be incidentally taken by the Project: Newell's shearwater, Hawaiian black-necked silt, Hawaiian coot, Hawaiian moorhen, Hawaiian duck, Hawaiian goose, Hawaiian short-eared owl, and the Hawaiian hoary bat (*i.e.*, the Covered Species). *See* Ex. A-1; Ex. A-4; Ex. A-27 (Snetsinger WDT) at ¶ 8.

190. This analysis concluded these species had a reasonable potential to be impacted by the development, operation, or decommissioning of the Project. Ex. A-27 at ¶ 9 (Snetsinger WDT). To develop the HCP, Applicant conducted a thorough review of each of the Covered Species biology including the status and distribution of each species within the Project Area, on O'ahu, and more broadly in Hawai'i and beyond to allow for a complete analysis of the potential cumulative impacts of this Project on the affected Covered Species. *Id.* The development of this information fulfills the statutory requirement under HRS 195D-4(g)(5). *Id.*

191. Section 4 of the HCP describes avoidance and minimization measures developed in consultation with DOFAW and USFWS and as approved by the ESRC. Ex. A-1 at 37-40; Ex. A-36 at 5-6; Ex. A-29 (Oller WDT) at ¶ 59. These steps are consistent with agency guidance and represent avoidance of impacts to the Covered Species to the maximum extent practicable. Ex. A-29 (Oller WDT) at ¶ 59. For instance, the specific steps discussed in the HCP for the Hawaiian hoary bat, include: (a) avoiding clearing trees from June 1 – September 15 to avoid killing or injuring non-volant bat pups; and (b) the implementation of LWSC during periods when bat fatalities are thought to be most likely to occur. Ex. A-1 at 39-40; Ex. A-5 (Altering Turbine Speed Reduces Bat Mortality at Wind-Energy Facilities); Ex. A-6 (Effectiveness of Changing Wind Turbine Cut-in Speed to Reduce Bat Fatalities at Wind Facilities); Ex. A-29 (Oller WDT) at ¶ 59. In addition, Section 9.5 of the HCP outlines Adaptive Management actions that could be taken as needed throughout the ITL term. Ex. A-1 at 86-87; Ex. A-29 (Oller WDT) at ¶ 61.

192. Research results from the U.S. mainland were used to estimate the effectiveness of LWSC because the rarity of bat fatalities in Hawai'i does not provide sufficient sample sizes to test the effectiveness of such measures and because the Hawaiian hoary bat is closely related to the U.S. mainland hoary bat, which is one of the more frequently taken bat species at wind farms. Ex. A-27 (Snetsinger WDT) at ¶¶ 16, 18. The relatively few bat fatalities that occur in Hawai'i, along with the fact that the agencies are making a consistent recommendation that all wind farms implement LWSC at all turbines, make it impossible to conduct a controlled experiment to evaluate LWSC effectiveness versus not using LWSC in Hawai'i. *Id.*

193. Although KNSC argued that data from the Kawailoa Wind Farm related to the effectiveness of LWSC should have been analyzed, such a study cannot be done. The Kawailoa Wind Farm has implemented LWSC since it began commercial operation; therefore, there is no way to compare fatality rates before and after LWSC implementation at that facility. *Id.* ¶ 19. The methodology used to estimate take at Kawailoa relied on the use of baseline acoustic activity data (*see* Ex. B-35), which is now recognized as an inappropriate way to predict Project fatalities. *See* Ex. A-54 at 11-15 (Hein et al. 2013). Therefore, the difference between estimated take in the Kawailoa Wind Farm HCP and that observed is unrelated to the effectiveness of LWSC in Hawai'i. Ex. A-1 at 43-44; Ex. A-53 (Snetsinger WRT) at ¶ 25.

194. The best available science regarding the potential benefits of LWSC exists in the experimental studies conducted at wind farms on the mainland that experience hundreds of bat fatalities per year. These studies, as cited in the HCP, have found LWSC to be effective at reducing the take of hoary bats. *See* Exs. A-5 & A-6; Ex. A-27 (Snetsinger WDT) at ¶ 20. The inclusion of conservative assumptions in the estimate accounts for any inherent uncertainty in its actual effectiveness. The LWSC analysis presented in the HCP was based on the best available science and the conclusions and rationale were supported by the ESRC, DOFAW, and the USFWS. Ex. A-1 at 43-44.

195. The HCP provides that the cut-in speed for LWSC will be 5 meters/second ("**m/s**"). KNSC argued that the cut-in speed should be 6.5 m/s. *See* Ex. B-15 at 70. However, the only study that proposes a cut-in speed of 6.5 m/s has been contradicted by multiple other studies finding that there is no significant difference in bat casualty rates between cut-in speeds of 5 m/s and 6.5 m/s. Vol. 1, Tr. 08/07/17 at 142:19-24; Ex. A-44 § IV.c at PDF page 7-8 & Figure 2; Exs. A-5 through A-9. The ESRC, in developing and adopting its Bat Guidance, Ex. A-44, reviewed the available studies on LWSC cut-in speeds. Some studies show that there is a difference between 5 and 6.5 m/s, and other show that there is no difference. Consistent with the research, the ESRC adopted guidance that LWSC cut-in speeds for wind energy projects in Hawai'i begin at a minimum of 5 m/s. Adaptive Management will be used to determine whether or not a higher cut-in speed is required. Ex. A-44 at A-44 § IV.c at PDF page 7-8; Vol. 1, Tr. 08/07/17 at 139:7-143:25.

196. Fretz testified that curtailing wind production at higher speeds could reduce bat take. Vol. 2, Tr. 08/08/17 at 200:4-6. He also testified that he does not think that the ESRC has the authority to tell an applicant to use additional LWSC if still under its take limit. Vol. 2, Tr. 08/08/17 at 200:24-8.

197. Applicant developed an estimate of take based on the per turbine fatality rate

observed at the Kahuku Wind Farm as the expected incidental take over the ITL term. The Tier 1 take estimate of 34 bats is the expected take over the ITL term of 20 years. Vol. 1, Tr. 08/07/17 at 76:14-23. However, to account for the uncertainty in the ability to estimate the effectiveness of LWSC and as well as uncertainty from other sources, Applicant identified a second tier of incidental take, that includes an additional 17 bats, that could be required if, for example, LWSC is not as effective at reducing Hawaiian hoary bat take as predicted. Ex. A-27 (Snetsinger WDT) at ¶¶ 15-16; Vol. 1, Tr. 08/07/17 at 76:24-77:2; Ex. A-1 at 43-44 & Table 7. The total requested take for the Hawaiian hoary bat for the Project is 51 bats. *Id.*

198. Specifically, 150% of the estimated take was used to develop the total requested take limit of 51 bats (the sum of Tier 1 and Tier 2). *See* Ex. A-27 at ¶ 17 (Snetsinger WDT). This approach was reviewed and approved by DOFAW, USFWS, and recommended for approval by the ESRC. *Id.* When combined with the conservative assumption associated with unobserved take, effectiveness of LWSC may be as low as 36% and still allow take to remain within the requested authorized take limit (*i.e.*, the Tier 2 limit). *Id.* In other words, using the best available information, Hawaiian hoary bat take is expected to be below the authorized take allowed under Tier 1. If, however, the effectiveness of LWSC assumed in the development of the Tier 1 estimate is inaccurate, Tier 2 would be triggered and Tier 2 mitigation would be initiated. Triggering of Tier 2 occurs when 75% of the take in Tier 1 has been used, allowing sufficient time for Tier 2 mitigation to begin prior to take occurring within that tier. *See* Ex. A-1 § 6.1.2.

199. Although data from Hawai'i are insufficient to measure a specific benefit to the application of LWSC, the observation of one (1) observed bat fatality over approximately the last four (4) years of operations at the Kahuku Wind Farm since implementing LWSC, and accounting for changes in search protocols at Applicant's proposed Project, is consistent with findings from mainland studies that demonstrated the benefit of this minimization measure at reducing bat fatalities. *See* Ex. A-55 at 8; *see also* Exs. A-5 through A-9.

200. Section 5 of the HCP also includes a discussion of the potential for population-level effects associated with the requested take authorization for each of the Covered Species. *Id.* at 41-55; Ex. A-29 (Oller WDT) at ¶ 62. No population-level effects are anticipated for any of the Covered Species from constructing, operating, or maintaining the proposed Project. Ex. A-29 (Oller WDT) at ¶ 62. This conclusion is supported by the DOFAW, USFWS, and ESRC approvals of the final HCP. *Id.* Cumulative impacts are also discussed in Section 5.6 of the HCP. Ex. A-1 at 55-56; Ex. A-29 (Oller WDT) at ¶ 63.

201. Section 9.4 of the HCP discusses the funding assurances to provide confidence that mitigation and other commitments in the HCP will be implemented. Ex. A-1 at 85-86; Ex. A-29 (Oller WDT) at ¶ 64; Ex. A-31 (Cutbirth WDT) at ¶ 22. A funding matrix is included as Appendix F to the HCP. Ex. A-1; Ex. A-29 (Oller WDT) at ¶ 64; Ex. A-31 (Cutbirth WDT) at ¶ 22. Applicant will provide financial assurances in the amount of approximately $4.6 million, with $3,736,050 for Tier 1 mitigation. Ex. A-1 at 85-86; Ex. A-31 (Cutbirth WDT) at ¶ 22. This will ensure funding for Tier 1 mitigation, the Post-Construction Monitoring Plan (Appendix A), and any required DOFAW compliance monitoring. *Id.* Funding assurances will be provided through an appropriate financial tool (*e.g.*, irrevocable letter of credit), depositing a sum of money in the endangered species trust fund created by HRS § 195D-31, or other means as

required and approved by the BLNR. Ex. A-31 (Cutbirth WDT) at ¶ 22. $894,000 will be provided to ensure Tier 2 mitigation. Ex. A-1 at 86.

202. Funding commitments for the Project were discussed with USFWS and DOFAW, who affirmed that any additional commitments, such as a Letter of Credit, will be made an express condition of the ITL, once approved. *See* Ex. A-1 at § 9.4, Ex. A-31 at ¶ 23 (Cutbirth WDT).

203. In sum, the HCP complies with HRS § 195D-21(b)(2)(C) by identifying the steps that will be taken to minimize and mitigate the negative impacts of the proposed Project, including the impact of any authorized incidental take, with consideration of the full range of impacts on each of the Covered Species on the island of O'ahu, and allowing for the cumulative impacts associated with the take to be adequately assessed. Ex. A-29 (Oller WDT) at ¶ 65. Available funding to implement those steps is also addressed. *Id.*

4. THE HCP SATISFIES HRS § 195D-21(B)(2)(D) BY IDENTIFYING 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 MEASURE OR ACTIONS; AND AN ADEQUATE FUNDING SOURCE TO ENSURE THAT THE ACTIONS OR MEASURES, INCLUDING MONITORING, ARE UNDERTAKEN IN ACCORDANCE WITH THE SCHEDULE (MO6 III.D)

204. This sub-criterion asks: does the HCP identify those measure 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 measure or actions; and an adequate funding source to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule? HRS § 195D-21(b)(2)(D).

205. Section 6 of the HCP describes mitigation actions to be undertaken which are designed to result in a net conservation benefit and improve survivability and habitat for the Covered Species. Ex. A-1 at 56-77; Ex. A-29 (Oller WDT) at ¶ 66. A timeline and measures of success, including monitoring and reporting requirements, are identified for each mitigation measure. *Id.*; Ex. A-44. As discussed above in Part VII.C.3, Section 9.4 of the HCP describes funding assurances which include funding for the implementation of mitigation actions and monitoring. Ex. A-1 at 85-86.

206. As further set forth above, to satisfy HRS § 195D-21(b)(2)(D), the HCP identifies: (i) measure or actions to be undertaken to protect, maintain, restore, or enhance the species, ecosystems, natural communities, or habitat types within the plan area; (ii) a schedule for implementation of the measure or actions; and (iii) an adequate funding source to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule. Ex. A-29 (Oller WDT) at ¶ 67. Therefore, the HCP satisfies this subcriterion.

5. THE HCP SATISFIES HRS § 195D-21(B)(2)(E) BECAUSE IT IS CONSISTENT WITH THE GOALS AND OBJECTIVES OF THE APPROVED RECOVERY PLAN FOR ENDANGERED OR THREATENED SPECIES KNOWN OR REASONABLY EXPECTED TO OCCUR IN THE ECOSYSTEMS, NATURAL COMMUNITIES, OR HABITAT TYPES IN THE PLAN AREA (MO6 III.E)

207. This sub-criterion asks: is the HCP consistent with the goals and objectives of any approved recovery plan for any endangered or threatened species known or reasonably expected to occur in the ecosystems, natural communities, or habitat types in the plan area? HRS § 195D-21(b)(2)(E).

208. Each of the mitigation actions identified in Section 6 of the HCP is consistent with the primary goals and objectives in the recovery plans for the Covered Species, and were developed in collaboration with the USFWS and DOFAW who are charged with recovery of these species. *See* Exs. A-45, A-46, A-47, A-48; Ex. A-29 (Oller WDT) at ¶ 68. For example, some of the primary actions identified in the Bat Recovery Plan are research and conservation of known occupied bat habitat (including acquisition of unprotected lands). *See* Ex. A-1 at 58-66; Ex. A-29 (Oller WDT) at ¶ 68. In addition, the HCP incorporates advancements in science made since the approval of the recovery plans. For example, while the mitigation actions identified for the Hawaiian hoary bat are consistent with the Bat Recovery Plan (Ex. A-45), the HCP also responds to the recent Bat Guidance (Ex. A-44), which incorporates more recent scientific analysis to identify priority mitigation actions. Ex. A-29 (Oller WDT) at ¶ 69.

209. Therefore, the HCP is consistent with the goals and objectives of the recovery plans for the Covered Species as required by HRS § 195D-21(b)(2)(E). Ex. A-29 (Oller WDT) at ¶ 70.

6. THE HCP SATISFIES § 195D-21(B)(2)(F) BECAUSE IT PROVIDES 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, INCLUDING ENDANGERED, THREATENED, PROPOSED, AND CANDIDATE SPECIES KNOWN OR REASONABLY EXPECTED TO BE PRESENT IN THE ECOSYSTEMS, NATURAL COMMUNITIES, OR HABITAT TYPES WITHIN THE PLAN AREA (MO6 III.F)

210. This sub-criterion asks: does the HCP 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, including any endangered, threatened, proposed, and candidate species known or reasonably expected to be present in the ecosystems, natural communities, or habitat types within the plan

area? HRS § 195D-21(b)(2)(F).

211. No significant adverse habitat-based impacts are anticipated that would affect the Covered Species. *See* Ex. A-1 at § 5; Ex. A-29 (Oller WDT) at ¶ 71. While the Covered Species have the potential to be impacted while transiting through the Project Area, Project operations as planned will not negatively affect the quality, quantity, or distribution of habitats as they relate to the Covered Species. Ex. A-29 (Oller WDT) at ¶ 72. These impacts will be offset by the planned mitigation actions that are designed to benefit the Covered Species, including maintaining or benefiting habitats for the Covered Species. *Id.* at ¶ 73.

212. The mitigation efforts planned for the Project include actions with long-term benefits and effects which are expected to outlast the term of the ITL. *Id.* at ¶ 74. Section 6 of the HCP describes how mitigation actions vary in their goals and expected outcomes; yet each mitigation action provides a reasonable certainty that benefits to the Covered Species will continue beyond the ITL term. *Id.* As an example, the construction of barrier fences and restoration of native habitats are likely to persist longer than the ITL term. *Id.* at ¶ 75. The achievement of goals such as improving knowledge through focused research, or of how to manage a habitat for the benefit of a species will have positive effects manifested through the improvement of future mitigation efforts, extending well beyond the ITL term. *Id.*

213. As discussed above in Part VII.A and VII.B, the mitigation and minimization measures that will be implemented as part of the Project are expected to provide a net benefit to the Covered Species by restoring, protecting, and maintaining habitat for the Covered Species. *See* FOF 107 - 178. The mitigation and minimization measures were developed in consultation with and based on the recommendations of the Agencies.

214. The HCP provides reasonable certainty that the species, ecosystems, natural communities, or habitat types related to the Covered Species will be maintained in the plan area, throughout the life of the plan, and even beyond, in sufficient quality, distribution, and extent to support the Covered Species, typically associated with the ecosystems, natural communities, or habitat types, including any proposed or candidate species known or reasonably expected to be present in the plan area. *Id.* at ¶ 76. Accordingly, the HCP satisfies HRS § 195D-2 1(b)(2)(F).

7. THE HCP SATISFIES § 195D-21(B)(2)(G) BECAUSE IT CONTAINS: I) OBJECTIVE, MEASURABLE GOALS, THE ACHIEVEMENT OF WHICH WILL CONTRIBUTE SIGNIFICANTLY TO THE PROTECTION, MAINTENANCE, RESTORATION, OR ENHANCEMENT OF THE ECOSYSTEMS, NATURAL COMMUNITIES, OR HABITAT TYPES; II) TIME FRAMES WITHIN WHICH THE GOALS ARE TO BE ACHIEVED; III) PROVISIONS FOR MONITORING (SUCH AS FIELD SAMPLING TECHNIQUES), INCLUDING PERIODIC MONITORING BY REPRESENTATIVES OF DLNR OR THE ENDANGERED SPECIES RECOVERY COMMITTEE, OR BOTH; AND IV) PROVISIONS FOR EVALUATING PROGRESS IN ACHIEVING THE GOALS QUANTITATIVELY AND QUALITATIVELY (MO6 III.G)

215. This sub-criterion asks: does the HCP contain objective, measurable 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 monitoring (such as field sampling techniques), including periodic monitoring by representatives of DLNR or the endangered species recovery committee, or both; and provisions for evaluating progress in achieving the goals quantitatively and qualitatively? HRS § 195D-21(b)(2)(G).

216. Section 6 of the HCP describes objective measurable goals for each mitigation action and the measures of success for each mitigation action, which define timelines required for successful implementation of the mitigation measures. *See* Ex. A-1 at 56-77; Ex. A-29 (Oller WDT) at ¶ 77. The mitigation goals and measures of success were developed using the best available science in consultation with, and approved by, DOFAW, USFWS, and the ESRC over a 3 year period. Ex. A-29 (Oller WDT) at ¶ 78. Monitoring these mitigation goals and associated reporting requirements will ensure that goals are met. *Id.* at ¶ 79. As discussed above, mitigation approaches and measures of success were refined throughout the HCP development process to include the most up-to-date information. *Id.* at ¶ 80. For example, the HCP includes updates incorporating recommendations from the Bat Guidance finalized in December 2015. Ex. A-44; Ex. A-29 (Oller WDT) at ¶ 80.

217. Regarding the success criteria for the restoration component of the mitigation, techniques are not currently available to measure the increase in bat population in the Poamoho Ridge mitigation area with any degree of certainty. Therefore, as supported by DOFAW, USFWS, and the ESRC, measures of habitat quality were identified to act as appropriate surrogate measures to track and demonstrate improvements to habitat expected to benefit the Hawaiian hoary bat. For the research component of mitigation, success criteria include design and implementation of an approved study and various reporting requirements. Over the course of the HCP term, DOFAW, USFWS, and the ESRC will have regular input through annual review and will also have approval authority over implementation of all key elements of the HCP. Ex. A-1 at 65-66; Ex. A-27 (Snetsinger WDT) at ¶ 31.

218. Section 7 of the HCP requires annual reporting to the ESRC throughout the HCP and ITL permit term. Ex. A-29 (Oller WDT) at ¶ 81. Section 9.4 of the HCP ensures

compliance monitoring funding for DLNR. *Id.*; *see also* Ex. A-1 at 77-79, 85-86. Furthermore, the HCP identifies areas of significant approval authority for DOFAW, USFWS, and the ESRC in regards to the management plan for the Poamoho Ridge mitigation area and the Hawaiian hoary bat research plan. Ex. A-29 (Oller WDT) at ¶ 82; Ex. A-1 at § 6.1.4 & App. E.

219. The HCP contains objective, measurable goals, approved by DOFAW, USFWS, and the ESRC, the achievement of which will contribute significantly to the protection, maintenance, restoration, or enhancement of the ecosystems, natural communities, or habitat types for the Covered Species. Ex. A-29 (Oller WDT) at ¶ 83. The time frames within which these goals are to be achieved and provisions for evaluating progress in achieving the goals quantitatively and qualitatively are set forth in the HCP, along with provisions for monitoring, including periodic monitoring by representatives of DLNR, DOFAW, and the ESRC. *Id.* at ¶ 84. Accordingly, the HCP satisfies HRS § 195D-21(b)(2)(G). *Id.*

8. THE HCP SATISFIES § 195D-21(B)(2)(H) BECAUSE IT PROVIDES FOR ADAPTIVE MANAGEMENT STRATEGIES THAT SPECIFIES THE ACTIONS TO BE TAKEN PERIODICALLY IF THE PLAN IS NOT ACHIEVING ITS GOALS (MO6 III.H)

220. This sub-criterion asks: does the HCP provide for an Adaptive Management strategy that specifies the actions to be taken periodically if the plan is not achieving its goals? HRS § 195D-21(b)(2)(H).

221. "Adaptive Management" is defined by the U.S. Department of the Interior as "a structured approach to decision making in the face of uncertainty that makes use of the experience of management and the results of research in an embedded feedback loop of monitoring, evaluation, and adjustments in management strategies." Ex. A-1 at 86.

222. Uncertainties include a lack of biological information for the Covered Species, lack of knowledge about the effectiveness of mitigation or management techniques, or doubt about the anticipated effects of the Project. Ex. A-1 at 86.

223. Adaptive Management is a required component of all HCPs. *See* HRS § 195D-21(b)(2)(H). It allows for the incorporation of new information into conservation and mitigation measures during HCP implementation. Ex.A-1 at 86.

224. In satisfaction of HRS § 195D-21(b)(2)(H), Section 9.5 of the HCP provides an Adaptive Management strategy which identifies specific actions appropriate to addressing circumstances if the stated goals are not being met. Ex. A-1 at 86-87; Ex. A-29 (Oller WDT) at ¶ 85. Adaptive Management is a required component of HCPs that takes into account uncertainty and allows the incorporation of new information into conservation mitigation measures during HCP implementation. Ex. A-1 at 86; Ex. A-29 (Oller WDT) at ¶ 86. The annual reporting requirements also provide an opportunity to engage with DOFAW, USFWS, and the ESRC to address challenges in achieving the stated goals. Ex. A-29 (Oller WDT) at ¶ 86.

225. Adaptive Management is considered when an observed fatality of a Covered Species occurs, when challenges to meeting measures of success are identified, and during the annual report review process. *See* Vol. 1, Tr. 08/07/17 at 63:3-23. When an observed fatality for

a Covered Species occurs, the first question addressed with the Agencies is, "[i]s there any adaptive management that is needed?" (i.e., is there something we could have done to prevent this?). *See id.* For example, if a Hawaiian hoary bat fatality is observed outside of the period when LWSC is being implemented, Applicant would consult with USFWS and DOFAW to consider if expanding the period of LWSC is appropriate. In general, the answer to this question would be yes, there is a risk that we may be able to reduce by expanding the period of LWSC; however, expansion of this period may not always be appropriate (*e.g.*, if the observed fatality occurs during an anomalous weather event). Similarly, permitting challenges for the Hamakua Marsh fence might suggest adapting the approaches described in the HCP by adjusting the fence parameters. *See* Ex. A-1 at 71-74. The range of potential future outcomes requires that successful adaptive management language be flexible. *See id.*; Ex. A-1 § 9.5 at 86-87; *see also infra* FOF 324-330.

