

## Attachment 15

### Skookumchuck Wind Energy Project Mitigation for Marbled Murrelets

Several commenters have requested that the applicant provide marbled murrelet mitigation similar to mitigation required for the Skookumchuck Wind Energy Project in Washington State. The project will generate up to 137 megawatts and will construct and operate 38 turbines and associated facilities (access roads, electrical collection lines, substation, met towers, operations and maintenance facility, and gen-tie) on an area of approximately 22,000 acres.

The mitigation for marbled murrelet described in the Draft Environmental Impact Statement (DEIS) developed for the Skookumchuck project is to develop and implement a Bird Bat Conservation Strategy Plan before operation of the project. The DEIS also requires mitigation to offset operational impacts of the project by acquiring conservation lands that promote the preservation and enhancement of suitable nesting habitat for marbled murrelets, and to provide funding for the removal of derelict fishing nets (to reduce entanglement fatalities for murrelets foraging at sea).

The Skookumchuck Wind applicant also prepared a Habitat Conservation Plan (HCP) and applied for an Incidental Take Permit for marbled murrelets under the federal Endangered Species Act. While **curtailment** of turbines to avoid collision impacts on marbled murrelets is not included in the DEIS or the revised DEIS, the HCP requires curtailment of 10 turbines with higher passage rates for marbled murrelet. Curtailment would occur during early morning hours for a 101-day period that includes the peak breeding season (May 1 through August 9).

As described on page 41 of the Skookumchuck Wind Energy Project HCP (Appendix 3.4-5 to the FEIS), with implementation of curtailment of those 10 turbines the estimated take of marbled murrelets is 0.840 murrelets/year, or 26 murrelets over the 30-year life of the project. Without curtailment, marbled murrelet take was estimated to be 0.98 murrelets/year, with a total of 30 birds taken over the 30-year life of the project. To account for the uncertainty associated with murrelet flight behavior and collision probability, the project applicant adopted a conservative approach and requested take authorization based on take of **2.496 murrelets/year or 75 marbled murrelets** over the 30-year life of the project.

Curtailment was a requirement of the HCP for the Skookumchuck Wind Project but was not included as a mitigation measure in the DEIR. Unlike the Skookumchuck project, the Humboldt Wind project EIR is not proposing to implement curtailment or habitat acquisition to mitigate marbled murrelets for the following reasons:

#### Elimination of Turbines is More Effective than Curtailment

- The Humboldt Wind project has not incorporated curtailment for high risk turbines, but instead has entirely **eliminated** the five highest risk turbines, and removed seven others, for a total reduction of 13 turbines (47 rather than 60).

- Eliminating high risk turbines is a more reliable and effective approach than the curtailment proposed at the Skookumchuck Wind project, which only reduces the projected take of murrelets from 30 to 26.
- With elimination of high risk and other turbines at the Humboldt Wind project the estimated marbled murrelet take is 7.7 fatalities over the 30-year life of the project (based on the deterministic model and a second year of marbled murrelet radar data).
- Before elimination of the turbines the estimated take was 10.43 marbled murrelet fatalities over the life of the project.

#### Corvid Management is a More Effective Mitigation Approach than Habitat Acquisition

- Only 4% of coastal old-growth forest remains in California relative to what was historically available, and almost all remnant murrelet nesting habitat has already been protected in California through designation as national, state, and county parks or preserves. Furthermore, no willing sellers of additional land with old growth are available in Humboldt County. Therefore, habitat acquisition is not a readily available option in Humboldt County.
- Even if old-growth habitat were available for purchase or for placement under a conservation easement, protection of existing old growth habitat would not increase the current number of marbled murrelets, it would just prevent future habitat loss.
- As documented in the scientific literature, failure of murrelet nests due to predation by corvids (jays and ravens) is currently one of the greatest threats to murrelets in California, and researchers have identified reduction in corvid predation as essential to maintaining a viable murrelet population. Reduction in corvid predation can be achieved by reducing human sources of food at parks and campground in or near marbled murrelet nesting habitat with a comprehensive corvid management plan (i.e., installation of bear-proof food lockers, garbage bins, and recycling bins; food catchment devices under water spigots; educational signage; active visitor education; and enforcement of corvid management practices throughout the murrelet nesting period). This approach has been successfully implemented locally by National and State Parks, who are the main agencies charged with management of Humboldt and Del Norte County's remaining old growth redwoods. This approach is also recommended as the most effective way to protect marbled murrelet breeding success by local murrelet experts.
- A 50% reduction in the number of corvids at Van Duzen County Park, which currently does not implement comprehensive corvid management, would produce between 47.6 and 96.8 additional breeding adults over the 30 year lifespan of the project, resulting in far more murrelets than would be lost due to project impacts.

The Skookumchuck DEIS and HCP documents are available at the following website:

<https://lewiscountywa.gov/departments/community-development/skookumchuck-wind-energy-project/>