Evenson, Tasheena

From: Joseph M Szewczak <joseph.szewczak@humboldt.edu>
Sent: Monday, November 25, 2019 1:03 PM
To: PlanningBuilding
Subject: Humboldt Wind Energy Project
Attachments: Dear Humboldt County Supervisors 21Nov2019.pdf

Hello John,

I sent the attached letter to the Planning Commision and Supervisors. Mike Wilson suggested that I send a copy to you to enter into the record.
Thank you,
Joe

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Joe Szewczak
Professor of Biological Sciences
joe@humboldt.edu

Dear Humboldt County Supervisor,

I wish to express my concern regarding the potential threat to hoary bats posed by the proposed Humboldt Wind Energy Project. I have particular expertise in this issue having developed the initial acoustic deterrent technology (PLOS ONE 2013 http://dx.plos.org/10.1371/journal.pone.0065794), authored guidance documents for the National Wind Coordinating Committee, advised the Altamont Technical Advisory Committee, and created the software used in the bat acoustic monitoring study of this project (SonoBat).

Firstly, the conservation and management of bats must be anticipatory rather than reactive. Bats have a low reproductive rate; just one birth per year and a single pup for most species. They cannot simply bounce back from a population decline as can many other taxa. Bats, and in particular solitary tree roosting bats as the hoary bat, have been historically difficult to study and assess their population status. The only bat species in the continental United States that have received Federal listing are cave roosting bats that have historical records documenting their decline, because biologists could observe them over the decades. We have no such historical record for hoary bats on which to base a listing, although many biologists believe they have declined similarly to the cave roosting species that have received protection. Comments and reports about the project have referenced the Frick et al. (2017) study that evaluated the long-term risk to hoary bats from continental-wide wind energy development. The situation with this species in our area poses unique concern in that the Humboldt Redwoods has the only known mass swarming site for this species (https://www.fs.usda.gov/treesearch/pubs/download/41178.pdf). Large numbers of hoary bats gather from presumably across the western United States in the fall as observed along Bull Creek in Humboldt Redwoods State Park. We do not know the full extent of the swarming activity beyond the study site along Bull Creek.

Hoary bats fly well above the ground, often foraging in open air above the canopy of forests. Much of the ground-based acoustic monitoring done for this project would not detect these bats. Only minimal rotor swept height monitoring was done during project assessment, and only one recording station during the fall migratory period. As these bats all must travel from across the western United States, and we do not know their routes, they may likely pass over the project site in unpredictable numbers with large surges. The one station that recorded at height on a meteorological tower did show one event with a large spike in passes. This could be a discrete event captured at that one station, that may happen at other locations along the ridge on other nights not detectable by this one station. (Bat detectors cannot detect bats from more than about 30 m away.)

With continued study, we may find our situation with hoary bats here to be similar to monarch butterflies that gather to overwinter at just two known sites. And these hoary bats do this here in one of the last remaining stands of the tallest forest on the planet. This creates a situation worthy for status as a World Heritage site.

Thus the concern: giving the unique nature of the situation here in Humboldt County, the potential impact for this project on this species remains uncertain, and could pose a

disproportionate risk to this species, moving it closer to a situation that could eventually lead to a consideration for listing. I believe that the preconstruction bat acoustic monitoring did not adequately assess the full potential for bat interaction at rotor swept height along the length of the ridge, and the possibility of temporal pulses of hoary bats moving over the ridge on their way to the Humboldt swarming site(s). Additional study could help resolve this. However, another option would be to implement a demand sensitive curtailment system, as done elsewhere. This would provide protection from mass fatality events from large pulses of activity that would otherwise become known via carcass searches.

In summary, given that most of the economic and energy benefits from this proposed project seem destined to benefit entities outside of our county, and that we have a probable unique environmental and biological situation here (not adequately addressed by the proposal and their responses), I encourage you to not accept this proposal in its current status.

Respectfully,

Joe Szewczak
Professor of Biological Sciences
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