226. Accordingly, the HCP provides for an Adaptive Management strategy, satisfying HRS § 195D-21(b)(2)(H).

D. BASED ON THE BEST SCIENTIFIC AND RELIABLE DATA AVAILABLE, THE CUMULATIVE ACTIVITIES UNDERTAKEN WITHIN THE AREAS COVERED BY THE HCP WILL BE ENVIRONMENTALLY BENEFICIAL (MO6 IV)

227. This fourth criterion asks: based on the best scientific and reliable data available, will the cumulative activities to be undertaken within the areas covered by the HCP not be environmentally beneficial? HRS § 195D-21(c).

228. Applicant worked closely with DOFAW, USFWS, and the ESRC to develop a HCP that avoids and minimizes adverse impacts to the Covered Species to the maximum extent practicable, and that mitigates for unavoidable adverse impacts. Ex. A-1 at 8; Ex. A-29 (Oller WDT) at ¶ 88. The planned HCP mitigation actions from all activities are designed with the best scientific data to provide a net benefit to each of the Covered Species. Ex. A-29 (Oller WDT) at ¶ 89. For instance, the approach used for developing mitigation for the Hawaiian hoary bat is addressed below, but a similar process using the best available scientific information was used for each Covered Species. *See id.*; Ex. A-1 at § 6.

229. An inherent limitation to all HCPs in Hawai'i that include the Hawaiian hoary bat is that there are many information gaps on the biology of the Hawaiian hoary bat, its limiting factors, and the effectiveness of certain mitigation measures. Ex. A-27 (Snetsinger WDT) at ¶ 28; *see* FOF 78. Project applicants, the agencies, and the ESRC necessarily rely on assumptions based on the best scientific information available. *See, e.g.*, FOF 81, 121, 122, 140, 145, 156, 159, 169, 216, *infra* FOF 252, 280, 288, 326.

230. However, in recognizing the importance of a balanced mitigation strategy, DOFAW, USFWS, and the ESRC have recommended and agreed to a mitigation strategy for the Project that includes funding for both research and habitat restoration based on this recommended financial commitment of approximately $50,000 per bat. Ex. A-44 at PDF pages 19-20; Ex. A-27 (Snetsinger WDT) at ¶ 29; Ex. A-29 (Oller WDT) at ¶ 92-93. This measure and funding amount have been adopted as an interim step to provide a financial structure to develop

approaches that will inform and refine future on-the-ground mitigation/management efforts to aid in the recovery of the Hawaiian hoary bat. Ex. A-44 at PDF pages 19-20. As described in the ESRC Bat Guidance, this funding amount is based in part on costs of conducting restoration at a mitigation ratio of approximately 40 acres per pair of bats. Ex. A-44 at PDF page 16.

231. The benefits from the restoration and management actions identified in the HCP (which include fencing to prevent habitat destruction by ungulates) are expected to persist longer than the wind farm operation and benefit the entire watershed, each of the Covered Species, as well as support the life expectancy requirements of the Hawaiian hoary bat. Ex. A-27 (Snetsinger WDT) at ¶ 30; Ex. A-29 (Oller WDT) at ¶ 94. The reforestation will not only benefit the Hawaiian hoary bat by enhancing habitat for bat foraging, roosting, and breeding, but also the entire watershed by enhancing regrowth of native forests and allowing better management of invasive species. Ex. A-1 at 59-63; Ex. A-29 (Oller WDT) at ¶ 95. These expected short-term and long-term benefits of the restoration actions support the conclusion that the mitigation actions provide a net benefit to the species. Ex. A-1 § 6.1.3 at 65; Ex. A-27 (Snetsinger WDT) at ¶ 30; Ex. A-29 (Oller WDT) at ¶ 95.

232. As described above in Part VII.A and VII.B, the measures implemented through the HCP further the purposes of HRS Chapter 195D by protecting, maintaining, restoring, and enhancing the ecosystems the Covered Species depend on and will increase the likelihood of recovery of the Covered Species. *See* FOF 107 - 178.

233. Accordingly, based on the best scientific data available, the cumulative activities proposed to be undertaken within the areas covered by the HCP will be environmentally beneficial, in compliance with HRS § 195D-21(c). Ex. A-29 (Oller WDT) at ¶ 87.

E. 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 (MO6 V)

234. This fifth criterion asks: will implementation of the HCP likely to jeopardize the continued existence of any endangered, threatened, proposed, or candidate species identified in the plan area? HRS § 195D-21(c)(1).

235. The Project and implementation of the HCP is not likely to jeopardize the continued existence of any Covered Species (or other endangered, threatened, proposed, or candidate species). Ex. A-29 (Oller WDT) at ¶ 96. As described in Section 6 of the HCP and above in Part VII.C.3, implementation of the HCP is not expected to have adverse population-level impacts on any of the Covered Species and mitigation measures are expected to improve survivability of the Covered Species and provide a net benefit. Ex. A-1 at 56-77; Ex. A-29 (Oller WDT) at ¶ 96. Because take is expected to be low in the Project Area, mitigation and habitat enhancements overall are designed to provide a net benefit for the habitat and survivability of the Hawaiian hoary bat. Adaptive Management will also be utilized to react to situations that differ from those assumed in the HCP or are learned through further scientific research efforts, so that the Project will provide a positive survival prospect for the species. Ex. A-29 (Oller WDT) at ¶ 97. Accordingly, the HCP complies with HRS § 195D-21(c)(1). *Id.*

236. Furthermore, other causes of avian mortality, *e.g.*, collisions with buildings, high tension wires, communication towers, cars, and environmental toxins and predators (domestic cats), have a significantly greater impact on avian mortality than wind farms and mortality from wind farms is a very small fraction of total avian fatalities. Ex. A-50 at 8.

237. As discussed above in Part VII.A and VII.B, the mitigation and minimization measures that will be implemented as part of the Project are expected to provide a net benefit to the Covered Species by restoring, protecting, and maintaining habitat for the Covered Species. *See* FOF FOF 107 - 178. The mitigation and minimization measures were developed in consultation with the Agencies.

238. Therefore, the implementation of the HCP is not likely to jeopardize the continued existence of the Covered Species.

F. 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 (MO6 VI)

239. This sixth criterion asks: will implementation of the HCP likely to cause any native species not endangered or threatened at the time of plan submission to become threatened or endangered? HRS § 195D-21(c)(2).

240. The Project and implementation of the HCP is not likely to cause any native species to become listed as threatened or endangered. Applicant studied the Project Area to prepare the HCP, and these efforts included a biological reconnaissance survey and a 1-year avian point count survey. *See* Exs. A-3 & A-4; Ex. A-29 (Oller WDT) at ¶ 98. These surveys were one of the primary sources in understanding the distribution and abundance of any species in the Project Area. *Id.* Results from these surveys are described in Section 3 of the HCP. Ex. A-1 at 13-37; Ex. A-29 (Oller WDT) at ¶ 99. Overall, the proposed Project Area has been highly disturbed by agricultural activities, and the vegetation is dominated by a mixture of aggressive non-native weedy species that took over following the abandonment of sugar cane agriculture. See Ex. A-18 (App. E to FEIS – Biological Survey Report) at 2; Ex. A-29 (Oller WDT) at ¶ 99. Plants and wildlife are dominated by non-native species and no listed threatened or endangered plant species were identified in the Project Area. Ex. A-1 at 4; Ex. A-29 (Oller WDT) at ¶ 100. Non-listed native species are widespread and common outside of the Project Area. Local impacts to these species associated with the construction, operation and decommissioning of the Project will not substantially increase the risk of causing any of those species to become threatened or endangered. Ex. A-1 at 4; Ex. A-29 (Oller WDT) at ¶ 101.

241. Through the implementation of the HCP, the Project is not likely to cause any native species not currently listed as threatened or endangered at the time of plan submission to become threatened or endangered, the HCP satisfies HRS § 195D-21(c)(2). Ex. A-29 (Oller WDT) at ¶ 102.

G. THE HCP CONTAINS SUFFICIENT INFORMATION FOR THE BLNR TO ASCERTAIN WITH REASONABLE CERTAINTY THE LIKELY EFFECT OF THE PLAN UPON ANY ENDANGERED, THREATENED, PROPOSED, OR CANDIDATE SPECIES IN THE PLAN AREA AND THROUGHOUT ITS HABITAT RANGE (MO6 VII)

242. This seventh criterion asks: does the HCP contain sufficient information for the BLNR to ascertain with reasonable certainty the likely effect of the plan upon any endangered, threatened, proposed, or candidate species in the plan area and throughout its habitat range? HRS § 195D-21(c).

243. The HCP contains a robust analysis of the potential impacts of the Project on the Covered Species and the benefits of the proposed mitigation measures, meeting the requirements of HRS § 195D-21(c). *See* Ex. A-1 at §§ 5 & 6; Ex. A-29 (Oller WDT) at ¶ 103. The analysis in the HCP was done using the best scientific information available incorporating approved methodologies of the State and Federal Agencies. Ex. A-29 (Oller WDT) at ¶ 103. The HCP defines a monitoring approach to continuously measure the effects of the Project on the Covered Species, defines measures of success and monitoring to evaluate the benefit of the mitigation efforts, and provides a reporting framework that will facilitate annual review of the HCP by the ESRC, USFWS, and DOFAW to confirm the accuracy of the assumptions throughout the permit term. Ex. A-1 at § 7 & App. A; Ex. A-29 (Oller WDT) at ¶ 104. Thus, as set forth in these findings, the HCP provides the information necessary to evaluate with reasonable certainly the effects of the Project and also provides a means for continuously evaluating its effectiveness and mechanisms for Adaptive Management over the term of the HCP. Ex. A-29 (Oller WDT) at ¶ 105.

H. THE PUBLIC WAS NOTIFIED OF THE PROPOSED HCP THROUGH THE PERIODIC BULLETIN OF THE OEQC, AND THE PROPOSED HCP AND APPLICATION WERE AVAILABLE FOR PUBLIC REVIEW AND COMMENT FOR AT LEAST 60 DAYS PRIOR TO APPROVAL (MO6 VIII)

244. This eighth criterion asks: was the public notified of the proposed HCP through the periodic bulletin of the office of environmental quality control, and was the proposed HCP and application available for public review and comment for at least 60 days prior to approval? HRS § 195D-21(a).

1. THE NOTICE IN THE OEQC BULLETIN IDENTIFIED THE AREA ENCOMPASSED BY THE HCP, THE PROPOSED ACTIVITY, AND THE ECOSYSTEMS, NATURAL COMMUNITIES, AND HABITAT TYPES WITHIN THE PLAN AREA (MO6 VIII.A)

245. This sub-criterion asks: did the notice in the OEQC bulletin identify the area encompassed by the HCP, the proposed activity, and the ecosystems, natural communities, and habitat types within the plan area? HRS § 195D-21(a).

246. The public was notified of the proposed HCP through the notices published in OEQC's *Environmental Notice*. The draft HCP was published in the *Environmental Notice* on

March 8, 2015. Ex. A-37; Ex. A-29 (Oller WDT) at ¶ 107. The draft HCP was available for public review and comment for a 90-day period—30 days longer than the statutory 60-day public comment period. Ex. A-29 (Oller WDT) at ¶ 107. The initial 60-day public comment period was extended to 90-days in the May 8, 2015 *Environmental Notice*. Ex. A-38; Ex. A-29 (Oller WDT) at ¶ 108. The notice identified the area encompassed by the HCP, the proposed Project and HCP activities, and the ecosystems, natural communities, and habitat types within the HCP area. *See* Ex. A-37; Ex. A-29 (Oller WDT) at ¶ 108. Thus, notice for the HCP satisfies the requirements of HRS § 195D-21(a).

2. NOTICE PROVIDED IN THE OEQC BULLETIN SOLICITED PUBLIC INPUT AND RELEVANT DATA (MO6 VIII.B)

247. This sub-criterion asks: Did the notice in the OEQC bulletin solicit public input and relevant data? HRS § 195D-21(a).

248. Both public input and relevant data were requested and received during this comment period. Ex. A-26 (Copies of HCP comments and data received during comment periods); Ex. A-29 (Oller WDT) at ¶ 109. On February 17, 2015, the draft HCP was submitted for publication in OEQC's *Environmental Notice*. Ex. A-29 at ¶ 110 (Oller WDT). On March 8, 2015 the draft HCP was published in the OEQC Environmental Bulletin. *Id.* A public hearing on the draft HCP was held on June 4, 2015. Ex. A-29 (Oller WDT) at ¶ 109. Furthermore, the ESRC noticed and held public meetings on the proposed final HCP, including the meeting on December 14, 2015 and the final public meeting on February 25, 2016. The President of KNSC was present at the February 25th meeting and made no public objection or adverse comments about the HCP at the meeting. Vol. 1, Tr. 08/07/17 at 154:3-11.

249. Accordingly, the notice in the *Environmental Notice* solicited public input and relevant data regarding the HCP, thereby satisfying this sub-criterion.

I. THE HCP MEETS THE CRITERIA OF HRS § 195D-4(g) (MO6 IX)

250. This ninth criterion asks: does the HCP meet the criteria of HRS § 195D-4(g)?

1. THE HCP WAS DEVELOPED AFTER CONSULTATION WITH THE ESRC (MO6 IX.A)

251. This sub-criterion asks: was the HCP developed after consultation with the endangered species recovering committee? HRS § 195D-4(g).

252. The ESRC is comprised of technical experts, biologists and scientists from State and Federal agencies, non-governmental entities, and independent experts. *See* Ex. A-1 at 11; Ex. A-31 (Cutbirth WDT) at ¶ 21; Ex. A-29 (Oller WDT) at ¶ 111. The members of the ESRC have expertise in threatened and endangered species conservation and used the best available science to evaluate the HCP. *Id.* ESRC does an excellent job for the State and has extremely high standards that ensure the requirements of HRS §§ 195D-4(g) and 195D-21 are met. *See* Ex. A-31 (Cutbirth WDT) at ¶ 21; Ex. A-29 (Oller WDT) at ¶ 112.

253. The HCP was developed through extensive consultation not only with the ESRC,

but also with multiple levels at DOFAW and USFWS, species experts, other important stakeholders, and the public. Ex. A-29 (Oller WDT) at ¶ 113. Input and the incorporation of requirements and revisions from the ESRC occurred throughout the development process and public review periods of the HCP. *Id.* Public meetings with the ESRC were held on the following dates:

- July 2, 2014 – Informational presentation to ESRC
- March 30, 2015 – ESRC site visit to the Project
- March 31, 2015 – Review of draft HCP during the State public comment period
- December 17, 2015 – Review of draft final HCP
- February 25, 2016 – Review of revised draft final HCP; ESRC recommendation to BLNR for approval of final HCP granted

Id.

254. After thorough consultation with the ESRC, the ESRC ultimately recommended to the Board that the HCP be approved. *See* Ex. A-2 at 4; Ex. A-36; FOF 312-313, 332-333.

255. As detailed in these findings of fact and conclusions of law, the HCP was developed through extensive consultation with the ESRC. Therefore, the HCP satisfies this sub-criterion.

2. THE TAKE AUTHORIZED BY THE ITL IS INCIDENTAL TO, AND NOT THE PURPOSE OF, THE CARRYING OUT OF AN OTHERWISE LAWFUL ACTIVITY (MO6 IX.B)

256. This sub-criterion asks: is the take authorized by the incidental take license incidental to, and not the purpose of, the carrying out of an otherwise lawful activity? HRS § 195D-4(g).

257. As described in Section 1.1 of the HCP, the purpose of the proposed Project is to generate renewable wind energy on the island of O'ahu. Ex. A-1 at 1; Ex. A-29 at ¶ 115 (Oller WDT). This Project will help Hawai'i achieve its 100% renewable energy initiative that was signed into law by the Governor last summer. H.B. 623; HRS § 269-92; Ex. A-29 at ¶ 115 (Oller WDT). To that end, wind-generated energy facilities are authorized under the State land use laws. *See* HRS § 205-2; Ex. A-29 (Oller WDT) at ¶ 116. Furthermore, renewable energy facilities, like the proposed Project, are encouraged by the State of Hawai'i, through the Hawai'i Clean Energy Initiative. Ex. A-29 (Oller WDT) at ¶ 117.

258. Therefore, construction and operation of the proposed Project is an otherwise lawful activity, which has the potential to result in an incidental take of State and Federal listed species. *Id.* at ¶ 118.

3. THE HCP, TO THE MAXIMUM EXTENT PRACTICABLE, MINIMIZES AND MITIGATES THE IMPACTS OF THE ANTICIPATED TAKE (MO6 IX.C)

259. This sub-criterion asks: does the HCP, to the maximum extent practicable, minimize and mitigate the impacts of the take? HRS § 195D-4(g)(1).

260. Section 4 of the HCP describes avoidance and minimization measures developed in consultation with DOFAW and USFWS, and approved by the ESRC. Ex. A-1 at 37-40; Ex. A-36 (02/25/16 ESRC Meeting Minutes) at 5-6; Ex. A-29 (Oller WDT) at ¶ 119. These measures are consistent with agency guidance and recommendations and represent avoidance of impacts to the Covered Species to the maximum extent practicable. Ex. A-29 (Oller WDT) at ¶ 119. Section 6 of the HCP also discusses the avoidance and minimization and mitigation measures that were developed in consultation with the USFWS, DOFAW, and the ESRC, which include:

- Avoiding impacts to Covered Species that can be prevented, for example, by not clearing trees when tree-roosting Hawaiian hoary bat pups that are incapable of flying could be killed or injured;
- Minimizing to the maximum extent practicable, impacts that cannot be avoided, for example, implementing LWSC at night to reduce the risk of take of the Hawaiian hoary bat; and
- Mitigating to a net benefit for the remaining impacts as described in examples in III (F) and IV (above) and described in Section 6 of the HCP.

Id. at ¶ 120.

261. As required by HRS § 195D-4(g)(1), the HCP accomplishes all of these objectives. *Id.*

262. The HCP provides a methodology and the biological information necessary to account for impacts to the Hawaiian hoary bat. This includes accounting for impacts to bats potentially killed by the turbines and dependent offspring. Ex. A-1 at 41-45 & Table 6, § 7.1.2 at 78, and App. A at 12. The HCP provides a robust monitoring plan for the life of the Project that will account for Project impacts including breeding individuals and dependent offspring. *See* Ex. A-1, App. A. All estimated take will be mitigated for using the mitigation framework provided in the HCP. Ex. A-1 at 57-66. Accordingly, contrary to KNSC's claims, the HCP includes elements designed to minimize impacts and provide a net benefit to the Hawaiian hoary bat through appropriate mitigation efforts.

263. Furthermore, the HCP provides for Adaptive Management measures that allow for adjustments to the minimization and mitigation measures if it is determined that such changes need to be made throughout the term of the ITL. *See* FOF 220-226, *infra* FOF 324-330.

264. All estimated take will be mitigated for using the mitigation framework provided in the HCP. Ex. A-1 at 57-66; FOF 107 - 178. Accordingly, the HCP includes elements designed to minimize impacts to the maximum extent practicable and provide a net benefit to the

Hawaiian hoary bat through appropriate mitigation efforts.

4. THE HCP GUARANTEES THAT APPLICANT WILL PROVIDE ADEQUATE FUNDING FOR THE HCP (MO6 IX.D)

265. This sub-criterion asks: is there a guarantee that the applicant will provide adequate funding for the HCP? HRS § 195D-4(g)(2).

266. As required by HRS § 195D-4(g)(2), Applicant has adequate funding for the HCP and will provide any required financial guarantee tool requested and approved by the BLNR (*e.g.*, an irrevocable letter of credit). Ex. A-1 at § 9.4; Ex. A-29 (Oller WDT) at ¶ 121. The Project's operational mitigation funds will be deposited in the endangered species trust fund created by HRS § 195D-31. Ex. A-1 at § 9.4. The funds will be adequate to ensure monitoring of the Covered Species by the State and to ensure that Applicant takes all actions necessary to minimize and mitigate the impacts of the take. Ex. A-29 (Oller WDT) at ¶ 122. Funding assurances include a budget for DOFAW to conduct compliance monitoring, if needed. *Id.* These funds will be used by DOFAW to verify Applicant's compliance with the terms of an approved HCP and corresponding ITL. *Id.*

267. The funding details of the HCP are described above in Part VII.C.3. *See* FOF 201-203, *infra* FOF 292. Accordingly, Applicant has guaranteed that there will be adequate funding to implement the HCP.

5. THE APPLICANT WILL PROVIDE THE MEANS, AS APPROVED BY THE BLNR, NECESSARY AND ADEQUATE TO ENSURE THAT THE APPLICANT TAKES ALL ACTIONS NECESSARY TO MINIMIZE AND MITIGATE THE IMPACTS OF THE TAKE (MO6 IX.E)

268. This sub-criterion asks: is the applicant required to post a bond, provide an irrevocable letter of credit, insurance, or surety bond, or provide other similar financial tools, including depositing a sum of money in the endangered species trust fund created under HRS § 195D-31, or provide other means approved by the Board, adequate to ensure monitoring of the species by the State and to ensure that the applicant takes all actions necessary to minimize and mitigate the impacts of the take? HRS § 195D-4(g)(3).

269. Applicant has committed to funding the HCP as discussed in Part VII.C.3.

270. Pursuant to the mandate of HRS § 195D-4(g)(3), Applicant is committed to provide all additional funding commitment requirements as directed by the BLNR upon approval of the HCP and ITL. Ex. A-29 (Oller WDT) at ¶ 124. To date, no additional funding requirements have been requested by USFWS, DOFAW, or ESRC but all commitments will be performed as stated in the final HCP. *See* Ex. A-29 (Oller WDT) at ¶ 124; Ex. A-31 (Cutbirth WDT) at ¶¶ 22-23.

271. Thus, the HCP satisfies this sub-criterion.

6. THE HCP WILL INCREASE THE LIKELIHOOD THAT THE COVERED SPECIES WILL SURVIVE AND RECOVER (MO6 IX.F)

272. This sub-criterion asks: does the HCP increase the likelihood that the species will survive and recover? HRS § 195D-4(g)(4).

273. As set forth above in these findings, the HCP was designed to develop and use mitigation measures that will increase the likelihood of survivability and recovery for all of the Covered Species, in satisfaction of HRS § 195D-4(g)(4). Ex. A-29 (Oller WDT) at ¶ 125; *see* Part VII.A and VII.B. By developing conservative estimates of take and providing mitigation for a net benefit from those conservative estimates, the HCP increases the likelihood that each of the Covered Species will survive and recover. *See* Ex. A-1 at §§ 5 & 6; Ex. A-29 (Oller WDT) at ¶ 125.

274. Furthermore, by including a framework for monitoring and reporting Project-related impacts and the effectiveness of the mitigation actions throughout the HCP term, the HCP provides confidence that actual take will not exceed estimates and that mitigation efforts and species habitat enhancements will achieve its goals. Ex. A-1 at § 7; Ex. A-29 (Oller WDT) at ¶ 126.

275. Finally, should monitoring suggest that the take is higher than expected or that mitigation is not achieving the targeted goals, the HCP provides an Adaptive Management structure to address and remedy these issues in consultation with USFWS and DOFAW. *See* Ex. A-1 at § 9.5; Ex. A-29 (Oller WDT) at ¶ 127.

