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Review of Consistency with Pre-Construction Survey Protocols

Review of Conformance with Pre-Construction Eagle Use Survey Protocols

Included below is a specific list of pre-construction survey requirements included in the revised 2016 eagle permit rule. The revised eagle permit rule requires implementation of survey and monitoring protocols that are “Service-approved.” Generally, we assume this means strict adherence to the survey protocols described in Appendix C and D of the Eagle Conservation Plan Guidance (ECPG). However, the requirements could be specifically waived if approved by the U.S. Fish and Wildlife Service (USFWS).

Specific requirements of pre-construction surveys and application data requirements described in the rule change are summarized in Table 1, along with descriptions of how the surveys performed to-date at the Black Oak Wind and Getty Wind projects (together, the Project) conform with these specifications.

As documented in Table 1, the pre-construction surveys conducted at the Project substantially comply with the protocols listed in the ECPG. However, because the studies began in 2011, two years prior to publishing the final ECPG and five years before the 2016 Eagle Rule, not all measures were followed in all of the surveys. Because the surveys were done prior to finalization of the protocol, and because the studies and preparation of the ECP for the Project have been developed through coordination with the USFWS since 2009 (in particular, multiple meetings and conference calls have been held with the USFWS starting in early 2014 after the ECPG was finalized in order to discuss eagle survey methodologies), the Applicant, Black Oak Wind LLC, requests that the USFWS document that this Project qualifies for a waiver from strict conformance with the ECPG protocols.

Table 1. Summary of Pre-construction Survey and Application Package Requirements

Requirement	Conformity with Eagle Rule/ECPG	Notes
<i>Pre-construction Survey Requirements</i>		
Conducting eagle surveys and small bird surveys separately, to avoid overlooking large birds while searching at a much smaller scale for small songbirds	2011/2012 surveys – partially conform 2014 – 2015 surveys - conform	For Black Oak, large bird and small bird surveys overlapped for some of the surveys, particularly those conducted in 2011. Surveys were always done with an emphasis on collecting information on eagle use. Although some small bird data were recorded, given the agricultural nature of the project site, this did not distract from the collecting of large bird data. The final year of surveys from February 2014 through January 2015 were eagle only surveys
Using trained observers that are capable of accurate bird identification and distance estimation	Conforms	
Distributing surveys across daylight hours (e.g., morning: sunrise to 1100 hours; midday: 1101–1600 hours; evening: 1601 hours to sunset), and by designing surveys to more intensively cover the midday period in areas where eagle flight is more likely at that time of day	Conforms	
Conducting surveys under all weather conditions except when visibility is less than 800 meters (m) horizontally and 200 m vertically.	Conforms	

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Requirement	Conformity with Eagle Rule/ECPG	Notes
Surveys must consist of point-based recordings of bald eagle and golden eagle flight activity (minutes of flight) within a three-dimensional cylindrical plot (the sample plot). The radius of the sample plot is 2,625 feet (ft) (800 meters (m)), and the height above ground level must be either 656 ft (200 m) or 82 ft (25 m) above the maximum blade reach, whichever is greater.	Conforms	
The duration of the survey for each visit to each sample plot must be at least 1 hour.	Substantially conforms	The April – June 2011 surveys were 30-minute surveys. The remainder of the surveys (December 2011 – March 2012 and February 2014 – January 2015) were all 60 minutes
Sampling must include at least 12 hours per sample plot per year for 2 or more years.	Substantially conforms, final year survey plan developed in coordination with USFWS	Surveys for the Project were conducted from April – June 2011, December 2011 - March 2012, and February 2014 – January 2015, for a total of 19 months. The approach and timeline to the final full year of eagle only surveys were developed through coordination with the USFWS
Each sample plot must be sampled at least once per month, and the survey start time for a sampling period must be selected randomly from daylight hours.	Partially conforms	Although not selected purely randomly, survey start times were shifted to different survey points to provide a variety of survey times at each point throughout the year

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Requirement	Conformity with Eagle Rule/ECPG	Notes
Sampling design must be spatially representative of the project footprint, and spatial coverage of sample plots must include at least 30 percent of the project footprint.	2011/2012 surveys – do not conform 2014 – 2015 surveys - conform	The 2011 and 2012 surveys did not cover 30% of the project footprint because these surveys were developed prior to the 2013 ECPG. The full year of eagle use surveys conducted in 2014/2015 complied with this requirement by covering 30% of the preliminary footprint (associated with the proposed layout in 2014). The 800-m survey plots associated with the 2014/2015 survey cover 28% of the final project footprint (merged 1-km buffer of final turbine layout).
Sample plot locations must be determined randomly.	Does not conform (see notes)	Sample plot locations were selected to be: spatially representative of the project site, provide clear fields of vision of the 800-m survey plot, and be reasonably accessible to the surveyor. Following these criteria, survey plots were not necessarily chosen at random
<i>Application Package Requirements</i>		
The radius and height of each sample plot.	Conforms	The ECP/permit application will be updated to include this information
The proportion of each three-dimensional sample plot that was observable from the sample point for each survey.	Conforms	The ECP/permit application will be updated to include this information
Dates, times, and weather conditions for each survey, to include the time surveys at each sample point began and ended.	Conforms	This information has been provided to the USFWS in email correspondence. The ECP/permit application will be updated to formally include this information

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Requirement	Conformity with Eagle Rule/ECPG	Notes
Information for each survey on the number of eagles by species observed (both in flight and perched), and the amount of flight time (minutes) that each was in the sample plot area.	Conforms	This information has been provided to the USFWS in email correspondence. The ECP/permit application will be updated to formally include this information
The number of proposed turbines and their specifications, including brand/model, rotor diameter, hub height, and maximum blade reach (height), or the range of possible options.	Conforms	This information has been provided to the USFWS in email correspondence. The ECP/permit application will be updated to formally include this information
Coordinates of the proposed turbine locations in decimal degrees (specify projection/datum), including any alternate sites.	Conforms	This information has been provided to the USFWS in email correspondence. The ECP/permit application will be updated to formally include this information