

Appendix J

Wildlife Monitoring and Protection Plan

**Wildlife Monitoring and Protection Plan
Chokecherry and Sierra Madre Wind Energy EIS**

**U.S. Bureau of Land Management
Rawlins Field Office
Rawlins, Wyoming**

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1 Introduction

This wildlife monitoring/protection plan was prepared in conjunction with the environmental impact statement (EIS) for the Chokecherry and Sierra Madre Wind Energy Project (CCSM). The EIS was developed with mitigation intended to avoid and/or minimize adverse impacts to wildlife present on project-affected areas. The goal of the plan is to implement monitoring efforts that would assess the effectiveness of protection measures outlined in the EIS. If monitoring efforts indicate that current mitigation is not sufficient, additional mitigation measures may be considered. Implementation of this plan will allow land managers and project personnel opportunities to achieve and maintain desired levels of wildlife productivity and populations on the CCSM (e.g., at pre-project levels) by minimizing and/or avoiding potential adverse impacts to wildlife species. In addition, the implementation of this plan will facilitate the maintenance of a diverse assemblage of wildlife populations on the CCSM simultaneously with development of wind energy resources.

The CCSM encompasses 222,689 acres located entirely in Carbon County, Wyoming. The towns of Rawlins and Sinclair are situated north of the CCSM along Interstate Highway 80 (I-80). The Chokecherry site is generally located within Townships 19 North (T19N) and 20 North (T20N), Ranges 85 West (R85W) through 87 West (R87W). The Sierra Madre site is generally located within T16N through T18N, R87W through R89W. A complete description of the proposed project and alternatives is provided in Chapter 2.0 of the EIS.

Proposed inventory, monitoring, and protection measures will be implemented under each potential development scenario, except that the plan will not be implemented under the No Action Alternative.

Implementation of the plan will begin in 2013, and is estimated to continue for the life of the Project. The plan will receive a major review for effectiveness every 5 years or as determined by the Review Team.

Power Company of Wyoming (PCW) is in the process of collecting additional data on avian and bat use of the application area through diurnal avian point count surveys, acoustic surveys, and nocturnal radar surveys. These data, along with data previously collected in the Application Area, will be used to develop an Avian and Bat Protection Plan (ABPP) that will include measures to avoid and minimize impacts to birds and bats when designing and operating the facility. The USFWS determined that developing an ABPP was appropriate option as stated in a letter received April 20, 2011 (**Attachment A**). The ABPP will include measures to mitigate migratory bird and bat fatalities, if fatality rates exceed certain thresholds agreed to by the U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), and Wyoming Game and Fish Department (WGFD).

A watershed monitoring plan was prepared to avoid and/or minimize adverse impacts to watershed resources present on project-affected areas. It is assumed that monitoring and mitigations measures presented in the watershed monitoring plan will likely benefit fisheries. Fish population monitoring within the Application Area will be conducted by the WGFD in coordination with the BLM.

2 Implementation Protocol

This section provides preliminary wildlife inventory, monitoring, and protection protocol. A summary of primary protocol components is provided in **Table 1**. Standard protocol for the Right-of-Way (ROW) application field reviews are provided in **Table 2**. Alternative protocols likely will be developed in the future in response to specific needs identified in annual reports (Section 2.1.1). Methods are provided for each wildlife species/category, and additional species/categories may be added based on needs

identified in annual reports. The wildlife species/categories for which specific inventory, monitoring, and protection procedures will be applied were developed based on management agency BLM, USFWS, WGFD) and individual concerns identified during the preparation of the EIS.

Considerable efforts will be required by agency and PCW personnel for plan implementation. Many of the annually proposed agency data collection activities are consistent with current agency requirements. Additionally, during annual planning (Section 2.1.2) and throughout project implementation, all efforts will be made to accommodate agency personnel schedules and responsibilities, and further agency cost-sharing approaches will be considered such that public demands and statutory directives are achieved.