276. Accordingly, the HCP satisfies this sub-criterion.

7. THE HCP CONSIDERS THE FULL RANGE OF SPECIES ON THE ISLAND SO THAT CUMULATIVE IMPACTS ASSOCIATED WITH THE TAKE ARE ADEQUATELY ASSESSED (MO6 IX.G)

277. This sub-criterion asks: Does the HCP take into consideration the full range of the species on the island so that cumulative impacts associated with the take can be adequately assessed? HRS § 195D-4(g)(5).

278. As required under HRS § 195D-4(g)(5), the HCP takes into consideration the full range of the Covered Species on the island of O'ahu so that cumulative impacts associated with the take of each Covered Species can be adequately assessed. Ex. A-29 (Oller WDT) at ¶ 128; Ex. A-1 at 13-37; *supra* Part VII.C.3, FOF 188-203.

279. Section 3 of the HCP describes the full range of each of the Covered Species using the best available scientific data, allowing for an adequate assessment of cumulative impacts. Ex. A-1 at 13-37; Ex. A-29 (Oller WDT) at ¶ 129. A summary assessment of potential population-level impacts to each of the Covered Species is provided in Section 5 of the HCP and concludes that no population-level effects are expected. Ex. A-1 at 41-56 Ex. A-29 (Oller WDT) at ¶ 129.

280. The cumulative impacts of the proposed Project are discussed in Section 5.6 of

the HCP. Ex. A-1 at 55-56; Ex. A-29 (Oller WDT) at ¶ 130. Section 5 includes a discussion of the potential for population level effects associated with the requested take authorization for each of the Covered Species. Ex. A-1 at 41-55; Ex. A-29 (Oller WDT) at ¶ 130. No population level effects are anticipated for any of the Covered Species as a result of the Project. *Id.* This conclusion is supported by the acceptance of the final HCP from DOFAW and USFWS, and by the ESRC approval of the final HCP. *Id.*

281. Furthermore, the HCP identifies the steps that will be taken to minimize and mitigate the negative impacts of the proposed Project, including the impact of any authorized incidental take, with consideration of the full range of impacts on the Covered Species habitats on the island of O'ahu allowing for the cumulative impacts associated with the take to be adequately assessed. *Id.* at ¶ 131.

282. Cumulative impacts to the Hawaiian hoary bat are discussed in the HCP with a more complete evaluation of potential impacts presented in the referenced FEIS. *See* Ex. A-1 § 5.6; Ex. A-12 at -106 to 4-112. Population level impacts are discussed in Section 5.1.4 of the HCP. Cumulative impacts on the Hawaiian hoary bat are assessed on a population basis. The populations of the Hawaiian hoary bat on each island are assessed on an island-specific basis. *See* HRS § 195D-21(b)(2)(C). Accordingly, it was appropriate for Applicant's HCP to consider and focus on the cumulative impacts to the Hawaiian hoary bat population on the island of O'ahu. See Ex. A-12 at 4-106 to 4-112; Ex. A-1 at 55-56; see also Ex. A-12 at 4-5 to 4-6 & Table 4.2-1; Ex. A-53 (Snetsinger WRT) at ¶ 14.

283. While the ability to definitively evaluate cumulative impacts of the Hawaiian hoary bat on O'ahu are based on available island-wide information, recent studies performed by or for O'ahu based wind farms have confirmed the Hawaiian hoary bat has a larger and more widespread population on O'ahu than previously thought. Ex. A-1 at 18, 56; Ex. A-53 (Snetsinger WRT) at ¶ 15; Vol. 1, Tr. 08/07/07 at 130:23-131:10.

284. Three of the five major wind farms to which KNSC refers are located on the island of Maui—the other two, the Kahuku Wind Power and Kawailoa Wind Power projects, are located on O'ahu. The HCP references the background information and data used to support the cumulative impact conclusions with additional detail provided in the FEIS cumulative impacts analysis. *See* Ex. A-1 at 55-56; Ex. A-12 at 4-106 to 4-112. The "analysis area" for bats consisted of the island of O'ahu and to capture other operating wind farms on O'ahu which could impact the same populations of species that are the focus of the HCP. *Id.*; Ex. A-53 (Snetsinger WRT) at ¶ 16.

285. Table 4.2-2 in the FEIS lists past, present, and reasonably foreseeable actions that overlap in space and time with the anticipated impacts of the Project. Ex. A-12 at 4-8 to 4-10. For bats, relevant actions include other operational wind farms on O'ahu, as well as ongoing and future actions, such as wildfires and development which have the potential to result in habitat loss. Table 4.2-2 indicates the authorized take limits for each species under the other O'ahu wind farm HCPs. The analysis also acknowledges the potential additional impacts to bats and other listed species from wind farms on other islands. Ex. A-1 at 40-56; Ex. A-12 at 4-5 to 4-6, 4-106 to 4-112; Ex. A-53 (Snetsinger WRT) at ¶ 17.

286. The cumulative impacts analysis acknowledges the uncertainty related to the distribution, abundance, and range-wide trends of the Hawaiian hoary bat, however all projects with HCPs are expected to incorporate mitigation, resulting in a net benefit to the species; therefore the cumulative impacts analysis concludes that significant adverse cumulative effects to bats are not anticipated. Ex. A-12 at 4-106 to 4-112; Ex. A-53 (Snetsinger WRT) at ¶ 18.

287. The first wind energy facility in Hawai'i has been operating for approximately eleven years. *See* Vol. 2, Tr. 08/08/17 at 209:13-18. Therefore, the first HCP in the state is also eleven years old.

288. Applicant's HCP had the benefit of and did consider and use the data of the HCPs for all existing wind farms in Hawai'i, including the information related to the existing take at those facilities. *See* Ex. A-1 at 55-56; Ex. A-12 at 4-106 to 4-112. Based on the best available information, Applicant's HCP is the most comprehensive HCP in Hawai'i to date. Ex. A-29 (Oller WDT) at ¶ 140-41.

289. Based on the commitments in the HCP, the Project should not result in a negative cumulative impact to the Hawaiian hoary bat or other Covered Species. Accordingly, this sub-criterion has been satisfied.

8. THE HCP MEETS THE REQUIREMENTS OF HRS § 195D-21(B) AND THE DLNR HAS RECEIVED ASSURANCES THAT THE HCP WILL BE IMPLEMENTED (MO6 IX.H)

290. This sub-criterion asks: will the measures required under HRS § 195D-21(b) be met, and has the DLNR required, and received, any other assurances that the plan will be implemented? HRS § 195D-4(g)(6).

291. The HCP meets the requirements under HRS § 195D-21(b); and the Applicant is committed to implementing the necessary measures to ensure that the HCP's goals are achieved. Ex. A-29 (Oller WDT) at ¶ 132. No evidence suggests otherwise.

292. As described above in Part VII.C.3, Section 9.4 of the HCP describes the financial assurances that will be required to demonstrate that the HCP will be implemented. *Id.* A funding matrix is included as Appendix F to the HCP. Applicant will provide financial assurances in the amount approximately $4.6 million, with $3,736,050 for Tier 1 mitigation. Ex. A-1 at 85-86. This will ensure funding for Tier 1 mitigation, the Post-Construction Monitoring Plan (Appendix A), and any required DOFAW compliance monitoring. *Id.* $894,000 will be provided to ensure Tier 2 mitigation. Ex. A-1 at 86.

293. Funding assurances will be provided through an appropriate financial tool (*e.g.*, irrevocable letter of credit), depositing a sum of money in the endangered species trust fund created by HRS § 195D-31, or other means as required and approved by the BLNR. *See* Ex. A-31 (Cutbirth WDT) at ¶ 22. Since the Applicant has satisfied all requirements imposed by the ESRC, as addressed in the HCP, HRS § 195D-4(g)(6) has been satisfied.

294. The HCP provides for Adaptive Management throughout the permit term. The key elements of HCP implementation are not discretionary, including fulfillment of obligations

under avoidance and minimization measures, monitoring, reporting, mitigation, funding, and Adaptive Management. Ex. A-1 at 85-86; Ex. A-21 (Cutbirth WDT) at ¶¶ 22-23. Furthermore, if the Board approves the HCP and ITL, it may impose explicit conditions to ensure that the HCP is implemented.

295. As such, this sub-criterion has been satisfied.

9. THE PROPOSED ACTIVITY, WHICH IS PERMITTED AND FACILITATED BY ISSUANCE OF THE ITL, WILL NOT INVOLVE THE USE OF SUBMERGED LANDS, MINING, OR BLASTING (MO6 IX.I)

296. This sub-criterion asks: does the activity, which is permitted and facilitated by issuance of the ITL involve the use of submerged lands, mining, or blasting? HRS § 195D-4(g)(7).

297. No part of the proposed Project or the implementation of the HCP will require or involve the use of submerged lands, mining, or blasting. Ex. A-29 (Oller WDT) at ¶ 134; Ex. A-31 (Cutbirth WDT) at ¶ 24. Thus, the HCP is in compliance with HRS § 195D-4(g)(7).

10. THE CUMULATIVE IMPACT OF THE ACTIVITY, WHICH IS PERMITTED AND FACILITATED BY THE ITL, WILL PROVIDE NET ENVIRONMENTAL BENEFITS (MO6 IX.J)

298. This sub-criterion asks: will the cumulative impact of the activity, which is permitted and facilitated by issuance of the incidental take license, provide net environmental benefits? HRS § 195D-4(g)(8).

299. The cumulative impact of the Project as implemented in accordance with the HCP, will provide net environmental benefits to the Covered Species. *See supra* Parts VII.C.3 and VII.I.7, FOF 188-203, 277-289. This assessment is the consensus view of DOFAW, USFWS, and the ESRC, and takes into account the best scientific data, avoidance and minimization measures, as well as the proposed mitigation measures described in the HCP. Thus, the HCP satisfies HRS § 195D-4(g)(8).

11. THE PROPOSED TAKE IS NOT LIKELY TO CAUSE THE LOSS OF GENETIC REPRESENTATION OF AN AFFECTED POPULATION OF ANY ENDANGERED, THREATENED, PROPOSED, OR CANDIDATE PLANT SPECIES (MO6 IX.K)

300. This sub-criterion asks: is the take likely to cause the loss of genetic representation of an affected population of any endangered, threatened, proposed, or candidate *plant* species? HRS § 195D-4(g)(9).

301. There are no listed threatened or endangered, or proposed or candidate, *plant* species identified in the Project Area. Ex. A-29 (Oller WDT) at ¶ 135. Thus, the proposed Project will not result in a loss of genetic representation of any such organic plant species, in satisfaction of HRS § 195D-4(g)(9). *Id.*

302. Even though this particular sub-criterion deals only with *plant* species, with respect to the animal species and as discussed in these findings of fact and conclusions of law, based on the best available scientific data, the anticipated take of any of the Covered Species is not likely to cause the loss of genetic representation of an affected population of any Covered Species. Ex. A-1 at 41-55; Ex. A-29 (Oller WDT) at ¶ 136. Although recent studies have concluded the Hawaiian hoary bat arrived in the islands as a result of two colonization events, both genetic groups are present on O'ahu, as well as islands where the Hawaiian hoary bat populations are much larger. Ex. A-49 (Russell et al. 2015); Ex. A-29 (Oller WDT) at ¶136. Therefore, based on our current understanding of the Hawaiian hoary bat genetics, impacts on O'ahu are unlikely to result in the loss of genetic representation of this species. Ex. A-29 (Oller WDT) at ¶ 137. Impacts to other Covered Species are not expected to result in the loss of genetic representation, as there are no studies to suggest that there is inter- or intra-island genetic variation in the species. *Id.*

12. MULTIPLE PUBLIC HEARINGS ON THE HCP WERE HELD ON O'AHU (MO6 IX.L)

303. This sub-criterion asks: was a public hearing held on this matter on O'ahu? HRS § 195D-4(g).

304. As required by HRS § 195D-4(g), a DLNR public hearing was held on the draft HCP on June 4, 2015, at the Kahuku Village Association Community Center. Ex. A-29 (Oller WDT) at ¶ 138. Comments submitted as part of this meeting and the associated public comment period were addressed in the final HCP. *Id.* Concerns raised by the public at these meetings were addressed in the final HCP. Furthermore, DOFAW and the ESRC reviewed the concerns raised by the public at the ESRC meetings and recommended that the final HCP be approved with the revisions made in response to public concerns. *See id.*; Ex. A-36; FOF 68 - 101.

305. In addition to the formal public meeting on June 4, 2015, seven other public meetings were held on the HCP:

- July 2, 2014 (informal project introduction to the ESRC)
- March 30-31, 2015 (site visit and ESRC meeting)
- June 4, 2015 (BLNR public meeting)
- December 17, 2015 (ESRC request for approval of final HCP, revisions recommended)
- February 25, 2016 (ESRC recommended HCP for approval)
- October 28, 2016 (BLNR public meeting on the HCP)
- November 10, 2016 (BLNR public meeting on the HCP)

Id. at ¶ 139; *see also infra* FOF 310.

306. During the proceedings, Rago asserted that no public meeting was held on the HCP after the maximum proposed height of the WTGs was increased to 200 meters. Vol. 1, Tr. 08/07/17 at 51:10-54:24. However, Rago testified that she attended the EIS and HCP meetings where revised WTG height was presented and considered. Vol. 1, Tr. 08/07/17 at 26:8-16, 158:12-19.

307. Applicant presented evidence that there were two (2) public ESRC meetings on the HCP after the WTG height was increased. The revised HCP was available to the public and attached to the ESRC agendas for those meetings. Vol. 1, Tr. 08/07/17 at 51:10-23.

308. HRS § 195D requires that the public hearing beheld when the draft HCP is made available for comment. Vol. 1, Tr. 08/07/17 at 52:14-20. HRS Chapter 195D does not require that an additional meeting be held when there is a design change and it is not uncommon for changes to occur between the draft and final HCP – that is the point of the draft and having the meeting after the draft is published. Vol. 1, Tr. 08/07/17 at 53:7-12. The draft HCP was available for public comment for 90 days – 30 days longer than HRS Chapter 195D requires. Vol. 1, Tr. 08/07/17 at 53:13-17. The current proposed maximum height of the WTGs was made in response to public comments on the draft HCP. Vol. 1, Tr. 08/07/17 at 53:19-54:1. HRS Chapter 195D, like the HRS Chapter 343 process for a draft and final EIS, also does not require that the final HCP be published prior to approval. Nonetheless, the final HCP was published and noticed for the 12/17/15 and 2/25/16 ESRC meetings on the final HCP, as well as the 10/28/19 Board meeting. Vol. 1, Tr. 08/07/17 at 56:3-8; 58:14-59:5; 110:12-18.

309. In addition to the two public ESRC meetings, two public Board meetings were also held on the HCP on 10/28/16 and 12/09/16, as well as an open house on the second draft EIS on 5/25/16 and the Board meeting accepting the final EIS for the HCP on 7/22/16. Ex. A-2 at 3-4.

310. A summary of the timeline of the public meetings on both the HCP and the concurrent EIS process is as follows:

HCP Timeline		**EIS Timeline**	
		12/23/13	EISPN published in the *Environmental Notice*
		11/08/14	EISPN republished in the *Environmental Notice*
03/08/15	Publication of draft HCP in the *Environmental Notice*		
03/30/15	ESRC site visit (public meeting)		
03/31/15	ESRC meeting to review draft HCP (public meeting)		
06/04/15	DLNR public meeting on draft HCP (official public hearing)		
		06/08/15	Draft EIS published in the *Environmental Notice*
06/23/15	Open house on draft HCP (public meeting)	06/23/15	Open house on DEIS (public meeting)
12/17/15	ESRC meeting on draft final HCP (public meeting)		
02/25/16	ESRC votes to recommend approval of final HCP (public meeting)		
03/01/16	Final HCP submitted to DOFAW & USFWS for review		
		04/23/16	Second draft EIS published in the

			Environmental Notice
		05/25/16	Public open house on second draft EIS.
		07/22/16	FEIS accepted by Board (public meeting)
		08/08/16	FEIS acceptance published in the *Environmental Notice*
10/28/16	First Board meeting on final HCP (public meeting)		
12/09/16	Second Board meeting on final HCP (public meeting) – KNSC petition for contested case granted		

311. Based on the evidence filed in this case and presented at the hearing, the HCP satisfies HRS § 195D-4(g) and all the requirements of HRS Chapter 195D identified in Minute Order 6.

VIII. OTHER ISSUES RAISED BY PETITIONERS

A. THE DETERMINATIONS OF DOFAW, ESRC, AND USFWS ARE ENTITLED TO DEFERENCE AND PRESUMPTIONS OF REGULARITY AND VALIDITY

312. DOFAW, ESRC and USFWS each determined that the final HCP was sufficient for submission to the applicable state and federal agencies for final review. Under the state's review process, the ESRC recommended to the Board that the HCP be approved. Vol. 2, Tr. 08/08/17 at 215:2-17, 216:2-5, 223:21-25; Ex. A- 36 at 6; Ex. A-2 at 4; Ex. A-29 (Oller WDT) at ¶ 23; Ex. A-53 (Snetsinger WRT) at ¶ 31. Likewise, DOFAW field staff reviewed and supported approval of the HCP to the ESRC. Ex. A-2 at 4; Ex. A-57 (DOFAW Staff Report to ESRC Feb. 2016)[5]; Ex. A-53 (Snetsinger WRT) at ¶ 32. DOFAW's February 25, 2016 staff report to the ESRC stated that "DOFAW staff has worked closely with Na Pua Makani through several rounds of revisions of the draft HCP. The resulting document reflects amendments based on the comments received by the ESRC" and that "DOFAW staff has reviewed the amendments to the HCP and has no additional concerns." Ex. A-57 at 2, 3; Ex. A-53 (Snetsinger WRT) at ¶ 32.

313. In its Staff Report to the Board recommending approval of the HCP, DOFAW determined that "[t]he HCP is a comprehensive analysis of both the threats and required mitigation for the proposed project." Ex. A-2 at 6.

B. CHALLENGES TO THE UNDERLYING FEIS ARE NOT PROPER

314. The HCP satisfies the requirements of HRS Chapter 195D set forth in Minute Order No. 6, which identified the sole issues to be addressed in this contested case hearing.

[5] The DOFAW Staff Report to the ESRC is mistakenly dated February 25, *2015*, however, this meeting took place on February 25, *2016*. *See* ESRC Meeting Notices and Archives, http://dlnr.hawaii.gov/wildlife/esrc/meeting-archives/ (last visited July 24, 2017).

315. Despite this focus, Petitioners attempted to raise arguments relating to the sufficiency of the underlying FEIS, which are a separate proceeding entirely and otherwise time barred by HRS Chapter 343.

316. Rago testified that she used to support wind farms and that it was not until she moved to Kahuku in about 2013 or 2014 that she began to oppose the Project. Vol. 1, Tr. 08/07/17 at 157:8-24, 160:12. When asked if she remembered if she opposed the Kahuku wind farm, she responded that she "wasn't residing in Kahuku, but I actually remember thinking it was a great idea." Vol. 1, Tr. 08/07/17 at 161:13-17.

317. Rago's pleadings in this proceeding argued that the noise impacts and cultural impacts from the Project were not analyzed. While these impacts are not part of the analysis required for approval of a HCP and ITL under HRS Chapter 195D, those concerns were fully addressed as part of the separate environmental review process under HRS Chapter 343. Ex. A-53 (Snetsinger WRT) at ¶ 33; Exs. A-12 through A-26. That separate process was fully completed and the time to challenge has long passed for this State-approved FEIS. *See* Ex. A-13. The challenges that Rago asserts here are not properly the subject of this proceeding.

318. Nevertheless, Sections 3.4 and 4.6, as well as Appendix D, of the FEIS address and consider the potential noise impacts of the Project. *See* Ex. A-12; Ex. A-17. The Noise Impact Assessment for the Project concluded that there will be temporary varying noise impacts during construction of the Project. Ex. A-12 at 4-53 to 4-54. Noise impacts during the operation phase of the Project will be minimal. *Id.*; Ex. A-53 (Snetsinger WRT) at ¶ 34.

319. Rago's WDT also states that she, as an elected officer of KCA, was not given notice of a May 25, 2016 meeting on the HCP. Rago WDT at 3-4. The May 25, 2016 meeting that Rago refers to was a public information meeting on the Second Draft EIS for the HCP, not the HCP itself. Notice of the meeting was published in the Star Advertiser on May 12 and 19, 2016. *See* Ex. A-58. Notice of the Second Draft EIS and the associated comment period was also published in the Environmental Notice on April 23, 2016. Ex. A-53 (Snetsinger WRT) at ¶ 36.

320. With respect to cultural impacts of the Project, they have been considered as part of the HCP and EIS processes. *See* Ex. A-1 at 16; Ex. A-12; Ex. A-20. One of the members of the ESRC has experience in this area and was present for the consideration and deliberation of the HCP. *See* Ex. A-35; Ex. A-36. Furthermore, a Cultural Impact Assessment ("**CIA**") was fully completed as part of the FEIS. *See* Ex. A-20; Ex. A-53 (Snetsinger WRT) at ¶ 35. Mr. Ka'ili was consulted and interviewed as part of the CIA consultation process. Ex. A-20 at Table 3 (PDF page 76), § 6.1.3 (PDF page 79). The CIA notes that little mention of the specific Project Site was made through consulting research. Ex. A-20 at PDF page 85. Based on this consideration and evidence that the parcel was heavily disturbed during the sugar cane plantation era, the CIA concluded that there will be minimal impacts to traditional and customary practices. As a result of Mr. Ka'ili's participation in the CIA, the CIA consultant recommended that the Applicant incorporate measures that minimize or mitigate any impacts to culturally important species. *Id.* As discussed above, Applicant, to the maximum extent practicable, has done so. Accordingly, while these issues are not relevant for purposes of the HCP and ITL approval process here under HRS Chapter 195D and MO6, Rago and Ka'ili's stated concerns were given a

full opportunity for consideration during the separate environmental review process and were addressed as part of the FEIS.

321. Ka'ili's testimony repeated the interview points he provided as part of the CIA: that the Hawaiian hoary bat is environmentally, scientifically, and culturally important. Vol. 1, Tr. 08/07/17 at 168:5-16. Ka'ili testified that he thinks the law requires an HCP to perpetuate environmental, scientific and cultural aspects of the species. Ka'ili is not a legal expert and provides no support for this proposition. While cultural considerations are important, they are not the dispositive criteria under HRS Chapter 195D. Moreover, the cultural impacts were analyzed as part of the EIS and are not otherwise considerations for the criteria for approval of the HCP. Ex. A-12; Ex. A-20.

322. Aside from being irrelevant to the stated and approved issues in Minute Order No. 6 and HRS Chapter 195D, the time period for any legal challenges to the sufficiency of the EIS has long since passed, as specified in Haw. Rev. Stat. § 343-7. Any judicial proceeding relating to the acceptance of an FEIS must be initiated within 60 days after the public has been informed that the FEIS has been accepted. Here, BLNR accepted the FEIS at its public meeting on July 22, 2016, and notice of this acceptance was published in the August 8, 2016 issue of the *Environmental Notice*. It is undisputed that no challenges to the FEIS were submitted within the 60-day challenge period (*i.e.*, by October 7, 2016). It is therefore inappropriate to raise any challenges to the FEIS in this contested case proceeding because individuals who oppose the FEIS are not allowed a "second chance at administrative and judicial review when they failed to timely appeal the original" FEIS. *See Oregon Natural Res. Council v. U.S. Forest Serv.*, 834 F.2d 842, 847 (9th Cir. 1987). Petitioners have waived all arguments to challenge the FEIS.

