

DRAFT OUTLINE

Statewide Guidelines for Reducing Wildlife Impacts from Wind Energy Development

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The purpose of developing these voluntary, science-based guidelines is to facilitate the permitting and environmental review process for wind energy development in California. The guidelines will focus on reducing impacts to birds and bats and will describe the kind of information needed to adequately identify, assess, mitigate and monitor the impacts of developing new wind energy projects and re-powering existing facilities. These guidelines are intended to be sufficiently flexible to accommodate the unique features of each wind development site while providing consistent methodology and guidelines to assess and mitigate the effects of wind development on wildlife.

1. INTRODUCTION

- a. Need, purpose and scope of guidelines
- b. Relationship of guidelines to local, state and federal laws
- c. Other references and sources of guidance
- d. Organization of guidelines

2. PRE-PERMITTING ASSESSMENT/MONITORING

Assess seasonal/annual variation in bird and bat use (breeding, wintering, migratory) and sensitivity of the site to provide: (1) information to assess effects on wildlife for impact analysis; (2) baseline comparison with post-construction survey data; (3) information for micro-siting of turbines, roads and other infrastructure; (4) fatal-flaws assessment for macro-siting.

Preliminary Information Gathering

Gather and evaluate baseline information:

- a. Assess validity and applicability of existing data from adjacent sites
- b. Evaluate size and scope of proposed project in relation to existing data
- c. Consult with California Department of Fish and Game, U.S. Fish and Wildlife Society (USFWS), Audubon, local experts, county planning departments
- d. Record searches (California Wildlife Habitat Relationship System, California Natural Diversity Data Base, USFWS species lists)
- e. Reconnaissance site survey to assess habitat

Pre-Permitting Field Surveys

Determine frequency, duration, and scope of pre-construction field studies based on availability of existing information, sensitivity of site, and size of the project. Establish methods, metrics, and study design (including before/after–control/impact) with:

- a. Diurnal avian use and behavior surveys (point counts, breeding bird surveys, raptor nest searches, mist-netting)
- b. Nocturnal studies for bats and night-flying birds (radar/acoustical methods, night vision devices, thermal animal detection systems)
- c. Establish appropriate protocol, statistical methods, and sample size for deriving post-operational fatality estimates (baseline bird/bat carcass counts)

3. IMPACT ANALYSIS

Assess extent and significance of:

- a. Direct impacts: predicted risk of bird/bat collisions, impacts due to construction, habitat loss
- b. Indirect impacts due to disturbance, behavioral avoidance
- c. Cumulative impacts analysis - determine regional scope of analysis, species/taxa addressed

The impact analysis is the basis for mitigation (avoidance, minimization, and compensatory) and level of post-construction monitoring

4. POST-CONSTRUCTION MONITORING/REPORTING

Purpose is to: (1) count fatalities, compare to control data and pre-construction estimates; (2) understand conditions relating to mortality (3) evaluate effectiveness of mitigation measures, provide feedback for Adaptive Resource Management; (4) provide information for future wind development sites, and (5) provide standardized information for monitoring reports to agencies.

Avian and bat fatality monitoring, use of site

- a. Carcass count – determine interval between counts, searcher detection rates and bias, scavenger removal rates, search radii, biometrics of carcass count
- b. Ongoing point count, transects, or nocturnal surveys to assess ambient level of habitat use by birds and bats

Reporting/Interpreting Monitoring Data

- a. Standardized reporting protocol for post-construction data
- b. Availability of report for public, peer review of reports

- c. Process for establishing a Technical Advisory Committee for data interpretation
- d. Process for implementing Adaptive Resource Management
- e. Statewide reporting/tracking wind facility mortality (APLIC model)

5. MITIGATION

- Pre-Construction Avoidance/Minimization Measures
- Post-Construction Measures
- Compensatory Mitigation
Establish nexus between bird fatalities, habitat loss, and appropriate compensatory mitigation; determine fee collection and mechanism for habitat protection/acquisition based on appropriate biometric.

6. GUIDELINES UPDATES AND REVISIONS

- a. Mechanism for ongoing feedback on guidelines from the stakeholders and lead agencies
- b. Process to update/revise guidelines