

Erickson, W., G. Johnson, D. Young, D. Strickland, R. Good, M. Bourassa, K. Bay, and K. Sernka. 2002. Synthesis and Comparison of Baseline Avian and Bat Use, Raptor Nesting and Mortality Information from Proposed and Existing Wind Developments. Report prepared for Bonneville Power Administration. WEST, Inc., Cheyenne, WY.

Primarily due to concerns generated from observed raptor mortality at the Altamont Pass (CA) wind plant, one of the first commercial electricity generating wind plants in the U.S., new proposed wind projects both within and outside of California have received a great deal of scrutiny and environmental review. A large amount of baseline and operational monitoring data have been collected at proposed and existing U.S. wind plants. The primary use of the avian baseline data collected at wind developments has been to estimate the overall project impacts (e.g., very low, low, moderate, and high relative mortality) on birds, especially raptors and sensitive species (e.g., state and federally listed species). In a few cases, these data have also been used for guiding placement of turbines within a project boundary. This new information has strengthened our ability to accurately predict and mitigate impacts from new projects. This report should assist various stakeholders in the interpretation and use of this large information source in evaluating new projects. This report also suggests that the level of baseline data (e.g., avian use data) required to adequately assess expected impacts of some projects may be reduced. This report provides an evaluation of the ability to predict direct impacts on avian resources (primarily raptors and waterfowl/waterbirds) using less than an entire year of baseline avian use data (one season, two seasons, etc.). This evaluation is important because pre-construction wildlife surveys can be one of the most time-consuming aspects of permitting wind power projects.

For baseline data, this study focuses primarily on standardized avian use data usually collected using point count survey methodology and raptor nest survey data. In addition to avian use and raptor nest survey data, other baseline data is usually collected at a proposed project to further quantify potential impacts. These surveys often include vegetation mapping and state or federal sensitive-status wildlife and plant surveys if there is a likelihood of these species occurring in the vicinity of the project area. This report does not address these types of surveys, however, it is assumed in this document that those surveys are conducted when appropriate to help further quantify potential impacts. The amount and extent of ecological baseline data to collect at a wind project should be determined on a case-by-case basis. The decision should use information gained from this report, recent information from new projects (e.g., Stateline OR/WA), existing project site data from agencies and other knowledgeable groups/individuals, public scoping, and results of vegetation and habitat mapping. Other factors that should also be considered include the likelihood of the presence of sensitive species at the site and expected impacts to those species, project size and project layout.