IX. POST-HEARING PROCESS

323. The Board has never: (1) held a contested case hearing related to an HCP; and (2) modified a HCP that was presented to them and recommended for approval by the ESRC. *See* Vol. 1, Tr. 08/07/17 at 60:22-25.

324. If a permittee is close to reaching its take limits, an amendment to the HCP may be necessary, or an increase in or changes to mitigation measures, or both. Vol. 1, Tr. 08/07/17 at 61:10-62:5.

325. The HCP establishes the procedures by which the HCP and ITL can be amended. *See* Ex. A-1 § 9.6 at 87.

326. Changes in mitigation measures would follow guidance provided by the ESRC Bat Guidance, Ex. A-44. Current scientific study and research is insufficient concerning bats, so additional funded research, in combination with restoration, is considered the best approach for mitigating impacts to the Hawaiian hoary bat at this time. As the ESRC learns more, the mitigation approach can be refined or adapted to further increase the survival and productivity of bats within the mitigation area and to potentially reduce take at the Project Site. Each new project and efforts taken to implement HCPs utilize the best available science and information. The measures are adapted over time as more data is obtained. The State has increased its institutional knowledge of the Hawaiian hoary bat over time through the existing wind projects.

Vol. 1, Tr. 08/07/17 at 62:6-63:2.

327. Section 9.5 of the HCP (Adaptive Management) contemplates that there are uncertainties, including "a lack of biological information for the Covered Species, a lack of knowledge about the effectiveness of mitigation or management techniques, or doubt about the anticipated effects of the Project. Adaptive Management is a required component in HCPs that allows for the incorporation of new information into conservation and mitigation measures during HCP implementation. Effective implementation of this approach requires explicit and measurable objectives, and identifies what actions are to be taken and when they should occur. Adaptive Management measures do not trigger the need for an [major] amendment (see Section 9.6)." Ex. A-1 at 86. The HCP acknowledges that the actual temporal distribution of fatalities may differ from what is expected. Among other things, the Applicant would consult with DOFAW and USFWS to determine if adjustments to LWSC or other mitigation measures would be appropriate. *See* Vol. 1, Tr. 08/07/17 at 64:11-67:25.

328. Implementation of Adaptive Management during the term of an ITL is considered to be a minor amendment. *See* Ex. A-1 at 86.

329. During the term of an ITL, if the agency decides there are better mitigation measures that should be implemented, additional coordination between the permittee and the agencies is necessary. This is the process of Adaptive Management, which is included in Applicant's HCP. Vol. 1, Tr. 08/07/17 at 64:11-67:25.

330. Fretz testified that Adaptive Management is implemented through a discussion with the permittee, usually at an ESRC meeting. Guidance and recommendations identifying a need for Adaptive Management originates from DOFAW staff. Much interaction with staff and the permittee occurs before the matter goes to the ESRC. The ESRC will not require anything that would change the conditions of the HCP, as the law requires that there be no surprises. Thus, the ESRC works with the permittee. Staff and the ESRC interact with the permittee on a regular basis. If there is a significant recommendation (*i.e.*, requiring a major change) made resulting from Adaptive Management, it could ultimately go to the ESRC for review and approval. *See* Vol. 2, Tr. 08/08/17 at 218:11-221:9; Ex. A-1 at 86.

331. Fretz testified that the mitigation measures presented in the HCP are a result of consultation between the Applicant, DOFAW and USFWS. Vol. 2, Tr. 08/08/17 at 222:7-16. The ESRC approved the community benefits and reforestation efforts proposed in the HCP. The ESRC considers the mitigation measures proposed to be appropriate for this Project. Vol. 2, Tr. 08/08/17 at 222:21-223:20.

332. Fretz testified that the ESRC reviewed the HCP and determined whether or not it was possible that there was better data. With respect to this HCP, the ESRC determined that the best information was used here and made its recommendation to the Board to approve the HCP. Vol. 2, Tr. 08/08/17 at 215:2-17.

333. Fretz testified that he is not aware of any other mitigation that needs to be added to this HCP and that the ESRC made its recommendation for approval of this HCP. Fretz testified that based on what he heard at the hearing, there is nothing that would make him change

his mind about approval or require the ESRC to review this HCP again. Vol. 2, Tr. 08/08/17 at 216:2-5, 223:21-25.

334. Riviere testified that KNSC's position is that the HCP is inadequate and should be sent back to the ESRC to reconsider the HCP and patch it up. Vol. 1, Tr. 08/07/17 at 152:22-25. But KNSC did not offer what is required to "patch it up" and when asked if all the patches it is asking for are made, would it support approval of the project, Riviere said he cannot speak for the future. Vol. 1, Tr. 08/07/17 at 153.

335. Ka'ili testified that he prefers wind turbine or technology that would not allow any take. Any take of the Hawaiian hoary bat is unacceptable to him. Vol. 1, Tr. 08/07/17 at 174:4-16. Therefore, there is no change or additional mitigation that could be added to the HCP that would be acceptable to Ka'ili.

336. Rago testified that she does not know what kind of changes would need to be made to make the project acceptable to her. 160:3-7.

337. Based on the parties' pleadings, the evidence and testimony presented at the hearing, and the proposed conditions of approval set forth below, there is no reason to remand the HCP to the ESRC for further review and the HCP satisfies the above criteria to support approval of the HCP and issuance of the ITL.

CONCLUSIONS OF LAW

I. INTRODUCTION

1. This contested case hearing requires the Board to consider whether the proposed HCP complies with the requirements set forth in HRS §§ 195D-21 and 195D-4(g). Minute Order No. 6; HRS §§ 195D-21 & 195D-4(g).

2. Challenges to the FEIS for the proposed HCP are improper as they are not material or relevant to the approval of the HCP.

3. If any statement designated as a COL is more properly considered a FOF, then it should be treated as a FOF; and if any statement designated as a FOF is more properly considered a COL, it should be treated as a COL.

4. Certain facts set forth within specified criteria addressed below may apply to one or more criteria, issue, or legal standard. To the extent such facts or findings are addressed within a particular heading or section does not limit it to that heading or section, but instead all such facts or findings are incorporated by reference for each applicable criteria section, as if specifically set forth within that heading or section.

5. The Hearing Officer considered the testimony of all witnesses at the evidentiary hearings and all exhibits received into evidence. The mere fact that a particular witness testimony or exhibit may not be specifically referred to below does not and shall not be construed to mean that said testimony or exhibit was not considered. Rather, specific reference to said witness testimony or exhibit was excluded because, after due consideration of said

testimony or exhibit, it was determined to be; (i) immaterial, (ii) irrelevant, (iii) contrary to law, (iv) less credible or persuasive, and/or (v) cumulative of other testimonies or exhibits specifically referred to below.

II. JURISDICTION; HEARING OFFICER AUTHORITY; STANDING

A. JURISDICTION

6. This contested case proceeding is before the Board pursuant to HAR § 13-1-29 and HRS Chapter 195D. *See* FOF 5 & n.1.

7. DLNR is authorized to conduct investigations of any species of wildlife to determine conservation measures necessary for the continued ability of such species to sustain themselves successfully. DLNR is also authorized to adopt rules related to, among other things, the take of any species for the purpose of conserving the same. HRS § 195D-3.

8. The Board is vested with the authority to approve habitat conservation plans and incidental take licenses. HRS § 194D-21 & HRS § 195D-4(g).

9. The Board has authority and jurisdiction to conduct this contested hearing pursuant to HRS Chapter 195D, HRS § 91-9, and HAR § 13-1-28.

10. The Board therefore has the authority to approve the HCP and ITL for the proposed Project.

B. HEARING OFFICER AUTHORITY

11. The Board's rules of practice and procedure, HAR Title 13, Chapter 1, give the Hearing Officer broad authority over the conduct of a contested case hearing, including, but not limited to, powers to: examine witnesses; certify to official acts; issue subpoenas; rule on offers of proof; receive relevant evidence; hold conferences; rule on objections or motions; fix times for submitting documents briefs; limit rebuttal evidence; limit the number of witnesses; limit the extent of direct and cross examination, or the time for testimony upon a particular issue to "avoid unnecessary or repetitive evidence"; and "dispose of other matters that normally and properly arise in the course of a hearing authorized by law that are necessary for the orderly and just conduct of a hearing." HAR § 13-1-32.

12. The Hearing Officer has the authority to "exercise discretion in the admission or rejection of evidence and the exclusion of immaterial, irrelevant, or unduly repetitious evidence as provided by law with a view of doing substantial justice." HAR § 13-1-35(a).

13. The Hearing Officer also has the authority to set the issues to be decided in a contested case hearing and to determine "such other matters as may expedite the orderly conduct and disposition of the proceeding as permitted by law." HAR § 13-1-36(a).

14. The Hearing Officer has discretion in exercising the authority vested under the Board's rules to implement the generally more flexible procedures typical for an administrative proceeding, as long as those procedures do not affect the substantive rights of the parties. *See*

Cariaga v. Del Monte Corp., 65 Haw. 404, 409, 652 P.2d 1143, 1147 (1982) ("The administrative tribunal or agency has been created in order to handle controversies arising under particular statutes. It is characteristic of these tribunals that simple and non-technical hearings take the place of court trials and informal proceedings supersede rigid formal pleadings and processes."); *see also Application of Wind Power Pac. Investors-III*, 67 Haw. 342, 343, 686 P.2d 831, 832-33 (1984) (refusing to reverse a Public Utilities Commission decision based on procedural irregularities because the irregularities complained of did not prejudice the substantial rights of the appellant) (citing HRS § 91-14(g)); *Survivors of Timothy Freitas, Dec. v. Pac. Contractors Co.*, 1 Haw.App. 77, 85, 613 P.2d 927, 933 (1980) (finding that the Labor and Industrial Relations Appeals Board's failure to state whether it had applied a presumption that a claim for covered work injury did not prejudice substantial rights where there was no reasonable doubt that employee's fatal accident was not work related) (citing HRS § 91-14(g)).

15. Adverse rulings, without more, are insufficient to establish bias or prejudice of an administrative officer. *See Peters v. Jamieson*, 48 Hawai'i 247, 264, 397 P.2d 575, 586 (1964) ("We adhere to the rule that mere erroneous or adverse rulings by the trial judge do not spell bias or prejudice and cannot be made the basis for disqualification.").

16. Although it is well-established that "pro se litigants are not excused from following court rules," *Briones v. Riviera Hotel & Casino*, 116 F.3d 379, 382 (9th Cir. 1997), and that they "must follow the same rules of procedure that govern other litigants," *King v. Atiyeh*, 814 F.2d 565, 567 (9th Cir. 1987), *overruled on other grounds* (citation omitted), here, the *pro se* status of Rago was fully considered in this matter in establishing and administering the procedures for the hearing to ensure that all parties were afforded adequate due process.

17. Rulings have a "presumption of honesty and integrity" in favor of the Hearing Officer. *Sifagaloa v. Board of Trustees of the Employment Retirement System*, 74 Haw. 181, 193, 840 P.2d 367, 372 (1992). It is well established that an adverse ruling does not evidence bias. *See Jou v. Dai-Tokyo Royal State Ins. Co.*, 116 Hawai'i 159, 165, 172 P.3d 471, 477 (2007) ("It is well-settled that mere adverse rulings are insufficient to establish bias."); *James W. Glover, Ltd. v. Fong*, 39 Hawai'i 308, 316 (1952) (stating that "mere adverse rulings, even if erroneous[,]" would not constitute a "basis for disqualification"). Additionally, the Hearing Officer accepting proposed findings of fact or conclusions, even if adopted verbatim, does not establish Hearing Officer bias. *See generally, Kumar v. Kumar*, 2014 WL 1632111, at *8 (Haw. Ct. App. 2014) (holding that a court's substantial adoption of a proposed decree did not establish an appearance of impartiality, *i.e.*, bias). In the context of civil proceedings, it is widely accepted that a trial judge may adopt a parties proposed findings it total or in part. *See, e.g., Howard v. Howard*, 259 P.2d 41, 42 (Cal.App. 2 Dist. 1953) (stating that courts may adopt proposed findings in total or in part); *American Water Development, Inc. v. City of Alamosa*, 874 P.2d 352, 376 (Colo. 1994) (holding that the adoption of a proposed FOF/COL is not necessarily improper, and that "[F]indings, if otherwise sufficient, are not weakened or discredited because given in the form submitted by counsel") (citations omitted).

18. As set forth in the findings of fact above, reasonable procedures within the scope of authority were set under the Board's rules for the orderly conduct and disposition of this proceeding. These procedures ensured that all parties had an opportunity to present evidence and argument on all material issues without prejudicing any substantial rights.

C. STANDING OF THE PARTIES

19. HAR § 13-1-2 defines "petitioner" as "the person or agency on whose behalf petition or application is made," and "person" as "appropriate individuals, partnerships, corporations, associations, or public or private organizations of any character other than agencies."

20. HAR §13-1-31(b) sets forth the standards for admission of persons or agencies as parties to a contested case proceeding:

> The following persons or agencies shall be admitted as parties:
>
> (1) All government agencies whose jurisdiction includes the land in questions shall be admitted as parties upon timely application.
>
> (2) All persons who have some property interest in the land, who lawfully reside on the land, who are adjacent property owners, or who otherwise can demonstrate that they will be so directly and immediately affected by the requested action that their interest in the proceeding is clearly distinguishable from that of the general public shall be admitted as parties upon timely application.

21. HAR §13-1-31(c) sets forth the standard for discretionary admission of parties to a contested case proceeding:

> Other persons who can show a substantial interest in the matter may be admitted as parties. The board may approve such requests if it finds that the requestor's participation will substantially assist the board in its decision making. The board may deny any request to be a party when it appears that:
>
> (1) The position of the requestor is substantially the same as the position of a party already admitted to the proceedings; and
>
> (2) The admission of additional parties will not add substantially new relevant information or the addition will make the proceedings inefficient and unmanageable.

22. Neither the Board's rules nor Hawai'i case law provide a definition of "substantial interest" as it is used in this context. However, case law indicates that "substantial interest" has been interpreted to mean either a property interest or a constitutionally protected right. *See Alderman v. U.S.*, 394 U.S. 165 (1969) ("While the Court grants special standing rights to property owners, it refuses to reach the question of whether employees, business visitors social guests, and other persons with less substantial property interests are also entitled to special standing privileges[.]"); *Mauna Kea Anaina Hou v. Bd. of Land and Natural Res.*, 136 Hawai'i 376, 390, 363 P.3d 224, 238 (2015) (finding that pursuing native Hawaiian cultural practices on Mauna Kea constituted a substantial interest).

23. Standing is an aspect of justiciability focusing on the party seeking a forum rather than the issues the party wants adjudicated. *Life of the Land v. Land Use Comm'n*, 63 Haw. 166, 172 (1981).

24. The Hawai'i Supreme Court has been liberal in recognizing standing in environmental cases. *See id.*

25. On April 6, 2017, the Hearing Officer issued Minute Order No. 3 setting the date for (i) objections to standing; and (ii) the first pre-hearing conference. No objections to standing were made. *See* Minute Order No. 4.

26. On April 27, 2017, the Fonoimoana Petitioners, through counsel James Wright, Esq., withdrew as parties to the contested case proceeding. Ex. A-43.

27. On April 27, 2017, the Hearing Officer issued Minute Order No. 4 related to standing of the parties.

D. KNSC'S STANDING

28. KNSC is a 501(c)(3) Hawai'i non-profit organization. Riviere, President of KNSC testified that KNSC's mission is "to preserve, protect and enhance the rural communities, the way of life and the lifestyles – in partnership with communities from Ka'ena Point to Kahalu'u." Vol. 1, Tr. 08/07/17 at 152:9-14.

29. KNSC's members have an interest in protecting endangered and threatened species, native species, and wildlife. Id. at 5. KNSC states that its members interests, related to "personal recreational, aesthetic, cultural, scientific, educational, and environmental interests" would adversely affected by the Project due to the Project's impacts on threatened and endangered species. *Id.* at 6.

30. Neither the Board nor the Hearing Officer made a determination about whether or not KNSC has standing in this proceeding. Nevertheless, no objections to KNSC's standing were made.

E. ELIZABETH RAGO'S STANDING

31. Rago is an individual who lives in Kahuku, two blocks from the proposed Project. She asserted standing on the basis of the proximity of her residence to the proposed Project and concerns about health issues and the decline of property value due to the Project. Rago WDT.

32. The Hearing Officer determined that: (1) Rago did not indicate how she will be directly and immediately affected by the approval of the HCP and ITL; and (2) Rago's environmental concerns are not clearly distinguishable from that of the general public. Therefore, the Hearing Officer determined that Rago was not entitled to be admitted as a party under HAR § 13-1-31(b)(2). Minute Order No. 4 at 2.

33. Notwithstanding the Hearing Officer's determination that Rago was not entitled to be admitted as a party to the proceeding under the mandatory admission rule, the Hearing Officer

found that Rago showed a substantial interest in the matter and that her participation would assist the Board in its decision-making. Accordingly, Rago was admitted as a party to this proceeding under the discretionary admission rule, HAR § 13-1-31(c). Id.

34. No objections to Rago's standing were made.

III. DENIAL OF OUTSTANDING MOTIONS

35. Any motions made by any party, either oral or written, that have not been specifically addressed herein and that have not yet been specifically ruled upon are hereby denied.

IV. EVIDENTIARY STANDARDS

36. Under HRS § 91-10(1):

> Except as provided in section 91-8.5, any oral or documentary evidence may be received, but every agency shall as a matter of policy provide for the exclusion of irrelevant, immaterial, or unduly repetitious evidence and no sanction shall be imposed or rule or order be issued except upon consideration of the whole record or such portions thereof as may be cited by any party and as supported by and in accordance with the reliable, probative, and substantial evidence. The agencies shall give effect to the rules of privilege recognized by law[.]

37. Consistent with the Hawai'i Administrative Procedures Act, HRS Chapter 91 ("**HAPA**"), the administrative rules governing procedures before the BLNR broadly provide that the Hearing Officer "may exercise discretion in the admission or rejection of evidence and the exclusion of immaterial, irrelevant, or unduly repetitious evidence as provided by law with a view of doing substantial justice." HAR § 13-1-35.

38. "The rules of evidence governing administrative hearings are considerably more relaxed than those governing judicial proceedings." *Price v. Zoning Bd. of Appeals*, 77 Haw. 168, 176 n.8, 883 P.2d 629, 637 n.8 (1994).

39. The standard for determining relevancy in agency proceedings under Chapter 91 is that of Haw. R. Evid. (HRE) 401. *See Loui v. Bd. of Med. Examiners*, 78 Haw. 21, 31, 889 P.2d 705, 715 (1995). HRE Rule 401 defines relevant evidence as "evidence having any tendency to make the existence of *any fact that is of consequence* to the determination of the action more probable than it would be without the evidence." HRE 401 (emphasis added); *Loui*, 78 Haw. at 31, 889 P.2d at 715 (quoting Rule 401).

40. Because the rules of evidence applied in administrative hearings are more relaxed than in court proceedings, doubts about admissibility are to be resolved in favor of admitting the evidence:

[W]hen an agency is faced with evidence of doubtful admissibility, it is preferable that it

allow the admission of such evidence rather than to exclude the same, for the very practical reason stated in Donnelly Garment Co. v. National Labor Relations Board, 123 F.2d 215, 224 (8th Cir. 1941), as follows: "If the record on review contains not only all evidence which was clearly admissible, but also all evidence of doubtful admissibility, the court which is called upon to review the case can usually make an end of it, whereas if evidence was excluded which that court regards as having been admissible, a new trial or rehearing cannot be avoided.

Cazimero v. Kohala Sugar Co., 54 Haw. 479, 483, 510 P.2d 89, 93 (1973)

41. The liberal standard of the admissibility of evidence in administrative hearings is also reflected in the established rule that even when ostensibly irrelevant or incompetent evidence is admitted during a hearing, the admission of such evidence alone is not grounds for reversal if there is "substantial evidence in the record to sustain the agency's determination" and the aggrieved party is not prejudiced. *Shorba v. Board of Education*, 59 Haw. 388, 398, 583 P.2d 313-19 (1978). Stated another way, unless an aggrieved party can show prejudice resulting from the admission of ostensibly irrelevant or incompetent evidence, admission of such evidence alone is not grounds for reversal. *Id.*

42. Although the admission of evidence in administrative hearings is less formal than those governing judicial proceedings, the Hearing Officer still has the authority to limit or entirely exclude evidence that does not meet the basic criteria of relevancy, materiality and avoidance of repetition. HRS § 91-10(1).

V. QUALIFICATION OF EXPERTS

43. Although none of the witnesses in this proceeding were formally received or qualified as expert witnesses, certain witnesses represented that they had expertise in one or more subject areas through their experience, training and/or education.

44. "[T]he competence, credibility and weight" of the testimony of all witnesses (including witnesses who represent that they have expertise in one or more subject areas), "is exclusively in the province of the trier of fact." *See Hawai'i Prince Hotel Waikiki Corp. v. City & County of Honolulu*, 89 Hawai'i 381, 390, 974 P.2d 21, 30 (1999) (quoting *State v. Pioneer Mill Co.*, 64 Haw. 168, 179, 637 P.2d 1131, 1139 (1981)).

45. As with the testimony of any witness, a Hearing Officer can believe or disbelieve the testimony of a witness claiming to have expertise in one or more areas, in whole or in part, and to give such testimony the weight the Hearing Officer deems appropriate.

46. Determining the weight, if any, to be given to the opinions and testimony of a witness claiming subject matter expertise is within the discretion of the Hearing Officer, just as it is within the discretion of the Hearing Officer to determine the weight to be given the testimony of any witness.

47. In addition, even though a witness represents that he or she has expertise in one or more areas, such proffered "expert" testimony – as with all admissible and reliable evidence --

must also meet the basic requirement that such evidence is material, relevant and non-repetitious. HAR § 13-1-35.

48. As reflected in the findings of fact above, determinations regarding the admissibility, weight and credibility of the testimony and opinions of the various witnesses in this matter were fully weighed and considered in conjunction with the evidence received on a case-by-case basis to determine whether such testimony and opinions are logical, credible, persuasive, and supported by evidence.

49. Witnesses proposed as experts in this action were considered without any objection being raised by opposing parties.

VI. LEGAL FRAMEWORK

A. BURDEN OF PROOF

50. HRS Chapter 91 states "[e]xcept as otherwise provided by law, the party initiating the proceeding shall have the burden of proof, including the burden of producing evidence as well as the burden of persuasion. The degree or quantum of proof shall be a preponderance of the evidence." HRS § 91-10(5).

51. HAR § 13-1-35(k) similarly provides:

> The party initiating the proceeding and, in the case of proceedings on alleged violations of law, the department, shall have the burden of proof, including the burden of producing evidence as well as the burden of persuasion. The quantum of proof shall be a preponderance of the evidence.

52. Applicant has the initial burden of proof in showing that its HCP warrants approval upon consideration of the criteria in HRS §§ 195D-21 and 194D-4(g).

