

2010 Spring Avian Point Count Survey

This protocol is designed to be responsive to the level of effort recommended in the National Wind Coordinating Committee (NWCC) Guidance Document and the United States Fish and Wildlife Service (USFWS) Interim Guidelines. The NWCC Guidelines call for an initial reconnaissance survey. The goal is to identify sites early in the planning process that have a high probability of substantial avian issues. The survey is designed to quantify the species, and activity of birds in the Project Area. The following point count survey protocol has become industry standard across the United States as part of environmental due diligence.

Point count surveys of large circular plots will be conducted to provide baseline information on both resident and migratory avian species within Project boundaries during the spring. The same points surveyed in fall 2009 will be surveyed in the spring 2010 survey. The avian point count survey will be conducted weekly from late March (weather permitting) through mid-June 2010. This survey period will be early enough in the year to account for spring migration of all major bird groups, raptor nesting, and songbird breeding. The study timing will also be designed to capture the three major migration waves within the season (e.g., waterfowl, shorebird, songbird). Surveys will be conducted during daylight hours. The radius of each circular plot will be 800 meters. Birds observed beyond 800 meters will be recorded, but not included in the site use calculations for comparison to other sites. In-transit observations of birds will be made while traveling between survey points.

A qualified biologist will conduct observations for 20 minutes at each observation point; all birds observed will be recorded. Species observed, number of birds (single or in a flock), flight height range, flight direction, habitat, distance from observer at closest approach, and activity will be recorded to determine how species are using the Project Area. This sampling strategy gives an assessment of the overall use of the Project Area by birds, as well as details on the specific locations of birds relative to topographic features and turbine locations. Environmental conditions (cloud cover, ceiling, temperature, precipitation, and wind speed) will be recorded at each observation point. The Universal Transverse Mercator (UTM) coordinates will be documented in the field using a global positioning system (GPS) unit.

Flight paths of large birds and sensitive species will be mapped. The distance at closest approach to the observer will be used to standardize the data for 800-meter radius plots, so the use data can be compared to that from other wind projects throughout the country. The number of birds counted will be summarized by observation point and count date. Wildlife observed while in the Project Area, but not during a 20-minute observation session, will be recorded as incidental observations and used to supplement the data.

Bird flight heights and distance from the observation point will be summarized by percent of observations to quantify the location of birds in the Project Area relative to the turbine locations. These data will be summarized to create a description of the behavior of birds in and around wind turbines.

Raptors Nest Surveys

A raptor nest survey will be conducted to gain an understanding of resident raptor use and make micro-siting recommendations. An initial survey will be conducted while the biologist is on-site establishing the point count locations in early spring; this will allow for easier detection of nest in trees as this survey will be conducted prior to leaf-out. Any detected stick nests will be revisited later in the spring during the point count surveys to determine nest activity and species presence. The biologist will also pay close attention to raptors detected during the point counts to glean clues about the locations of nests not detected during the initial survey. The Project Area will be searched by driving along roads and stopping to scan with binoculars and a spotting scope. All suitable nesting habitat within the Project Area will be searched. Particular attention will be given to areas where raptor nests are likely to occur, such as rock outcrops, cliff ridges, power lines, and areas near bodies of water. All nests will be photographed and a GPS will be used to record nest locations. The biologist will also record activity status, nest condition, nest height, nest substrate, and any other relevant data. Care will be taken to not approach active nests too closely to avoid disturbing nesting birds. However, if no birds are observed on the nest, the nest will be approached to look for signs of nesting such as whitewash, downy feathers, and pellets.

Reporting of Survey Results

A report will be prepared for the spring avian survey and raptor nest survey. The final report will incorporate information from the 2009 fall avian survey report and include a comparison between the results for the two survey seasons. The report will also document active raptor nests at the Project Area.