53. Once Applicant's *prima facie* case is met, the burden then shifts to persons contesting the action to rebut Applicant's prima facie case. S*ee Mauna Kea Power Co., Inc. v. Bd. of Land and Natural Res.*, 76 Hawai'i 259, 265, 974 P.2d 1084, 1090 (1994) (acknowledging that an applicant for a conservation district use permit before the Board has the initial burden of proving its prima facie case meeting the criteria for a CDUP and that substantial evidence must be presented to rebut a prima facie case). Conclusory statements that are not supported by reliable and credible evidence are insufficient to rebut a prima facie case. *See generally Thornton v. City of St. Helens*, 425 F.3d 1158, 1167 (9th Cir. 2005) (holding that "conclusory statements of bias do not carry the nonmoving party's burden in opposition to a motion for summary judgment "); *Lucas v. Chicago Transit Auth.*, 367 F.3d 714, 726 (7th Cir. 2004) (holding "that conclusory statements, not grounded in specific facts, are not sufficient to avoid summary judgment"); *Hansen v. United States*, 7 F.3d 137, 138 (9th Cir. 1993) ("When the nonmoving party relies only on its own affidavits to oppose summary judgment, it cannot rely on conclusory allegations unsupported by factual data to create an issue of material fact.").

54. Petitioners are required to carry the burden of proof on issues asserted by them.

B. AGENCY DETERMINATIONS MUST BE GIVEN DEFERENCE

55. A fundamental principle of administrative and judicial law recognizes that the agency's determinations are entitled to deference during administrative or judicial review and are also entitled to a presumption of regularity and validity. *See Sierra Club v. Dep't of Transp.*, 167 P.3d 292, 310-11, 115 Hawai'i 299, 317-18 (2007) ("Therefore, a reviewing court must determine whether the agency's factual determinations were clearly erroneous"); *see also San Luis & Delta Mendota Water Authority v. Jewell*, 747 F.3d 581,601-602 (9th Cir. 2014) ("[T]he [Administrative Procedure Act] provides that an agency action must be upheld on review unless it is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law' . . . . Although our inquiry must be thorough, the standard of review is highly deferential; the agency's decision is 'entitled to a presumption of regularity,' and we may not substitute our judgment for that of the agency").

56. In addition, the ESRC recommendation on the HCP is presumed a valid act under Hawai'i law. *See Keliipuleole v. Wilson*, 85 Hawai'i 217, 221, 941 P. 2d 300, 309 (1997) ("[A] presumption of validity is accorded to decisions of administrative bodies acting within their sphere of expertise and one seeking to upset the order bears 'the heavy burden of making a convincing showing that it is invalid because it is unjust and unreasonable in its consequences.'").

57. Accordingly, determinations made by the oversight Agencies, DOFAW, ESRC, and USFWS, should be upheld and confirmed by the Hearing Officer on Applicant's *prima facie* case in support of its burden of proof. Once the approved plan and agency approvals are shown, the burden then shifts to the opponents to prove that such determinations and approvals were clearly erroneous, arbitrary, capricious or an abuse of discretion by the approving agencies. Petitioners did not make such a showing.

58. It is well-established that "where the information is not readily available, [the courts] cannot insist on perfection: The best scientific data available, does not mean the best scientific data possible." *San Luis & Delta Mendota Water Authority v. Jewell*, 747 F.3d 581,602 (9th Cir. 2014) (internal quotations, citations, brackets, ellipses omitted). As detailed in the HCP, the Applicant used the best scientific information available and did not disregard superior evidence. *See id.* ("The best available data requirement merely prohibits an agency from disregarding available scientific evidence that is in some way better than the evidence it relied on.") (internal quotations, citations, and brackets omitted). No additional scientific information presented at the hearing changes or undermines the rationale contained in the existing HCP assumptions about estimated take for the Project based on the proposed height of the turbines.

59. Deferring to an agency's findings is appropriate because a court "cannot supplant their [the agencies'] decisions because we find the views of other experts and other policy options more appealing. . . . the court defers to the agency's reasonable resolution of conflicting opinions from experts, since the Service's wildlife experts are in a much better position than the court to evaluate such evidence. . . . We will not arbitrate between scientist and we will not intrude on the public agencies' duties to make policy and protect the species." *Environmental Council of Sacramento v. City of Sacramento*, 142 Cal.App.4th 1018, 1042-43 (2006) (citations

and internal quotation marks omitted).

C. STATUTE AND ADMINISTRATIVE RULES

1. HCP CRITERIA

60. The criteria under which a HCP is considered for compliance and approval is set forth in HRS § 195D-21. A copy of HRS § 195D-21 is attached as **Appendix B**.

61. The criteria of HRS § 195D-21 was incorporated into Minute Order No. 6. *See* Appendix A. Discussion of the criteria in HRS § 195D-21 is referenced by its designation in Minute Order No. 6. *See* Appendix A; FOF 55 & n.2.

2. ITL CRITERIA

62. The criteria under which an ITL is considered for compliance and approval is set forth in HRS § 195D-4(g), which provides:

> After consultation with the endangered species recovery committee, the board may issue a temporary license as a part of a habitat conservation plan to allow a take otherwise prohibited by subsection (e) if the take is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity; provided that:
>
> > (1) The applicant, to the maximum extent practicable, shall minimize and mitigate the impacts of the take;
> >
> > (2) The applicant shall guarantee that adequate funding for the plan will be provided;
> >
> > (3) The applicant shall post a bond, provide an irrevocable letter of credit, insurance, or surety bond, or provide other similar financial tools, including depositing a sum of money in the endangered species trust fund created by section 195D-31, or provide other means approved by the board, adequate to ensure monitoring of the species by the State and to ensure that the applicant takes all actions necessary to minimize and mitigate the impacts of the take;
> >
> > (4) The plan shall increase the likelihood that the species will survive and recover;
> >
> > (5) 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;
> >
> > (6) The measures, if any, required under section 195D-21(b) shall be met, and the department has received any other assurances that may be required so that the plan may be implemented;

(7) The activity, which is permitted and facilitated by issuing the license to take a species, does not involve the use of submerged lands, mining, or blasting;

(8) The cumulative impact of the activity, which is permitted and facilitated by the license, provides net environmental benefits; and

(9) 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.

Board approval shall require an affirmative vote of not less than two-thirds of the authorized membership of the board after holding a public hearing on the matter on the affected island. The department shall notify the public of a proposed license under this section through publication in the periodic bulletin of the office of environmental quality control and make the application and proposed license available for public review and comment for not less than sixty days prior to approval.

63. The criteria of HRS § 195D-21 was incorporated into Minute Order No. 6. *See* Appendix A. Discussion of the criteria in HRS § 195D-21 is referenced by its designation in Minute Order No. 6. *See* Appendix A; FOF 55 & n.2.

3. ITL CONDITIONS

64. After a HCP and ITL are approved, an agency may impose additional conditions on the Applicant under the following circumstances only:

After approval of a habitat conservation plan or safe harbor agreement, or issuance of an incidental take license pursuant to this chapter, no agencies or departments of the State, in order to protect a threatened or endangered species, may impose any new requirements or conditions on, or modify any existing requirements or conditions applicable to, a landowner or successor to the landowner, to mitigate or compensate for changes in the conditions or circumstances of any species or ecosystem, natural community, or habitat covered by the plan, agreement, or license unless:

(1) The landowner, or the landowner's successor, expressly consents to the requirement, condition, or modification;

(2) The board has found, in accordance with those special procedures agreed to by the board and the landowner, or in the absence of any special procedures, in accordance with those procedures that govern the findings generally, that:

(A) The requirement, condition, or modification does not impose

any additional restriction on any parcel of land or body of water available for use or development under the plan or agreement; and

(B) The requirement, condition, or modification will not increase the cost to the landowner or other parties to the plan or agreement of implementing the plan or agreement;

(3) The department is prepared to exercise its authority to:

(A) Pay the landowner for the costs of any new requirement or condition or any modification of any existing requirement or condition, which costs may be determined through binding arbitration; and

(B) Take any other action to ensure that any party to the plan or agreement is not, without the party's consent, unduly burdened by the requirement, condition, or modification, in which case the department shall implement that necessary requirement, condition, or modification upon committing to pay the costs, mitigate the actions, or undertake the action;

(4) The board has revoked the approval of the plan or rescinded the agreement in accordance with section 195D-21(d) or 195D-22(c); or

(5) Extraordinary new circumstances or information indicate that failure to modify the plan or agreement is likely to appreciably reduce the likelihood of the survival or recovery of any threatened or endangered species in its natural habitat. If additional mitigation measures are subsequently deemed necessary to provide for the conservation of a species that was otherwise adequately covered under the terms of a habitat conservation plan, safe harbor agreement, or incidental take license as a result of extraordinary circumstances, the primary obligation for executing mitigation measures shall rest with the State, or the federal government with its consent, and not with the landowner.

HRS § 195D-23(a).

D. CASE LAW

1. *MORIMOTO V. BLNR*

65. In *Morimoto v. BLNR*, 107 Hawai'i 296, 113 P.3d 172 (2005) ("**Morimoto**"), the Hawai'i Supreme Court held:

> [W]hen an applicant submits its application for a CDUP, the public and interested parties know that BLNR will evaluate the application in accordance with the eight criteria in HAR § 13-5-

> 30(c), that BLNR will look to any draft EIS or EA that must be submitted as part of the application, and that BLNR will incorporate any representations in the EIS or EA (relevant to mitigation) as a condition of the CDUP. These rules provide sufficient guidance to CDUP applicants and the public, offsetting the threat of "unbridled discretion."

Id. at 304, 113 P.3d at 180 (citation omitted).

66. In *Morimoto*, the Court held that BLNR may properly consider mitigation measures in an EIS when reviewing an application for a CDUP to determine if it is consistent with the criteria set forth in HAR § 13-5-30(c). *Id.* at 302-04, 113 P.3d at 178-80.

67. The Court also recognized that BLNR may approve a proposed land use despite some environmental impacts to the Conservation District, provided that the project incorporates appropriate mitigation measures and conditions. *Id.* at 64 n.13; *see also Morimoto*, 107 Hawai'i at 305-06, 113 P.3d at 181-82; *Stop H-3 Ass'n v. State Dep't of Transp.*, 68 Haw. 154, 158, 706 P.2d 446, 449 (1985).

68. Moreover, under *Morimoto*, the Hawai'i Supreme Court held that all mitigation measures set forth in an EIS (regardless of whether direct or indirect) must be made part of the conditions of the CDUP. *See Morimoto*, 107 Hawai'i at 303-04, 113 P.3d at 179-80.

69. *Morimoto* suggests that where mitigation measures have been accepted as part of a final EIS, those mitigation measures – which are required to be made conditions of the CDUP – will also satisfy HAR § 13-5-30(c)(4). But more importantly, *Morimoto* clearly holds that all mitigation measures may be considered.

70. Hawai'i law requires the "mitigation" of impacts; it does not require that impacts be eliminated altogether. *See Morimoto*, 107 Hawai'i at 305-06, 113 P.3d at 181-82 (finding that BLNR appropriately considered the effect of mitigation measures designed to "diminish" – not eliminate altogether – "the impact of the project upon the Palila").

71. Likewise, HRS § 195D-21 requires the applicant of a HCP and ITL to mitigate negative impacts.

72. Given that there is no Hawai'i case law interpreting HRS Chapter 195D, the Court's analysis with respect to incorporating mitigation measures contained in an EIS into an HCP should be adopted to the extent reasonably applicable here.

2. *ENVIRONMENTAL COUNCIL OF SACRAMENTO V. CITY OF SACRAMENTO*

73. While Hawai'i does not have any case law related to habitat conservation plans, California case law is instructive. In *Environmental Council of Sacramento v. City of Sacramento*, the California Court of Appeal, Third District, considered a challenge by environmental groups to the county's certification of an environmental impact report ("**EIR**") under the California Environmental Quality Act ("**CEQA**") and the issuance of incidental take

permits by the Department of Fish and Game under the California Endangered Species Act ("**CESA**"). 142 Cal.App.4th 1018 (2006).

74. The Court held that the (1) baseline assumptions underlying the agency's and county's findings that the plan included adequate mitigation measures; and (2) agency's finding that the plan's mitigation measures were adequately funded and monitored thus ensuring the continued existence of the covered species was not jeopardized, were supported by substantial evidence. *See id.* at 1036-44.

75. The conservation plan in *Environmental Council of Sacramento* included the following mitigation measures: upgrading habitat, acquiring permanent land reserves with higher quality habitat than the lands to be developed, and providing monitoring (through the Natomas Basins Conservancy, a nonprofit organization) and Adaptive Management to protect the species. *Id.* at 1025. The conservation plan also included a number of minimization measures. *See id.* at 1026.

76. The court explicitly recognized the need for Adaptive Management:

> The Conservation Plan is not static, nor is it confined to its initial assumptions. Cognizant that many factors might change during the 50-year life of the Conservation Plan, the public agencies designed an Adaptive Management program. In other words, both compliance monitoring and biological effectiveness monitoring may reveal ineffective management of the reserves or that assumptions upon which the Conservation Plan predicated have not held over time. The Conservancy can respond to the deficiencies revealed by monitoring or periodic reviews. If unable to protect the species with these measures, the plan can be amended or revised, or the permits can be suspended or revoked.
>
> *Id.* at 1026 (citations omitted).

77. Importantly, the court stated that "[a] public agency can make reasonable assumptions based on substantial evidence about future conditions without guaranteeing that those assumptions will remain true." *Id.* at 1036. Therefore, there is no requirement that the Agencies know that a particular mitigation measure, such as a research component, will in fact benefit the Covered Species.

78. Like this contested case proceeding, and KNSC's focus on the portions of the HCP related to the Hawaiian hoary bat only, the plaintiffs in *Environmental Council of Sacramento* primarily challenged one aspect of the conservation plan to assert that the entire conservation plan is insufficient. In response, the court stated that "Plaintiffs parse but one component from the integrated mitigation program, ignoring the broader context, the broader findings, and the broader evidence relied on by the agencies." *Id.* at 1039.

79. The court also recognized the difficulty in ascertaining exact take numbers based on the limited data available for one of the covered species, the Swainson's hawk:

> . . . proscribed taking involves mortality. In this case, there is little evidence forecasting how many animals will actually be killed as a result of development of the Natomas Basin. The difficulty in calculating the potential take of the hawks is particularly vexing because they are only part-time residents of the basin and are adept at foraging in nearby Yolo County. Thus, not only is the habitat throughout the basin of uneven value, but the Department's ability to coerce developers to mitigate is further circumscribed by the limited data on the scope of actual take.
>
> *Id.* at 1040.

80. The court recognized that it is appropriate for the agency to consider other factors, such as competing interests, in not requiring the highest amount of mitigation. *See id.* at 1039 ("The preconstruction surveys, preservation of land . . . avoidance of development in the one-mile hawk zone, and preservation and planting of nest trees are all part of the integrated mitigation plan designed to compensate for the incidental take of any covered plants and animals."); *id.* at 1041 (discussing the scope of mitigation measures and the sufficiency of those measures when considering the practical, legal, and financial constraints of more intense mitigation).

81. In deferring to the agencies' findings, the court held that it "cannot supplant their [the agencies] decisions because we find the views of other experts and other policy options more appealing. . . . the court defers to the agency's reasonable resolution of conflicting opinions from experts, since the Service's wildlife experts are in a much better position than the court to evaluate such evidence. . . . We will not arbitrate between scientist and we will not intrude on the public agencies' duties to make policy and protect the species." *Id.* at 1042-43 (citations and internal quotation marks omitted).

82. The court concluded that the mitigation measures will fully mitigate the harm to the covered species and will help the species to thrive. *Id.* at 1043-44.

83. While Petitioners question whether the mitigation measures for the Hawaiian hoary bat will work, the substantial credible evidence in the record supports the conclusion that the HCP will increase the likelihood of survivability and enhance habitat in order to mitigate impacts to the Covered Species. *See* Ex. A-29 (Oller WDT) at ¶ 95; FOF 120 & 122; *see also* FOF 107-178.

84. No evidence was presented supporting a challenge to the mitigation measures for the other seven Covered Species and the mitigation measures proposed for the Hawaiian hoary bat are accepted as appropriate mitigation for other species.

85. In the absence of definitive studies for the Hawaiian hoary bat, it is the common practice of the Agencies and their recommendation to applicants to use surrogate measures to forecast the effectiveness of mitigation measures for the Hawaiian hoary bat. *See* FOF 120, 122, 140, 144-145, 147 & 216-217.

86. The substantial evidence in the record supports the conclusion that the use of

surrogate measures is appropriate, and that the mitigation measures proposed in the HCP are expected to provide a net benefit to the ecosystem as a whole, and in turn, the Covered Species. *See* Ex. A-29 (Oller WDT) at ¶ 95; FOF 120 & 122, 107-178.

3. *CENTER FOR BIOLOGICAL DIVERSITY V. U.S. FISH & WILDLIFE SERVICE*

87. In *Center for Biological Diversity v. U.S. Fish & Wildlife Service* ("***CBD v. USFWS***"), the Court of Appeals for the Ninth Circuit analyzed a challenge to USFWS's decision to sign a memorandum of agreement ("MOA") involving a groundwater pumping project. 807 F.3d 1031 (9th Cir. 2015). The Center for Biological Diversity ("CBD") argued that the biological opinion ("Biop") supporting the MOA did not use the best science and that the conservation measures proposed were not effective or adequate to ensure against jeopardy of the endangered Moapa dace (a small fish).

88. The Biop predicted that the MOA's conservation measures would increase habitat and reproductive potential for the species, reduce potential for fire and restore overall spawning and rearing habitat, provide more secure habitat, improve existing habitat, reduce the species vulnerability to catastrophic events, and expand the species within its range and increase its current population size, supporting the USFWS's finding that "[t]he overall expected outcome of these measures is an increase in the species distribution and abundance throughout the range of the species." *Id.* at 1041 (citations omitted). The Biop did not authorize any incidental take.

89. The Ninth Circuit affirmed its earlier holding that mitigation measures in a conservation agreement may be used to determine the effects of the proposed action and whether it is likely to jeopardize the listed species so long as the mitigation measures are enforceable under the Endangered Species Act ("**ESA**"). *See id.* at 1045.

90. The Ninth Circuit also acknowledged that while the ESA requires agencies to use the best scientific and commercial data available, the standard "does ***not*** require the agency to conduct new tests or make decisions on data that does not yet exist. Rather, the best available data requirement merely prohibits an agency from disregarding available scientific evidence that is in some way better than the evidence it relies on." *Id.* at 1047 (brackets, citations, and internal quotation marks omitted; emphasis added); *see also Kern Cnty. Farm Bureau v. Allen*, 450 F.3d 1072, 1080 (9th Cir. 2006) ("Moreover, if the only available data is weak, and thus not dispositive, an agency's reliance on such data does not render the agency's determination arbitrary and capricious.") (citations and quotation marks omitted); *San Luis & Delta-Mendota Water Authority v. Locke*, 776 F.3d 971, 995 (9th Cir. 2014) ("An Agency complies with the best available science standard so long as it does not ignore available studies, even if it disagrees with or discredits them.").

91. CBD argued that the record did not support a conclusion that the conservation measures are effective and adequate, in particular, that a certain flow rate would protect the Moapa dace, but the Ninth Circuit disagreed with CBD and found that even though one of the USFWS scientist had concerns about the effectiveness of some conservation measures, it was clear that USFWS did not have definitive data supporting a conclusion on the flow rate either way because flow levels have never actually fallen so low. *See CBD v. USFWS*, 807 F.3d at

1049-50. Because USFWS did not have the site specific data, it used surrogate data and data based on known characteristics. *See id.* at 50. In response to CBD's argument, the Ninth Circuit deferred to the agency and held that USFWS's chosen methodology was based on the best available science given the data that was available. *Id.* Therefore, it was rational for USFWS to assume that reducing and ceasing pumping will slow decline in water levels, thereby resulting in a benefit to the listed species. *See id.*

92. The Ninth Circuit also affirmed *Locke*'s holding that the requirement to use the best science ***does not*** "require an agency to conduct new tests or make decisions on data that does not yet exist[.]" *Id.* at 1050; *Locke*, 776 F.3d at 995.

4. *KA PA'AKAI O KA 'ĀINA V. LAND USE COMM'N*

93. In *Ka Pa'akai o Ka 'Āina v. Land Use Comm'n* (***"Ka Pa'akai"***), the Hawai'i Supreme Court provided an analytical framework "to effectuate the State's obligation to protect native Hawaiian customary and traditional practices while reasonably accommodating competing private interests[.]" 94 Hawai'i 31, 46-47, 7 P.3d 1068, 1083-84 (2000).

94. Under *Ka Pa'akai*, an agency, in order to fulfill its duty to preserve and protect customary and traditional native Hawaiian rights to the extent feasible, must examine, and make specific findings and conclusions as to:

> (1) the identity and scope of "valued cultural, historical, or natural resources in the [application] area, including the extent to which traditional and customary native Hawaiian rights are exercised in the [application] area; (2) the extent to which those resources – including traditional and customary native Hawaiian rights – will be affected or impaired by the proposed action; and (3) the feasible action, if any, to be taken by the [agency] to reasonably protect native Hawaiian rights if they are found to exist.

Id. at 47, 7 P.3d at 1084 (footnotes omitted).

95. A *Ka Pa'akai* analysis may be conducted by an agency within the context of a contested case hearing. *See generally, id.* (analyzing the Land Use Commission's findings of fact and conclusions of law following contested case hearing).

96. The HCP and previously approved FEIS for the proposed Project provide the Board with the information necessary to perform the *Ka Pa'akai* analysis.

VII. DISCUSSION AND CONCLUSIONS

A. THE HCP SATISFIES HRS CHAPTER 195D

97. Based on the evidence filed and the testimony presented at the evidentiary hearing, the Hearing Officer makes the following conclusions of law:

1. THE HCP SATISFIES THE CRITERIA OF HRS § 195D-21

98. The HCP further the purposes of HRS 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 plan, as set forth in MO6 I. HRS § 195D-21(b)(1)(A). *See* FOF 107 - 163.

99. The HCP increases the likelihood of recovery of the endangered or threatened species that are the focus of the HCP, as set forth in MO6 II. HRS § 195D-21(b)(1)(B). *See* FOF 164 - 178.

100. The HCP satisfies all the requirements of HRS Chapter 195D, as set forth in MO6 III. HRS § 195D-21(b)(1)(C). *See* FOF 179 - 225; *see also* FOF 107-178.

a. The HCP identifies the geographic area encompassed by the plan; the ecosystems, natural communities, or habitat types within the plan areas that are the focus of the plan; and the endangered, threatened, proposed, and candidate species known or reasonably expected to be present in those ecosystems, natural communities, or habitat types in the plan area? HRS § 195D-21(b)(2)(A). *See* MO6 III.A; FOF 180 - 183.

b. The HCP describes the activities contemplated to be undertaken within the plan area with sufficient detail to allow DLNR to evaluate the impact of the activities on the particular ecosystems, natural communities, or habitat types within the plan area that are the focus of the plan. HRS § 195D-21(b)(2)(B). *See* MO6 III.B; FOF 184 - 187.

c. The HCP identifies 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. HRS § 195D-21(b)(2)(C). *See* MO6 III.C; FOF 188 - 203.

d. The HCP identifies those measure 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 measure or actions; and an adequate funding source to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule. HRS § 195D-21(b)(2)(D). *See* MO6 III.D; FOF 204 - 206.

e. The HCP is consistent with the goals and objectives of any approved recovery plan for any endangered or threatened species known or reasonably expected to occur in the ecosystems, natural communities, or habitat types in the plan area. HRS § 195D-21(b)(2)(E). *See* MO6 III.E; FOF 207 - 209.

f. The HCP provides 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, including any endangered, threatened, proposed, and candidate species known or reasonably expected to be present in the ecosystems, natural communities, or habitat types within the plan area. HRS § 195D-21(b)(2)(F). *See* MO6 III.F; FOF 210 -214.

g. The HCP contains objective, measurable 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 monitoring (such as field sampling techniques), including periodic monitoring by representatives of DLNR or the endangered species recovery committee, or both; and provisions for evaluating progress in achieving the goals quantitatively and qualitatively. HRS § 195D-21(b)(2)(G). *See* MO6 III.G; FOF 215 -219.

h. The HCP provides for an Adaptive Management strategy that specifies the actions to be taken periodically if the plan is not achieving its goals. HRS § 195D-21(b)(2)(H). *See* MO6 III.H; FOF 220 -225.

101. Based on the best scientific and reliable data available, the cumulative activities to be undertaken within the areas covered by the HCP will be environmentally beneficial. HRS § 195D-21(c), as set forth in MO6 IV. *See* FOF 227 -233.

102. KNSC's argument that the HCP does not use the best available science fails because KNSC has not pointed to any evidence that DOFAW's, USFWS, or the ESRC's concerns have not been addressed or were supported by better science or that the HCP ignores better science than what was relied upon. *See CBD v. USFWS*, 807 F.3d at 1050-51; FOF 81, 121, 122, 140, 145, 156, 159, 169, 216, 252, 280, 288, 326.

103. 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. HRS § 195D-21(c)(1), as set forth in MO6 V. *See* FOF 234 - 238.

104. 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. HRS § 195D-21(c)(2), as set forth in MO6 VI. *See* FOF 239 - 241.

105. The HCP contains sufficient information for the BLNR to ascertain with reasonable certainty the likely effect of the plan upon any endangered, threatened, proposed, or candidate species in the plan area and throughout its habitat range, as set forth in MO6 VII. HRS § 195D-21(c). *See* FOF 242 - 243.

106. The public was notified of the proposed HCP through publication of the HCP in OEQC's periodic bulletin, and the proposed HCP and ITL application were available for public review and comment for at least 60 days prior to approval. HRS § 195D-21(a), as set forth in MO6 VIII. *See* FOF 244 - 248.

a. The notice in the OEQC bulletin identified the area encompassed by the HCP, the proposed activity, and the ecosystems, natural communities, and habitat types within the plan area. HRS § 195D-21(a). *See* MO6 VIII.A; FOF 245 - 246.

b. The notice in the OEQC bulletin solicited public input and relevant data. HRS § 195D-21(a). *See* MO6 VIII.B; FOF 247 - 248.

2. THE HCP SATISFIES THE CRITERIA OF HRS § 195D-4(G)

107. The HCP meets the criteria of HRS § 195D-4(g), as set forth in MO6 IX. *See* FOF 250 - 311.

a. The HCP was developed after extensive consultation with the ESRC. HRS § 195D-4(g). *See* MO6 IX.A; FOF 251 - 255, 303-310.

b. The take authorized by the ITL is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity—a wind energy generating facility. HRS § 195D-4(g). *See* MO6 IX.B; FOF 66, 256 - 258; Ex. A-31 (Cutbirth WDT) at ¶¶ 12-13.

c. The measures proposed by the HCP will, to the maximum extent practicable, minimize and mitigate the impacts of the take. HRS § 195D-4(g)(1). *See* MO6 IX.C; FOF 259 - 264.

d. There is a guarantee that the Applicant will provide adequate funding for the HCP. HRS § 195D-4(g)(2). *See* MO6 IX.D; FOF 201-203, 265 - 267, 292-293.

e. Applicant is required to post a bond, provide an irrevocable letter of credit, insurance, or surety bond, or provide other similar financial tools, including depositing a sum of money in the endangered species trust fund created under HRS § 195D-31, or provide other means approved by the Board, adequate to ensure monitoring of the species by the State and to ensure that the applicant takes all actions necessary to minimize and mitigate the impacts of the take. HRS § 195D-4(g)(3). *See* MO6 IX.E; FOF 268 - 271.

f. The HCP will increase the likelihood that the Covered Species will survive and recover. HRS § 195D-4(g)(4). *See* MO6 IX.F; FOF 272 - 276.

g. The HCP takes into consideration the full range of the species on the island so that cumulative impacts associated with the take can be adequately assessed. HRS § 195D-4(g)(5). *See* MO6 IX.G; FOF 188-203, 277 - 289, 298-299.

h. The measures required to be met under HRS § 195D-21(b) will be met, and DLNR has required, and received, assurances that the HCP will be implemented if the HCP and ITL are approved. HRS § 195D-4(g)(6). *See* MO6 IX.H; FOF 290 - 295.

i. The activity, which is permitted and facilitated by issuance of the ITL, does not

involve the use of submerged lands, mining, or blasting. HRS § 195D-4(g)(7). *See* MO6 IX.I; FOF 296 - 297.

j. The cumulative impact of the activity, which is permitted and facilitated by issuance of the ITL, is expected to provide net environmental benefits. HRS § 195D-4(g)(8). *See* MO6 IX.J; FOF 298 - 299.

k. 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. HRS § 195D-4(g)(9). *See* MO6 IX.K; FOF 300 - 302.

l. A public hearing was held on this matter on O'ahu on June 15, 2015. HRS § 195D-4(g). Multiple additional public meetings were held on the HCP. *See* MO6 IX.L; FOF 303 - 311.

108. Rago alleges that there was not a second public hearing on the HCP following the change in height of the WTGs. Rago's contention is incorrect.

109. First, HRS Chapter 195D does not require that more than one public hearing be held after the draft HCP is published. *See* HRS §§ 195D-21, § 195D-4(g). Applicant consulted with the DOFAW, USFWS, and ESRC and all agreed that no changes to the HCP were necessary because there was no change in impacts. FOF 148; Vol. 1, Tr. 08/07/17 at 54:15-24; 72:4-11.

110. Second, multiple public meetings were held on the HCP following the change in maximum height for the HCP. *See* FOF 68-101, 303 - 311. The public hearing on the draft HCP took place on June 4, 2015. The increase to the maximum proposed height of the WTGs currently in the HCP was included in the *draft final* HCP and *final* HCP. *See* FOF 308-310. The draft final HCP was published and noticed for the 12/17/15 and 2/25/16 ESRC meetings on the draft final and final HCP, as well as the 10/28/19 Board meeting. Vol. 1, Tr. 08/07/17 at 56:3-8; 58:14-59:5; 110:12-18. Applicant presented evidence that there were two (2) public ESRC meetings on the HCP after the WTG height was increased. The revised HCP was available to the public and attached to the ESRC agendas for those meetings. Vol. 1, Tr. 08/07/17 at 51:10-23.

111. Thus, the statutory public meeting on the HCP was held, as well as multiple additional public meetings to consider additional public and agency input and concerns.

B. DETERMINATIONS BY THE AGENCIES

112. A fundamental principle of administrative and judicial law recognizes that the agency's determinations are entitled to deference during administrative or judicial review and are also entitled to a presumption of regularity and validity. *See Sierra Club v. Dep't of Transp.*, 167 P.3d 292, 310-11, 115 Hawai'i 299, 317-18 (2007) ("Therefore, a reviewing court must determine whether the agency's factual determinations were clearly erroneous"); *see also San Luis & Delta Mendota Water Authority v. Jewell*, 747 F.3d 581,601-602 (9th Cir. 2014) ("[T]he [Administrative Procedure Act] provides that an agency action must be upheld on review unless it is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law' . . . . Although our inquiry must be thorough, the standard of review is highly deferential; the agency's

decision is 'entitled to a presumption of regularity,' and we may not substitute our judgment for that of the agency").

113. The ESRC is the expert consultant to the Board, specifically established by statute to review HCPs and ITLs and to provide a recommendation to the Board. HRS § 195D-25.

114. The ESRC's recommendation for approval is owed due consideration as the body within DLNR responsible for oversight of HCPs, and its conclusions should be given deference and a presumption of validity.

115. As detailed in the FOF above and the evidence in the record, the HCP was developed through extensive consultation with not only the ESRC, but also DOFAW and USFWS. *See* FOF 68-101.

116. Fretz's testimony supports the conclusion that the HCP was fully vetted by the ESRC. Nothing was presented to him at the hearing that would change his mind about recommending the HCP for approval by the Board. *See* FOF 332-333; *see also* 312-313.

117. Accordingly, determinations made by the oversight agencies, DOFAW, ESRC, and USFWS, should be upheld and confirmed by the Hearing Officer. Applicant has made its *prima facie* case in support of its burden of proof. Once the approved plan and agency approvals are shown, the burden then shifts to the opponents to prove that such determinations and approvals were clearly erroneous, arbitrary, capricious or an abuse of discretion by the approving agencies. Petitioners did not make such a showing.

C. PETITIONERS' OTHER ARGUMENTS

1. CHALLENGES TO THE FEIS

118. Based on the reliable, credible evidence presented in this proceeding, challenges to the FEIS for the Project are not properly before the Board in this proceeding. *See* FOF 314 - 322.

119. The time period for legal challenges to the sufficiency of the EIS has long since passed. Any judicial proceeding relating to the acceptance of an FEIS must be initiated within 60 days after the public has been informed that the FEIS has been accepted. HRS § 343-7. BLNR accepted the FEIS at its public meeting on July 22, 2016, and notice of this acceptance was published in the August 8, 2016 issue of the *Environmental Notice*. It is undisputed that no challenges to the FEIS were submitted within the 60-day challenge period (*i.e.*, by October 7, 2016). It is therefore inappropriate to raise any challenges to the FEIS in this contested case proceeding because individuals who oppose the FEIS are not allowed a "second chance at administrative and judicial review when they failed to timely appeal the original" FEIS. *See Oregon Natural Res. Council v. U.S. Forest Serv.*, 834 F.2d 842, 847 (9th Cir. 1987). Petitioners have therefore waived all arguments to challenge the FEIS. *See* FOF 322.

2. CULTURAL RESOURCES

120. Based on the reliable, credible evidence presented in this proceeding, the

Applicant has provided the Board with the information necessary to identify the valued cultural, historical, or natural resources in the Project area, including the extent to which traditional and customary native Hawaiian rights are exercised, the extent to which those rights and resources may be impacted by the Project, and the feasible action to be taken, as further detailed in the CIA and FEIS.

121. Finding that there are no native Hawaiian traditional and customary practices on or near the Project Site and that Applicant has mitigated impacts to the Hawaiian hoary bat to the maximum extent practicable, the mitigation measures proposed in the HCP will reasonably protect the Hawaiian hoary bat. *See* FOF 320-321; Ex. A-20; Ex. A-12 §§ 3.11, 4.13.

VIII. SUMMARY

122. Based on the foregoing and the evidence in the record supports approval of the Applicant's HCP and ITL for the proposed Project. Applicant has met its burden showing that the HCP satisfies the criteria set forth in HRS §§ 195D-21 and 195D-4(g).

IX. RECOMMENDED DECISION AND ORDER

The HCP and ITL should be approved for issuance, subject to the following conditions:

A. GENERAL CONDITIONS

1. This license only authorizes the permittee to conduct incidental take of the Covered Species on the lands owned or otherwise controlled by Applicant on the Island of O'ahu, Hawai'i at the time this license is issued pursuant to the "Na Pua Makani Wind Energy Project Habitat Conservation Plan" dated March 2016 (hereafter "HCP").

2. This license is valid only if Applicant abides by the terms and conditions of the HCP and ITL for the duration of the license.

3. This license is valid for species protected by federal law only if accompanied by proper federal permits. The permit number for the required permit must be provided to the Division of Forestry and Wildlife ("DOFAW") when it is obtained.

4. This license shall become valid upon completion of the following:

   a. A legal representative of Applicant has acknowledged understanding and agreement to abide by its conditions.

   b. Both copies of the signed license must be returned to DOFAW. Upon approval by the Chairperson of the Board of Land and Natural Resources, a copy of the license will be returned to the applicant.

5. The take authorization contained in this license is not effective until Na Pua Makani Power Partners provides DOFAW with an executed copy of the letter of credit (or other approved financial tool) containing terms reasonably acceptable to DOFAW. Upon triggering Tier 2 mitigation, financial assurances for an additional $894,000 will be provided to ensure

funding for Tier 2 mitigation. If triggered, funding assurances for Tier 2 will be provided before the Tier 1 take threshold is exceeded. An estimate of the costs for implementing the HCP is provided in Appendix F to the HCP.

6. The Board may suspend or revoke this license if the HCP is suspended or revoked. The Board may also suspend or revoke this license in accordance with applicable laws and regulations in force during the term of the license.

7. Persons in violation of the terms and conditions of this license and/or related or appropriate laws may be subject to criminal and or administrative penalty under §§183D-5, 183D-21, 195D-9, and 195D-27, Hawai'i Revised Statutes, and §124-8, Hawai'i Administrative Rules, or as otherwise provided by law, and/or revocation of this permit.

8. Applicant shall submit an annual report to DLNR by August 1 of each fiscal year ending June 30, that includes a description of activities and accomplishments, analysis of the problems and issues encountered in meeting or failing to meet the objectives set forth in the HCP, areas needing technical advice, status of funding, and plans and management objectives for the next fiscal year, including any proposed modifications thereto.

B. SPECIAL CONDITIONS

9. The allowable incidental take authorized by this license for the Covered Species includes observed, unobserved, direct, and indirect take as defined in the HCP.

10. The estimation of incidental take for the Covered Species will be calculated according to adjustments made to the observed direct take according to methods detailed in the HCP, including adjustments to include unobserved and indirect take.

11. The incidental take authorized by this license for the Hawaiian hoary bat is defined by two tiered levels, each of which is identified in the HCP. In the event that the take level for the Hawaiian hoary bat for tier 1 is reached, incidental take at the tier 2 level is authorized, provided that Applicant abides by the terms and conditions of the HCP.

12. DLNR will be notified within 24 hours, and a written incident report filed within 3 business days, of any mortalities, injuries, or disease observed on the property. Injured individuals or carcasses will be handled according to guidelines in the HCP.

13. The mitigation measures set forth in the HCP shall be incorporated into this ITL and implemented by the Applicant.

14. If, during the term of the ITL, the DOFAW, ESRC, and Board determine that additional reasonable mitigation measures are required, as supported by the best available scientific research being funded by the existing HCP efforts and otherwise, then the Applicant shall work with DOFAW, the ESRC, and the Board to implement, through its Adaptive Management efforts, any reasonable additional mitigation measures that will improve the survivability and recovery of the Covered Species. The Board shall not require Applicant to implement any measures (a) that impact Applicant's energy production or prejudice its ongoing operations, (b) significantly increase any additional funding requirements, or (c) upon which

Applicant has not first been consulted. Implementation of Adaptive Management measures to reduce the risk of take shall not require an amendment to the HCP so long as there are no proposed major amendments to existing take limits.

15. The funding commitments set forth in the HCP shall be complied with upon approval and upon commencement of construction, through the issuance of a letter of credit to support those funding obligations set forth in Section 9.4 of the HCP.

DATED: Honolulu, Hawai'i, September 11, 2017.

JOHN P. MANAUT
PUANANIONAONA P. THOENE

Attorneys for Applicant
NA PUA MAKANI POWER PARTNERS, LLC

APPENDIX A

BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAII

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Koolauloa District, Island of O'ahu, Hawaii.	)	Case No. BLNR-CC-17-001 MINUTE ORDER NO. 6; CERTIFICATE OF SERVICE

MINUTE ORDER No.6

ISSUES

Following is the Hearing Officer's list of issues to be addressed in this contested case. Na Pua Makani Power Partners, LLC, the applicant in this case, has the burden of proof.

Any exceptions to the list of issues to allocation of the burden of proof shall be filed no later than Friday, May 5, 2017.

ISSUES

I. Will the Habitat Conservation Plan ("HCP" or plan) further the purposes of HRS 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 plan? HRS § 195D-21(b)(1)(A).

II. Will the HCP increase the likelihood of recovery of the endangered or threatened species that are the focus of the HCP? HRS § 195D-21(b)(1)(B).

III. Does the HCP satisfy all the requirements of HRS Chapter 195D? HRS § 195D-21(b)(1)(C).

A. Does the HCP identify the geographic area encompassed by the plan; the ecosystems, natural communities, or habitat types within the plan areas that are the focus of the plan; and the endangered, threatened, proposed, and candidate species known or reasonably expected to be present in those ecosystems, natural communities, or habitat types in the plan area? HRS § 195D-21(b)(2)(A).

B. Does the HCP describe the activities contemplated to be undertaken within the plan area with sufficient detail to allow DLNR to evaluate the impact of the activities on the particular ecosystems, natural communities, or habitat types within the plan area that are the focus of the plan? HRS § 195D-21(b)(2)(B).

C. Does the HCP 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? HRS § 195D-21(b)(2)(C).

D. Does the HCP identify those measure 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 measure or actions; and an adequate funding source to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule? HRS § 195D-21(b)(2)(D).

E. Is the HCP consistent with the goals and objectives of any approved recovery plan for any endangered or threatened species known or reasonably expected to occur in the ecosystems, natural communities, or habitat types in the plan area? HRS § 195D-21(b)(2)(E).

F. Does the HCP 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, including any endangered, threatened, proposed, and candidate species known or reasonably expected to be present in the ecosystems, natural communities, or habitat types within the plan area? HRS § 195D-21(b)(2)(F).

G. Does the HCP contain objective, measurable 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 monitoring (such as field sampling techniques), including periodic monitoring by representatives of DLNRT or the endangered species recovery committee, or both; and provisions for evaluating progress in achieving the goals quantitatively and qualitatively? HRS § 195D-21(b)(2)(G).

H. Does the HCP provide for an adaptive management strategy that specifies the actions to be taken periodically if the plan is not achieving its goals? HRS § 195D-21(b)(2)(H).

IV. Based on the best scientific and reliable data available, will the cumulative activities to be undertaken within the areas covered by the HCP not be environmentally beneficial? HRS § 195D-21(c).

V. Will implementation of the HCP likely to jeopardize the continued existence of any endangered, threatened, proposed, or candidate species identified in the plan area? HRS § 195D-21(c)(1).

VI. Will implementation of the HCP likely to cause any native species not endangered or threatened at the time of plan submission to become threatened or endangered? HRS § 195D-21(c)(2).

VII. Does the HCP contain sufficient information for the BLNR to ascertain with reasonable certainty the likely effect of the plan upon any endangered, threatened, proposed, or candidate species in the plan area and throughout its habitat range? HRS § 195D-21(c).

VIII. Was the public notified of the proposed HCP through the periodic bulletin of the office of environmental quality control, and was the proposed HCP and application available for public review and comment for at least 60 days prior to approval? HRS § 195D-21(a).

A. Did the notice in the OEQC bulletin identify the area encompassed by the HCP, the proposed activity, and the ecosystems, natural communities, and habitat types within the plan area? HRS § 195D-21(a).

B. Did the notice in the OEQC bulletin solicit public input and relevant data? HRS § 195D-21(a).

IX. Does the HCP meet the criteria of HRS § 195D-4(g)?

A. Was the HCP developed after consultation with the endangered species recovering committee? HRS § 195D-4(g).

B. Is the take authorized by the incidental take license incidental to, and not the purpose of, the carrying out of an otherwise lawful activity? HRS § 195D-4(g).

C. Is the applicant required, to the maximum extent practicable, minimize and mitigate the impacts of the take? HRS § 195D-4(g)(1).

D. Is there a guarantee that the applicant will provide adequate funding for the HCP? HRS § 195D-4(g)(2).

E. Is the applicant required to post a bond, provide an irrevocable letter of credit, insurance, or surety bond, or provide other similar financial tools, including depositing a sum of money in the endangered species trust fund created under

HRS § 195D-31, or provide other means approved by the Board, adequate to ensure monitoring of the species by the State and to ensure that the applicant takes all actions necessary to minimize and mitigate the impacts of the take? HRS § 195D-4(g)(3).

F. Does the HCP increase the likelihood that the species will survive and recover? HRS § 195D-4(g)(4).

G. Does the HCP take into consideration the full range of the species on the island so that cumulative impacts associated with the take can be adequately assessed? HRS § 195D-4(g)(5).

H. Will the measures required under HRS § 195D-21(b) be met, and has the Department required, and received, any other assurances that the plan will be implemented? HRS § 195D-4(g)(6).

I. Does the activity, which is permitted and facilitated by issuance of the incidental take license involve the use of submerged lands, mining, or blasting? HRS § 195D-4(g)(7).

J. Will the cumulative impact of the activity, which is permitted and facilitated by issuance of the incidental take license, provide net environmental benefits? HRS § 195D-4(g)(8).

K. Is the take likely to cause the loss of genetic representation of an affected population of any endangered, threatened, proposed, or candidate plant species? HRS § 195D-4(g)(9).

L. Was a public hearing held on this matter on Oahu? HRS § 195D-4(g).

DATED: Honolulu, Hawai`i, April 27, 2017.

YVONNE Y. IZU
Hearing Officer

BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAII

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Koolauloa District, Island of O'ahu, Hawaii.	)	Case No. BLNR-CC-17-001 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of Minute Order No. 5 was duly served upon the following parties, by Hand Delivery, U.S. Mail, postage prepaid, or electronically, at the addresses below:

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DATED: Honolulu, Hawai`i, April __, 2017.

KATHERINE CULLISON
Department of Land and Natural Resources

APPENDIX B

KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

West's Hawai'i Revised Statutes Annotated
Division 1. Government
Title 12. Conservation and Resources (Refs & Annos)
Subtitle 6. [General and Miscellaneous Programs]
Chapter 195D. Conservation of Aquatic Life, Wildlife, and Land Plants
[Part II]. [Recovery]

HRS § 195D-21

§ 195D-21. Habitat conservation plans

Currentness

(a) The department may enter into a planning process with any landowner for the purpose of preparing and implementing a habitat conservation plan. An agreement may include multiple landowners. Applications to enter into a planning process shall identify:

(1) The geographic area encompassed by the plan;

(2) The ecosystems, natural communities, or habitat types within the plan area that are the focus of the plan;

(3) The endangered, threatened, proposed, and candidate species known or reasonably expected to occur in the ecosystems, natural communities, or habitat types in the plan area;

(4) The measures or actions to be undertaken to protect, maintain, restore, or enhance those ecosystems, natural communities, or habitat types within the plan area;

(5) A schedule for implementation of the proposed measures and actions; and

(6) An adequate funding source to ensure that the proposed measures and actions are undertaken in accordance with the schedule.

After a habitat conservation plan is prepared, the board shall notify the public of the proposed habitat conservation plan through the periodic bulletin of the office of environmental quality control and make the proposed plan and the application available for public review and comment not less than sixty days prior to approval. The notice shall include, but not be limited to, identification of the area encompassed by the plan, the proposed activity, and the ecosystems, natural communities, and habitat types within the plan area. The notice shall solicit public input and relevant data.

(b)(1) Except as otherwise provided by law, the board, upon recommendation from the department, in cooperation with other state, federal, county, or private organizations and landowners, after a public hearing on the island affected, and

upon an affirmative vote of not less than two-thirds of its authorized membership, may enter into a habitat conservation plan, if it determines that:

(A) The plan will further the purposes of this chapter 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 plan;

(B) The plan will increase the likelihood of recovery of the endangered or threatened species that are the focus of the plan; and

(C) The plan satisfies all the requirements of this chapter.

In the event the board votes to enter into a habitat conservation plan for which the majority of the endangered species recovery committee recommended disapproval, the board may not enter into the habitat conservation plan unless the plan is approved by a two-thirds majority vote of both houses of the legislature. Habitat conservation plans may allow conservation rental agreements, habitat banking, and direct payments. Any habitat conservation plan approved pursuant to this section shall be based on the best available scientific and other reliable data available at the time the plan is approved.

(2) Each habitat conservation plan 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 endangered, threatened, proposed, and candidate species known or reasonably expected to be present in those ecosystems, natural communities, or habitat types in the plan area;

(B) Describe the activities contemplated to be undertaken within the plan area with sufficient detail to allow the department to evaluate the impact of the activities on the particular ecosystems, natural communities, or habitat types within the plan area that are the focus of the plan;

(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;

(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 to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule;

(E) Be consistent with the goals and objectives of any approved recovery plan for any endangered species or threatened species known or reasonably expected to occur in the ecosystems, natural communities, or habitat types in the plan area;

(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, including any endangered, threatened, proposed, and candidate species known or reasonably expected to be present in the ecosystems, natural communities, or habitat types within the plan area;

(G) Contain objective, measurable 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 (such as field sampling techniques), including periodic monitoring by representatives of the department or the endangered species recovery committee, or both; and provisions for evaluating progress in achieving the goals quantitatively and qualitatively; and

(H) Provide for an adaptive management strategy that specifies the actions to be taken periodically if the plan is not achieving its goals.

(c) The board shall disapprove a habitat conservation plan if the board determines, based upon the best scientific and other reliable data available at the time its determination is made, that the cumulative activities, if any, contemplated to be undertaken within the areas covered by the plan are not environmentally beneficial, or that implementation of the plan:

(1) Is likely to jeopardize the continued existence of any endangered, threatened, proposed, or candidate species identified in the plan area;

(2) Is likely to cause any native species not endangered or threatened at the time of plan submission to become threatened or endangered;

(3) Fails to meet the criteria of subsections (a) and (b); or

(4) Fails to meet the criteria of section 195D-4(g).

The habitat conservation plan shall contain sufficient information for the board to ascertain with reasonable certainty the likely effect of the plan upon any endangered, threatened, proposed, or candidate species in the plan area and throughout its habitat range.

(d) Notwithstanding any other law to the contrary, the board shall suspend or revoke the approval of any habitat conservation plan approved under this section if the board determines that:

(1) Any parties to the plan, or their successors, have breached their obligations under the plan or under any agreement implementing the plan and have failed to cure the breach in a timely manner, and the effect of the breach is to diminish the likelihood that the plan will achieve its goals within the time frames or in the manner set forth in the plan;

(2) The plan no longer has the funding source specified in subsection (a) or another sufficient funding source to ensure the measures or actions specified in subsection (b) are undertaken in accordance with this section; or

(3) Continuation of the permitted activity would appreciably reduce the likelihood of survival or recovery of any threatened or endangered species in the wild.

(e) The rights and obligations under any habitat conservation plan shall run with the land and shall be recorded by the department in the bureau of conveyances or the land court, as may be appropriate.

(f) Participants in a habitat conservation plan shall submit an annual report to the department within ninety days of each fiscal year ending June 30, that includes a description of activities and accomplishments, analysis of the problems and issues encountered in meeting or failing to meet the objectives set forth in the habitat conservation plan, areas needing technical advice, status of funding, and plans and management objectives for the next fiscal year, including any proposed modifications thereto.

Credits

Laws 1997, ch. 380, § 2; Laws 1998, ch. 237, § 2; Laws 2003, ch. 35, § 4; Laws 2004, ch. 10, § 6.

H R S § 195D-21, HI ST § 195D-21

Current through Act 217 (End) of the 2017 Regular Session, pending classification of undesignated material and text revision by the revisor of statutes. For research tips relating to newly added undesignated material, see Searching and Fields under scope.

End of Document

BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAI'I

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Ko'olauloa District, Island of O'ahu, Hawai'i	Case No. BLNR-CC-17-001 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

The undersigned certifies that the above-referenced document was served upon the following parties by email unless indicated otherwise:

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EXHIBIT 2
SPECIFIC EXCEPTIONS/OBJECTIONS

FOF / COL #	FOF / COL Text	Reason for Exception
FOF		
58	NPM will provide the status and results of the research or management efforts in its annual report to the agencies. Results will include biological measures related to reductions in predators or other measures appropriate to the program that is funded, with results appropriately scaled to the relative proportion of the overall funds that were contributed by NPM. Ex. A-1 at 68. However, it is not anticipated that NPM will have to provide different or additional mitigation even if biological measurements of success are not met.	The last sentence of this FOF is incorrect. Through adaptive management, the Agencies can require Applicant to incorporate different or additional minimization and/or mitigation measures if measures of success are not met or if future best available science supports such changes to the HCP. *See* Ex. A-1 § 9.5. Additional supplemental measures that may be implemented if mitigation goals are not achieved at Poamoho Ridge are listed in the Poamoho Ridge Management Plan Outline, Appendix E to the HCP (Ex. A-1), and will be described in detail in the Poamoho Ridge Management Plan to be developed in collaboration with the Agencies upon initiation of Project construction. As stated in Section 6.1.2.2 of the HCP, this plan is subject to review by USFWS and DOFAW and requires the recommendation for approval by the ESRC. *See* Exceptions Part IV.F.
112	Whether the fence is effective in reducing predation or improving breeding habitat is not included as a measure of success. Whether the staff biologist is effective in educating the public or whether monitoring activities have a positive impact on improving habitat for waterbirds is not included as a measure of success. Ex. A-1 at 75.	This FOF ignores that the measures of success included in the HCP were developed in consultation and agreement with the Agencies. The Recommendation provides no reason for replacing the Agencies' recommendations with that of the HO. *See also* Exceptions Part IV.E, Part IV.G.
175	Nevertheless, in its calculation of bat mortality, NPM assumes that the number of bat deaths is directly proportional to the number of WTGs (i.e. a linear relationship). NPM divides bat mortality per WTG at	Applicant objects as this FOF infers a mischaracterization of the accepted process. It is standard practice in the wind industry and with regulatory agencies to calculate per turbine (or per megawatt) fatality rates based on post-

Exhibit 2

	Kahuku to calculate the fatality rate and then multiplies the fatality rate by NPM's number of WTGs. Transcript Vol I at 97; Exhibit A-1 at 42.	construction monitoring data to enable comparison to other projects or against regional trends. The extrapolation of the per turbine fatality rate from the adjacent Kahuku Wind Farm to predict future bat take at the proposed Project was an approach agreed upon by the Agencies and comprises the best available science in the absence of project-specific mortality monitoring data. No expert testified otherwise. *See* Exceptions Part IV.A.3.
176	Because the fatality calculation is based on an average per turbine and then multiplied by the number of turbines proposed by NPM, it appears that NPM presumes that the number of WTGs in a Project is irrelevant. If the number of WTGs is irrelevant, NPM fails to explain why its analysis was limited to data from the Kahuku Wind Project and did not consider fatalities per WTG from other wind energy projects in Hawai`i. Given the lack of information about the relationship between the size of a wind project to the number of bat fatalities, NPM should have analyzed bat mortality at other wind projects in Hawaii in estimating take for the Project, instead of relying solely on data from the Kahuku Wind Project.	This FOF is incorrect because it misinterprets how Applicant is required to estimate take. As explained above, the common practice in the industry and by the Agencies is to standardize fatality estimates by calculating the number of fatalities per turbine or per megawatt. This makes a more direct comparison between projects of varying size possible. To Applicant's knowledge, there is no known correlation between project "size" (i.e., the total number of WTGs in a given project) and per turbine fatality rates, rather many factors such as geographic location, the presence of topographic features, vegetation/surrounding land use, turbine position, and others may collectively influence fatality risk. The approach agreed upon by the Agencies for predicting total project bat take at the proposed Project was to select surrogate data from a project most similar with respect to the characteristics listed above. The bat fatality data from the Kahuku Wind Farm represent the best available science in the absence of project-specific mortality monitoring data. For this reason, data from other Hawaiian islands or from very different locations on O'ahu were not used as surrogates. Applicant's 150% estimate of take for the Hawaiian hoary bat includes a buffer to account for uncertainties related to the take estimation.

		The Recommendation fails to explain how an analysis of bat mortality at other wind energy facilities provides better data than from the Kahuku Wind Farm. *See* Vol. 1, Tr. 8/7/17 at 98:14-21 (providing that the relationship between bat deaths and the size of a project has not been studied closely). As discussed in the Exceptions, the Kahuku Wind Farm is the best surrogate for the Project and provides actual data upon which Applicant's estimates are based. *See* Exceptions Part IV.A. Applicant maintains that the existing Kahuku Wind Farm represents the most similar wind farm to the proposed Project and therefore provides the most appropriate surrogate data (bat fatalities per turbine) for predicting Hawaiian hoary bat take at the Project. *See* Ex. A-1 at 41. The Kawailoa Wind Farm is not the most appropriate surrogate because it is located approximately 4.5 miles (at its closest point) from the proposed Project, on the northern flank of the Ko'olau mountain range (west slope) near the town of Haleiwa; whereas, the Kahuku Wind Farm is located adjacent to the proposed Project at the base of the northern flank of the Ko'olau mountain range (east slope) near the town of Kahuku and has topographical and vegetative characteristics most similar to the Project. *See* Ex. A-27 (Snetsinger WDT) at 5. Although the WTGs at the Kawailoa Wind Farm are taller than those at the Kahuku Wind Farm (493 feet versus 420 feet, respectively; SWCA 2010 (Ex. B-23), 2011 (Ex. B-35)), there is no evidence to suggest that there is a relationship between bat mortality per turbine and turbine height. *See* Ex. A-10 at 1364. Thus, data from the Kawailoa Wind Farm are not a more appropriate surrogate than data from the Kahuku Wind Farm due to the mere 15 percent difference in turbine

		height (which is considered to be a small difference).
180	Whether the partially operational period is included or excluded, the difference in operational periods between Kahuku and Kawailoa amounts to no more than 6 months. NPM has failed to articulate why this 6-month period is a rational basis for rejecting data from Kawailoa and relying exclusively on data from Kahuku.	This FOF mischaracterizes the evidence in the record as it places more emphasis on this factor than the other 3 factors articulated by Applicant as the reasons for choosing the Kahuku Wind Farm as the appropriate surrogate for the Project. *See* NPM FOF 140, 143, 147; *see also* NPM FOF 120, 121. At the hearing, Applicant explained that the additional months that the Kahuku Wind Farm operated still provided valuable data and that it was therefore entirely reasonable to take those months into account where the Kahuku Wind Farm was only partially operational, so long as the estimate accounted for additional uncertainty. Applicant's 150% estimate of take for the Hawaiian hoary bat includes a buffer to account for uncertainties related to take estimation. In response to this FOF, Applicant will add a clarification to Table 5-1 of the HCP describing why post-construction monitoring data from the Kawailoa or from other Hawai'i wind farms were considered but not used to predict bat take for this Project. *See* NPM FOF 78, 197-198.
181	Other wind facilities in Hawai`i have been in operation for longer periods. NPM failed to provide any analysis on the relationship between the length of operational period to bat mortality that justifies its reliance solely on data from the Kahuku Wind Project and exclusion of data from other Hawai`i wind projects.	*See* Response to FOF 176 and 180. When considering all wind farms in Hawai'i, differences in project area characteristics, and LWSC implementation as well as other unknown factors result in highly variable bat fatality rates among existing projects. There is also high variability in fatality rates between years at a single project. Therefore, the approach for selecting the best surrogate data to estimate bat take at the proposed Project, agreed upon by the Agencies, was to evaluate wind projects on the same island, and then among the projects existing on O'ahu, to select the one that was most similar in location,

		topographic characteristics, and vegetation/surrounding land uses, and with a sufficient number of years of monitoring data to be likely to capture inter-annual variation in bat fatalities.
185	Applicant contends that notwithstanding the difference in height between the WTGs at Kahuku and the Project's WTGs, the Kahuku Wind Project is an appropriate surrogate because there is no direct correlation between turbine height and take. Vol. 1, Tr. 08/07/17 at 54:15-24; 72:4-11; see Ex. A-10.	This is an inaccurate and misleading finding. The citations do not support the FOF. The citations cited in this FOF refer to testimony at the hearing that the increase in height of the WTGs to 656 feet did not change the take estimate for the Hawaiian hoary bat because the impact assessment was done based on the maximum impacts of the Project. Applicant clarifies to the Board that it did not state that the Kahuku Wind Farm was chosen as a surrogate because it has WTGs similar to that of the proposed Project. The Recommendation makes this incorrect inference in this FOF that because Applicant argues that the Kahuku Wind Farm is a good surrogate, there must be no correlation between WTG height and take. As stated in FOF 174, > It is ***unknown*** whether the relationship between bat deaths and the number of turbines is linear. It is not something that has been studied closely. The data is analyzed under the assumption that the number of turbines to bats killed is proportional to the amount of fatalities. However, there could be factors associated with bigger projects can change relative to bats. Vol. 1, Tr. 08/07/17 at 97:12-100:2. (Emphasis added.) Therefore, no science exists and no testimony was presented that this Project's assumptions were erroneous or

		that defeated the prima facie evidence in existing studies and testimony. There is no adjustment that Applicant can make to a per turbine fatality rate to account for turbine height differences, because many factors influence fatality risk for bats, so it is inappropriate and inaccurate to single out height alone. Therefore, it is not possible to draw an inference based on turbine height differences alone.
190	In relying on the Kahuku Wind Project as a surrogate for the Project, Applicant failed to consider the difference in turbine height in estimating take for the Project. For example, although the WTGs at Kawailoa are taller than Kahuku's (but still not as tall as the maximum proposed for the Project) Applicant elected not to use data solely from Kahuku and not Kawailoa. Contrary to Applicant's contention, the best scientific data does not support the hypothesis that there is no correlation between turbine height and take.	This FOF does not cite to or make any effort to explain or distinguish what the best scientific data might be that exists to support the proposition that there is a correlation between turbine height and bat take. Applicant presented evidence that there is no direct correlation, and results of recent research are at best ambiguous. *See* NPM FOF 148, 149. *See* Vol. 1, Tr. 08/07/17 at 54:15-24; 72:4-11; 100:11-101:5; Ex. A-10. No credible contrary evidence or testimony was presented to rebut conclusively that conclusion and testimony. Further, Applicant explained that the studies proffered by Keep the North Shore Country ("**KNSC**"), Ex. B-1 and Ex. B-7, are not the best available science because Ex. A-10 is a more recent, credible and more comprehensive scientific study. *See* NPM FOF 151-155. The Recommendation gives no explanation for rejecting Applicant's proffer of what constitutes the best available science on this precise point, which decision was made in consultation with the Agencies, and why the Recommendation's uncited studies or assumptions are better than what was presented by Applicant.
193	It may be that the location of the Kahuku Wind Farm and the similarities in topography and vegetation are the most	This FOF improperly injects a standard that does not exist in HRS §§ 195D-21 and 195D-4(g). There is no rule or

	influential factors in estimating the Project's potential take of `ope`ape`a. By relying solely on data from the Kahuku Wind Project, without discussing data from other wind projects or sufficiently articulating why data from other wind projects are not applicable to the Project, NPM failed to meet its burden of showing that the best available scientific information was used in estimating take.	standard requiring Applicant to provide in the HCP why certain data were not used. Using the best available science, Applicant presented evidence of why the Kahuku Wind Farm is the best surrogate for the Project. *See supra* Response to FOF 176, 180, 190. However, in response to this FOF and if the Board so requires, Applicant will add a clarification to Table 5-1 of the HCP describing why post-construction monitoring data from the Kawailoa Wind Farm or from other Hawai'i wind farms was considered but not used to predict bat take for this Project.
194	Because very little is known about the population status of `ope`ape`a (estimates range from a few hundred to a few thousand), and given the fact that take of `ope`ape`a by wind energy facilities may have been underestimated in the past, a robust analysis of potential take is critical. By relying solely on the Kahuku Wind Project as a surrogate and electing not to consider data from other wind facilities on Oahu or the other islands, and by failing to consider the impact of turbine height on bat mortality, the estimated take set forth in the HCP is not reliable enough for the Board to determine that the HCP will not jeopardize the continued existence of `ope`ape`a. HRS 195D-21(c), HRS 195D-21(c)(1).	This FOF mischaracterizes and misunderstands Applicant's HCP. Applicant did in fact consider the impact of the WTG height for the Project on bat mortality. *See* Ex. A-1 at 5; Ex. A-12 at 86; NPM FOF 150-155; Vol. 2, Tr. 08/08/17 at 191:18-24; Ex. A-34 at 31; Vol. 1, Tr. 08/07/17 at 18:16-19; *see also* Responses to FOF 185 and 190.. The Agencies, including the ESRC, are required to be comfortable with a "no jeopardy" determination before they recommend to the Board that the HCP be approved. At the hearing, the Chair of the ESRC testified that he stood by the ESRC's recommendation to approve the HCP and issue the ITL and that no revisions to the HCP were warranted, therefore suggesting that the ESRC is comfortable with the Hawaiian hoary bat take estimate for this Project. *See* NPM FOF 332-333. It is well-established that "where the information is not readily available, [the courts] cannot insist on perfection: The best scientific data available, does not mean the best scientific data possible." *San Luis & Delta Mendota Water Authority v. Jewell*, 747 F.3d 581,602 (9th Cir. 2014) (internal quotations, citations, brackets, ellipses omitted).

		As detailed in the HCP, the Applicant used the best scientific information available and did not disregard superior evidence. *See id.* ("The best available data requirement merely prohibits an agency from disregarding available scientific evidence that is in some way better than the evidence it relied on.") (internal quotations, citations, and brackets omitted). No additional scientific information presented at the hearing changes or undermines the rationale contained in the existing HCP assumptions about estimated take for the Project based on the proposed height of the turbines. NPM FOF 158. While other projects were considered and addressed, it was clear that the neighboring Kahuku project would provide the most direct and comparable conditions to estimate take and everyone with expertise in this area at the Agencies and experts agreed. There is no basis to reject that guidance or assume a better approach would alter or change the outcome and no evidence of any different outcome or proof was presented. The HCP includes a buffer on top of the estimated amount of bat take to account for uncertainties related to fatality estimation.
208	HRS § 1954(g)(1) requires the applicant to minimize and mitigate the impacts of the take to the maximum extent practicable. Although, studies to date are inconclusive as to whether there is a significant difference in minimizing bat fatalities when the cut-in speeds are increased from 5 to 6.5 m/s, there some evidence that it does. Conversely, there is no evidence that cut-in speed of 5 m/s is more effective in minimizing impacts to bats than cut-in speed of 6.5 m/s. Moreover, the inferences are that curtailing wind production at higher speeds could reduce bat take. Therefore, the best scientific knowledge currently available	This FOF is not supported by the substantial evidence in the record. The FOF itself acknowledges that the studies on the effectiveness of LWSC between 5 m/s and 6.5 m/s are inconclusive. That evidence does not support a finding that "the best scientific knowledge currently available suggests that increasing cut-in speed to 6.5 m/s, rather than 5 m/s, would minimize impacts to the maximum extent." Again, the Recommendation does not cite to which studies are supposedly the best scientific evidence or give any reason for why those studies are better than the evidence presented by Applicant. The LWSC regime proposed in

	suggests that increasing cut-in speed to 6.5 m/s, rather than 5 m/s, would minimize impacts to the maximum extent.	Applicant's HCP is consistent with recommendations made in the ESRC Bat Guidance. *See* Ex. A-44 at 7-8. Furthermore, a 1-year study of bat activity on Oahu documented that bat activity was more likely when mean wind speeds were less than 4.6 m/s, suggesting that a baseline LWSC cut-in speed of 5.0 m/s is reasonable, based on the best available science and understanding. Further the finding ignores that the HCP states that over time if additional research or operational conditions require an adjustment to incrementally higher cut in speeds, adaptive management, as described in the HCP, will account for those circumstances and the Project will adjust. *See also* Response to FOF 194 and Exceptions Part IV.C.
210	Applicant did not provide evidence that increasing cut-in speed from 5 m/s to 6.5 m/s is not practicable.	Although Applicant acknowledges that it did not state that increasing the cut-in speed to 6.5 m/s was not practicable, Applicant is not required to do so where the impacts of take are fully mitigated. *See Nat'l Wildlife Fed'n v. Norton*, 306 F. Supp. 2d 920, 928-29 (E.D. Cal. 2004) ("The words "maximum extent practicable" signify that the applicant may do something less than fully minimize and mitigate the impacts of the take where to do more would not be practicable. ***Moreover, the statutory language does not suggest that an applicant must ever do more than mitigate the effect of its take of species***. Thus, if a permit authorized the destruction of one acre of habitat that normally supports one individual member of a protected species, it would not be necessary for the applicant to create 100 acres of new habitat that would support some 100 individuals of the species, even if the particular developer could afford to do so. Using this construction of the statute, the Service made a finding that "the level of mitigation provided for in the [Plan] more than

		compensates for the impacts of take that will occur under the plan." 15 (AR 7140.) ***Based on such a finding, the Service was under no obligation to inquire whether additional mitigation was financially possible. All that was reasonably required to mitigate had been included in the Plan***.") (emphases added). Therefore, a showing of impracticality is not necessary where impacts are fully mitigated. The HCP as written is consistent with the ESRC Bat Guidance recommendation for implementing a baseline LWSC cut-in speed of 5.0 m/s. If additional research or operational conditions require an adjustment to incrementally higher cut-in speeds, the adaptive management identified in this HCP will account for those circumstances, and the Project will adjust accordingly.
227	Measures of Success. The HCP identifies the completion of tasks, such as, but not limited to, having an approved research plan, timely funding the Poamoho Ridge habitat improvement plan, and having conducted acoustic bat monitoring. The HCP also lists monitoring of efforts in removal of pigs and goats and invasive plants. Ex. A-1 at 65-66. The HCP is silent as to what happens in the event that pigs, goats and invasive plants are not removed to the extent and in the timeframe provided in the management plan. See discussion of Adaptive Management below.	Applicant takes exception to the portion of this FOF that states that the HCP is silent on what happens if certain measures end up being less effective than anticipated because it fails to consider how adaptive management really works and the Recommendation's treatment of measures of success for the Hawaiian hoary bat arbitrarily finds that the same or similar measures of success that were acceptable for the other species are somehow unacceptable for the Hawaiian hoary bat. *See* Exceptions Part IV.F. A draft management plan for Poamoho Ridge was attached to the HCP as Appendix E. *See* Ex. A-1 at 62. The management plan is the framework for mitigation. Once the HCP is approved, and the initial mitigation measures are being implemented, Applicant will develop a comprehensive management plan which will have more detailed goals, objectives, and timelines associated with the

		restoration and management activities. *See id.* at 62-63. The management plan will include ways to address any supplemental measure that should be taken if mitigation goals are not met. The final management plan and specific actions for what happens if Applicant's proposed mitigation is not effective does not need to be included in the HCP, but comes after the HCP is approved and Applicant has a chance to work with the landowners and observe whether proposed restoration and management are working, so that specific actions to address those issues can be developed and implemented. *See id.* and App. E.
235	The HCP's adaptive management strategy focuses on avoidance and minimization measures and on Permittee's ability to comply with mitigation requirements (see examples above). There is no discussion, however, on revising mitigation plans when (i) meaningful measures of success are not being met, and (ii) new information comes to light that may indicate different mitigation measures that may be more effective in protecting the species and promoting its survivability. Oller explained an informal process between the Permittee and the agencies that rely on voluntary cooperation but without coercive or enforcement powers by the agencies, except in cases of violation of the ITL or HCP. Tr. 8/7/17 at 63:3 to 67:25 (Oller).	*See* Response to FOF 227. Section 7.2 of the HCP describes reporting requirements. Each year, Applicant will submit an annual report detailing progress in implementing the HCP, including mitigation requirements. A presentation of this information will be made to the ESRC. At that meeting, the ESRC will provide input on additional actions to be taken, as needed, to ensure that mitigation goals are met. Should Applicant fall out of compliance with requirements set forth under the HCP or ITL, Applicant would be subject to law enforcement action.
236	Most of the measures of success included in the HCP are not conducive to adaptive management strategies. For example, by contributing to a pool of money for `a`o conservation research or projects to be carried out by USFWS, there is no adaptive management strategy under the HCP in the event that the management project that was funded turns out to be ineffective. See FOF # 52.	*See* Response to FOF 227.
237	Even where adaptive management strategies are practical, the HCP fails to specify actions that will be taken. For	*See* Response to FOF 227 and discussion in Exceptions Part IV.F. In response to this FOF and if the Board so

	example, mitigation for take of Hawaiian waterbirds includes partial fencing of Hamakua Marsh and funding for a staff biologist to do public education and monitoring. The HCP does not discuss any adaptive management strategy in the event that fencing, monitoring and public education are not successful in reducing the number of predators entering the marsh, the amount of trash in the parking lot adjacent to the marsh, or increasing the nesting opportunities within the marsh.	requires, Applicant will add the following clarification to the waterbird success criteria described in the HCP: "During the 2-year mitigation commitment, the part-time biologist will conduct periodic monitoring, to be determined in collaboration with USFWS and DOFAW. In addition to reporting the number of observed waterbird fatalities at Hamakua Marsh after fence construction, the part-time biologist will also document public engagement activities. As stated in the HCP, the results of monitoring will be included in the HCP annual reports, along with any adaptive management, if needed, as agreed to with the Agencies." The adaptive management process allows for Applicant and the Agencies to analyze and address any potential issues if and when they may arise. *See* Exceptions Part IV.F.
238	Research is an acceptable form of mitigation if information gained through research will inform and benefit future mitigation efforts. Given the limited knowledge about `ope`aope`a, research is an appropriate form of mitigation provided that the knowledge gained from research will inform and benefit future mitigation efforts. The HCP's mitigation strategy calls, in part, for funding for research but relies on other, future wind projects to implement mitigation strategies arising out of the research. The requested ITL is for a 21-year period. Moreover, currently there is ongoing research on `ope`ape`a. It is foreseeable, therefore, that during the permit term, research efforts may conclude that protecting habitats other than Poamoho Ridge may be more effective in the survival of `ope`ape`a on Oahu, especially as current knowledge indicate that `ope`ape`a use a variety of different, including disturbed,	This FOF is inaccurate and misrepresents the evidence in the record. First, the HCP's mitigation strategy does not rely on future wind projects to implement mitigation strategies arising out of the research funded by Applicant – Applicant will also be responsible for implementing research and habitat restoration as the specific bat mitigation strategies for the Project. Should the Project research and restoration actions or other best available science become available in the future, adaptive management actions may be considered in collaboration with the Agencies. Similarly, the implementation of LWSC at existing wind projects in Hawaii and the U.S. Mainland are examples of using adaptive management. *See* Ex. A-1 at 56-77, 85-86. Second, as discussed in Part IV.F of the Exceptions, the HCP does allow for adaptive management that may require

	habitats. Adaptive management should enable revisions in NPM's mitigation plans due to new research findings. The HCP, however, does not include such adaptive management strategies.	Applicant to revise its mitigation plans and measures. This is the purpose of incorporating a second Tier of mitigation, which will be informed by the results of research and the outcome of mitigation actions that will be implemented at Poamoho Ridge. Furthermore, the conditions proposed by Applicant for the ITL that would explicitly allow for this.
COL		
1.e	`Ope`ape`a. By providing for LWSC at 5 m/s, instead of 6.5 m/s, the HCP fails to minimize impacts to `ope`ape`a to the maximum extent practicable, and, therefore, may not be protecting or maintaining the habitat used by `ope`ape`a (i.e., the Project area) as required under HRS § 195D-21(b)(1)(A). FOF 197-210. Because of limited knowledge about `ope`ape`a, it cannot be concluded that the proposed mitigation of improvement of habitat at Poamoho Ridge will protect, maintain, restore, or enhance the ecosystems, natural communities, or habitat types upon which `ope`ape`a depend. FOF 216. As the HCP does not include an effective adaptive management strategy for revising mitigation measures if future research reveals that different mitigation measures would be more effective in protecting and maintaining habitat used by `ope`ape`a, FOF 228-238, the HCP does not meet this criterion with respect to `ope`ape`a.	*See* Responses to FOF 208, 210 & 238.
2.e	`Ope`ape`a. Mitigation proposed for `ope`ape`a includes contributing towards habitat improvement at Poamoho Ridge by providing annual funds to the KMWP and funding for research. FOF 213, 220. Because of limited knowledge about `ope`ape`a, it cannot be concluded that the proposed mitigation of improvement of habitat at Poamoho Ridge will increase the likelihood of recovery of `ope`ape`a. FOF 216. As the HCP does not include an effective adaptive management strategy for revising	*See* Response to FOF 238 and Exceptions Part IV.D.

	mitigation measures if future research reveals that different mitigation measures would be more effective in protecting and maintaining habitat used by `ope`ape`a, FOF 228-238, the HCP does not meet this criterion with respect to `ope`ape`a.	
5.e	`Ope`ape`a. See COL 1.e and 2.e., above. Because very little is known about the population status of `ope`ape`a (estimates range from a few hundred to a few thousand), and given the fact that take of `ope`ape`a by wind energy facilities may have been underestimated in the past, a robust analysis of potential take is critical. By relying solely on the Kahuku Wind Project as a surrogate and electing not to consider data from other wind facilities on Oahu or the other islands, and by failing to consider the impact of turbine height on bat mortality, the estimated take set forth in the HCP is not reliable enough for the Board to determine the cumulative impacts on `ope`ape`a. FOF 194.	The Agencies must evaluate cumulative impacts based on the amount of take requested by the Applicant. The buffer surrounding the take estimate (150% of the take estimate is the total requested amount of take for both Tier 1 and Tier 2) to account for uncertainties associated with fatality rate estimation. This COL holds Applicant to the wrong standard. Applicant is not required to consider the cumulative impacts of take to the Hawaiian hoary bat by analyzing the population on all islands. As explained in Applicant's proposed FOF/COL: 282. Cumulative impacts to the Hawaiian hoary bat are discussed in the HCP with a more complete evaluation of potential impacts presented in the referenced FEIS. *See* Ex. A-1 § 5.6; Ex. A-12 at [4]-106 to 4-112. Population level impacts are discussed in Section 5.1.4 of the HCP. Cumulative impacts on the Hawaiian hoary bat are assessed on a population basis. ***The populations of the Hawaiian hoary bat on each island are assessed on an island-specific basis***. See HRS § 195D-21(b)(2)(C). ***Accordingly, it was appropriate for Applicant's HCP to consider and focus on the cumulative impacts to the Hawaiian hoary bat population on the island of O'ahu***. See Ex. A-12 at 4-106 to 4-112; Ex. A-1 at 55-56; see also Ex. A-12 at 4-5 to 4-6 & Table 4.2-1; Ex. A-53 (Snetsinger WRT) at ¶ 14.

		NPM FOF 282 (emphases added); *see also* NPM FOF 284-286. As discussed above, the Agencies are required to make a "no jeopardy" determination. DOFAW and USFWS, by moving the HCP to the ESRC for approval, and the recommendation of the ESRC to the Board to approve the HCP, indicates that the Agencies are comfortable that the HCP meets the state and federal issuance criteria, including no jeopardy. *See* Exceptions Part IV.A.
6	Pursuant to HRS § 195D-21(b)(2)(D), Appendix F and Section 9.4 of the HCP identifies those measures or actions proposed 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 measure or actions; and an adequate funding source to ensure that the actions or measures, including monitoring, are undertaken in accordance with the schedule. See other COL, however, regarding the adequacy of such proposed measures or actions.	Applicant objects only to the last sentence of this COL. First, this COL does not specifically identify which measures the Recommendation takes issue with. Second, for the reasons discussed in Responses to FOF 58, 112, 227, 235 & 236, and COL 9.a, 9.c & 9.f, and Exceptions Parts IV.D and IV.E, the last sentence of this COL is incorrect.
8.a	See COL 1.a. through 1.e.	Applicant takes Exception to COL 1.e. *See* Responses to FOF 208, 210 & 238 and COL 1.e.
9.a	Most of the measurements of success in the HCP cannot be said, when achieved, to contribute significantly to the protection, maintenance, restoration or enhancement of ecosystems, natural communities, or habitat types. Instead, success is most often measured by the contribution of money, without any evaluation of whether the use of the money actually contributed significantly to the survival or	This COL again holds Applicant to a standard that is not present in HRS Chapter 195D. There is nothing in HRS Chapter 195D that requires measures of success for HCPs to be biological. And while the Recommendation may desire that measures of success are biological, Applicant presented evidence, including the Agencies concurrence with the HCP, why biological measures of success are

	recovery of the Covered Species. While in some cases, the contribution of money is the most practicable measure of success, in other areas, there should be more meaningful measures to determine whether the mitigation measures are successful in contributing to the survival and recovery of the Covered Species.	difficult to measure for some species, particularly the Hawaiian hoary bat. *See* Response to FOF 58; *see also* Exceptions Parts IV.D and IV.E. Precedent is set in other HCPs that measures of success can be non-biological. In various areas in the Recommendation FOF/COL, she concludes for other species that this is an acceptable approach basing it on the low number of authorized take for each species. The Recommendation gives no reason for why doing the same for Hawaiian waterbirds and the Hawaiian hoary bat is unacceptable and therefore makes the HCP deficient. Accordingly, this conclusion is arbitrary and capricious.
9.c	Hawaiian Waterbirds. The HCP proposes to measure success by timely fence construction and funding for fence maintenance and a half-time staff biologist. FOF 111. These actions, however, cannot be cannot be said, when achieved, to contribute significantly to the protection, maintenance, restoration or enhancement of ecosystems, natural communities, or habitat types. Meaningful measures of success should include assessments of the (i) effectiveness of the fence in reducing predation or improving breeding habitat, (ii) staff biologist's engagement with the public regarding the protection of waterbirds, and (iii) whether monitoring activities contribute towards improving habitat for waterbirds. These types of measurements of success are not included in the HCP, FOF 112, and thus, are not compliant with HRS § 195D-21(b)(2)(G).	*See* Response to FOF 227 and Exceptions Part IV.E.
9.f	`Ope`ape`a. The HCP identifies the completion of tasks, such as, but not limited to, having an approved research plan, timely funding the Poamoho Ridge habitat improvement plan, and having conducted acoustic bat	*See* Response to FOF 227 and Exceptions Part IV.D.

	monitoring. The HCP also lists monitoring of efforts in removal of pigs and goats and invasive plants. The HCP is silent as to what happens in the event that pigs, goats and invasive plants are not removed to the extent and in the timeframe provided in the management plan. FOF 227. Moreover, the HCP is silent on adaptive management strategies in the event future research reveals that the mitigation plan will not benefit `ope`ape`a. FOF 216. The HCP fails to include meaningful measures of success with respect to `ope`ape`a mitigation, and in this respect is not compliant with HRS § 195D-21(b)(2)(G).	
10	The HCP's adaptive management strategy focuses on avoidance and minimization measures and NPM's ability to comply with authorized take levels and mitigation requirements. It fails to provide an enforceable adaptive management strategy for revising mitigation measures when new information supports alternative mitigation measures. FOF 228-238. This failure renders the HCP non-compliant with HRS § 195D-21(b)(2)H).	*See* Response to FOF 58, 227, 238.
11	In three instances, Applicant failed to use the best scientific and reliable data in assessing impacts and mitigation as required under HRS § 195D-21(c): (i) electing to use LWSC cut-in speed of 5 m/s, instead of 6.5 m/s; (ii) concluding that the height of WTGs has no impact on take of `ope`ape`a; and (iii) by relying solely on data from the Kahuku Wind Project for estimating the Project's take of `ope`ape`a.	*See* Exceptions Part IV.A, B & C.
12	Because of the less than robust analysis of anticipated take of `ope`ape`a by the Project, combined with the limited information available about `ope`ape`a populations on Oahu and statewide, it cannot be determined with confidence whether the Project will jeopardize the continued existence of `ope`ape`a. HRS § 195D-21(c)(1).	*See* Exceptions Part IV.H. This COL holds Applicant to a higher standard than what's required by HRS Chapter 195D, requiring Applicant to prove with ***confidence*** (i.e., beyond a reasonable doubt), that the Project will not jeopardize the Hawaiian hoary bat. This is higher than the preponderance of the evidence

	FOF 194.	standard required for this application. HRS § 195D(c)(1) states that the Board shall disapprove of the HCP if the plan is *likely* to jeopardize the continued existence of any species.
14	The HCP, by (i) relying solely on data from the Kahuku Wind Project excluding data from other wind projects in the State, and (ii) failing to analyze the impact of the increased height of WTGs on `ope`ape`a, failed to provide sufficient information for the Board to ascertain with reasonable certainty the effect of the plan on `ope`ape`a in the plan area and throughout its habitat range. HRS § 195D-21(c). FOF 194.	*See* Response to FOF 180 and Exceptions Part IV.A. & G; *see also* Ex. A-36 at 5-7 (ESRC decision approving the HCP after thorough discussion of the HCP, including mitigation measures and measures of success); NPM FOF 312-313, 68-101.
18	HRS § 1954(g)(1) requires the applicant to minimize and mitigate the impacts of the take to the maximum extent practicable. Increasing cut-in speed to 6.5 m/s, rather than 5 m/s, would minimize impacts to the maximum extent. However, the HCP provides for cut-in speed at 5 m/s and Applicant did not provide evidence that increasing cut-in speed to 6.5 m/s is not practicable. Therefore, the HCP does not satisfy HRS § 195D-4(g)(1). FOF 208-210.	*See* Responses to FOF 208, 210 & 238.
21	The minimization and mitigation measures proposed in the HCP are aimed at increasing the likelihood of survival and recovery of all of the Covered Species except `ope`ape`a. HRS § 195D-4(g)(4). See COL 5.a. through 5.e., above. Additionally, not enough information is known about the potential acquisition of property for protection of `ope`ape`a habitat for the Board to analyze whether it would mitigate the impacts of take. FOF 226.	*See* Response to FOF 227, 238 and Exceptions Part IV.D.
22	Because Applicant conducted a less than robust analysis of anticipated take of `ope`ape`a, especially given the higher than anticipated rate of take experienced at other wind energy projects in the state, the Board is unable to	*See* Response to COL 5.e; NPM FOF 96, 188-203; Exceptions Part IV.A.

	adequately assess the cumulative impact of the take of `ope`ape`a as required by HRS § 195D-4(g)(5). FOF 194.	

EXHIBIT 3
PROPOSED INCIDENTAL TAKE LICENSE

State of Hawai'i
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, Hawai'i 96813

Incidental Take License No. _____
Date Issued: _____
Expiration Date: _____

INCIDENTAL TAKE LICENSE

to accompany:

Na Pua Makani Power Partners, LLC Habitat Conservation Plan

The Board of Land and Natural Resources hereby grants permission under the authority of § 195D-4(g), Hawai'i Revised Statutes and all other applicable laws, to the Permittee:

Na Pua Makani Power Partners, LLC
2020 Alameda Padre Serra, Suite 105
Santa Barbara, California 93103

To: take of (if such taking is incidental to, and not for the purpose of, the carrying out of an otherwise lawful activity);

The following species:

Common Name	Scientific Name	Tier	Requested Authorization 21-year limit	TMK
'ōpe'ape'a (Hawaiian hoary bat)	*Lasiurus cinereus semotus*	Tier 1	34 bats	(1) 5-6-008: 006 and (1) 5-6-006: 008
		Tier 2	51 bats	
'a'o (Newell's shearwater)	*Puffinus newelli*	Not applicable	4 adults / immatures and fledglings and 2 chicks/eggs	
nēnē (Hawaiian goose)	*Branta sandvicensis*	Not applicable	6 birds	
koloa maoli (Hawaiian duck)	*Anas wyvilliana*	Not applicable	4 birds	
ae'o (Hawaiian black-necked silt)	*Himantopus mexicanus knudseni*	Not applicable	4 birds	
'alae ke'oke'o (Hawaiian coot)	*Fulica alai*	Not applicable	8 birds	

ʻalae ʻula (Hawaiian moorhen)	*Gallinula chloropus sandvicensis*	Not applicable	8 birds	
pueo (Hawaiian short-eared owl	*Asio flammeus sandwichensis*	Not applicable	4 adults / fledged young and 4 chicks/eggs	

Subject to the following conditions:

GENERAL CONDITIONS

1. This license only authorizes the permittee to conduct incidental take of the Covered Species on the lands owned or otherwise controlled by Permittee on the Island of Oʻahu, Hawaiʻi at the time this license is issued pursuant to the "Na Pua Makani Wind Energy Project Habitat Conservation Plan" dated March 2016 (the "HCP").

2. This license is valid only if Permittee abides by the terms and conditions of the HCP and ITL for the duration of the license.

3. This license is valid for species protected by federal law only if accompanied by proper federal permits. The permit number for the required permit must be provided to the Division of Forestry and Wildlife ("DOFAW") when it is obtained.

4. This license shall become valid upon completion of the following:

   a. A legal representative of Permittee has acknowledged understanding and agreement to abide by its conditions.

   b. Both copies of the signed license must be returned to DOFAW. Upon approval by the Chairperson of the Board of Land and Natural Resources, a copy of the license will be returned to the Permittee.

5. The take authorization contained in this license is not effective until Na Pua Makani Power Partners provides DOFAW with an executed copy of the letter of credit (or other approved financial tool) containing terms reasonably acceptable to DOFAW. Upon triggering Tier 2 mitigation, financial assurances for an additional $894,000 will be provided to ensure funding for Tier 2 mitigation. If triggered, funding assurances for Tier 2 will be provided before the Tier 1 take threshold is exceeded. An estimate of the costs for implementing the HCP is provided in Appendix F to the HCP.

6. The Board may suspend or revoke this license if the HCP is suspended or revoked. The Board may also suspend or revoke this license in accordance with applicable laws and regulations in force during the term of the license.

7. Persons in violation of the terms and conditions of this license and/or related or appropriate laws may be subject to criminal and or administrative penalty under §§183D-5, 183D-21, 195D-9, and 195D-27, Hawaiʻi Revised Statutes, and §124-8, Hawaiʻi Administrative Rules, or as otherwise provided by law, and/or revocation of this permit.

8. Permittee shall submit an annual report to DLNR by August 1 of each fiscal year ending June 30, that includes a description of activities and accomplishments, analysis of the problems and issues encountered in meeting or failing to meet the objectives set forth in the HCP, areas needing technical advice, status of funding, and plans and management objectives for the next fiscal year, including any proposed modifications thereto.

SPECIAL CONDITIONS

9. No more than 8 wind turbine generators with a maximum height of 570 feet (173 meters) each will be developed as part of the Project.

10. The allowable incidental take authorized by this license for the Covered Species includes observed, unobserved, direct, and indirect take as defined in the HCP.

11. The estimation of incidental take for the Covered Species will be calculated according to adjustments made to the observed direct take according to methods detailed in the HCP, including adjustments to include unobserved and indirect take.

12. The incidental take authorized by this license for the Hawaiian hoary bat is defined by two tiered levels, each of which is identified in the HCP. In the event that the take level for the Hawaiian hoary bat for tier 1 is reached, incidental take at the tier 2 level is authorized, provided that Permittee abides by the terms and conditions of the HCP.

13. DLNR will be notified within 24 hours, and a written incident report filed within 3 business days, of any mortalities, injuries, or disease observed on the property. Injured individuals or carcasses will be handled according to guidelines in the HCP and DLNR/USFWS guidance. Agency guidance for reporting incidents may change over the life of the permit and will be modified accordingly.

14. The minimization and mitigation measures set forth in the HCP shall be incorporated into this ITL and implemented by the Permittee.

15. If, during the term of the ITL, the DOFAW, ESRC, and Board determine that additional or alternative reasonable avoidance, minimization or mitigation measures are required, as supported by the best available scientific research being funded by the existing HCP efforts and other best available science, the Permittee shall work with DOFAW, the ESRC, and the Board to implement, through its Adaptive Management efforts, any reasonable additional avoidance, minimization or mitigation measures that will improve the survivability and recovery of the Covered Species. The Board shall not require Permittee to implement any measures (a) that impact Permittee's energy production or prejudice its ongoing operations, (b) significantly increase any additional funding requirements, or (c) upon which Permittee has not first been consulted. Implementation of Adaptive Management measures to reduce the risk of take shall not require an amendment to the HCP so long as there are no proposed major amendments to existing take limits.

16. Adaptive management will be used to implement advances in scientific knowledge to the extent conclusions can be reasonably drawn, based on credible scientific studies to be undertaken in the future through funding provided in mitigation, that adjustments in

wind turbine cut-in speed to wind speeds up to 6.5 m/s during certain time periods of activity is necessary and demonstrated to reduce the rate of take within the two tiers of take.

17. The funding commitments set forth in the HCP shall be complied with through the issuance of a letter of credit to support those funding obligations set forth in Section 9.4 of the HCP.

18. During the 2-year mitigation commitment for Hawaiian Waterbirds, the part-time biologist will conduct periodic monitoring, to be determined in collaboration with USFWS and DOFAW. In addition to reporting the number of observed Hawaiian Waterbird fatalities at Hamakua Marsh after fence construction, the part time biologist will also document public engagement activities. Results of monitoring will be included in the HCP Annual Reports, along with any adaptive management necessary to maintain mitigation effectiveness.

SUZANNE D. CASE
Chairperson and Member
Board of Land and Natural Resources

Cc: DOFAW O'ahu Branch
DOCARE
USFWS Pacific Islands Office, Honolulu
Senior Resident Agent, USFWS-Law Enforcement, Honolulu

Attachment No. 1 to INCIDENTAL TAKE LICENSE NO. _____

The undersigned has read, understands and hereby agrees to abide by General Condition Nos. 1-8 and Special Conditions 9-18 as stipulated on pages 2 through 4 of INCIDENTAL TAKE LICENSE NO. _____.

NA PUA MAKANI POWER PARTNERS, LLC

By: _____
Name:
Title:

"Permittee"

BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAI'I

IN THE MATTER OF A Contested Case Hearing Re Final Habitat Conservation Plan and Incidental Take License for the Na Pua Makani Wind Energy Project by Applicant Na Pua Makani Power Partners, LLC; Tax Map Key Nos. (1) 5-6-008:006 and (1) 5-6-006:018, Ko'olauloa District, Island of O'ahu, Hawai'i	Case No. BLNR-CC-17-001 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

The undersigned certifies that the above-referenced document was served upon the following parties by email unless indicated otherwise:

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DATED: Honolulu, Hawai'i, December 7, 2017.

JOHN P. MANAUT
PUANANIONAONA P. THOENE

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NA PUA MAKANI POWER PARTNERS, LLC