2.1 Annual Reports and Meetings

2.1.1 Reports

During project development, PCW will provide an updated inventory and description of all existing project features (i.e., location, size, and associated level of human activity at each feature), as well as those tentatively proposed for development during the next 12 months in a format that is compatible with a Geographic Information System (GIS). This inventory will be submitted to the BLM by PCW no later than December 31 of each calendar year. These data will be coupled with annual wildlife inventory, monitoring, and protection data obtained for the previous year and included in annual reports. Annual reports will be prepared by the PCWs' environmental consultant with BLM oversight. Annual wildlife inventory, monitoring and protection data gathered in conjunction with the project will be provided to the BLM by December 31 of each calendar year.

Annual reports will summarize annual wildlife inventory and monitoring results, note any trends across years, identify and assess protection measures implemented during past years, specify monitoring and protection measures proposed for the upcoming year, recommend modifications to the existing wildlife monitoring/protection plan based on the successes and/or failures of past years and identify additional species/categories to be monitored. Where possible, the data presented in reports will be used to identify potential correlations between development and wildlife productivity and/or abundance, as well as, sources of potential disturbance to wildlife. A GIS database will be used for information storage, retrieval, planning, and annual GIS data updates will be conducted. Raw data collected each year also will be provided to other management agencies, at the request of the agencies.

Annual reports will be completed by PCW in draft and submitted to the BLM and other interested parties (i.e., USFWS and WGFD) by December 31 of each year. A final annual report will be issued by early February of each year. Additional reports may be prepared in any year, as necessary, to comply with other relevant wildlife laws, rules, and regulations.

2.1.2 Meetings

A one day meeting between the BLM, USFWS, WGFD, and PCW will be organized by the BLM and held in January of each year to discuss and modify, as necessary, proposed wildlife inventory, monitoring and protection protocol for the upcoming year. Decisions regarding annual PCW-specific financing and personnel requirements will be made at these meetings. A protocol regarding how to accommodate previously unidentified development sites will also be determined during the annual meeting. Final decisions will be made by the BLM based on the input of all affected parties.

Additional meetings may be held in any given year to inform and update cooperating agencies on the findings of additional reports, as necessary.

2.2 Inventory and Monitoring

Inventory and monitoring protocols will be as identified below for each wildlife species/category. These protocols will be unchanged across development alternatives, except as authorized by the BLM or

specified in this plan. Additional wildlife species/categories and associated surveys may be added or wildlife species/categories and surveys may be omitted in future years, pending results presented in the coordinated review of annual reports. Opportunistic wildlife observations may be made throughout the year by agency and PCW personnel present in the CCSM.

The frequency of inventory and monitoring will be dependent upon the level of development in the Application Area. In general, inventory and monitoring frequency will increase with increased levels of development. Inventory and monitoring results may lead to further, currently unidentifiable, scientific studies specifically designed to determine cause and effect. The review team and/or BLM will identify the level of effort required by this wildlife plan subject to the standard listed below. Site- and species-specific surveys will be conducted in association with future POD submittals for construction of CCSM.

2.2.1 Special Status Species

The level of inventory/monitoring required for special status species (SSS) including threatened, endangered, candidate, and other sensitive species will be commensurate with established protocols for the potentially affected species. All surveys will be conducted in coordination with the BLM. Methodologies and results of these surveys will be included in annual reports and provided in separate supplemental reports. As SSS are added to or withdrawn from USFWS, BLM, and/or WGFD lists, appropriate modifications will be incorporated to this plan and specified in annual reports.

SSS data collected during surveys and described below will be provided only as necessary to those requiring the data for specific management and/or project development needs. Site- and species-specific surveys will be conducted as necessary prior to construction.

Black-footed Ferret and White-tailed Prairie Dog

The USFWS, in coordination with the WGFD, has developed a list of habitat blocks that are not likely to be inhabited by black-footed ferrets (i.e., block-cleared). In these areas, take of individual ferrets and effects to a wild population is highly unlikely and surveys for ferrets are no longer recommended. Although ferret surveys are not required in these areas, the area may still maintain value for the survival and recovery of the species in the future. Additionally, areas remain that require ferret surveys (i.e., non block-cleared) in potential habitat. A portion of the Application Area coincides with the Bolten Ranch Prairie Dog complex, which is a non block-cleared area. Prior to any ground disturbing activities within white-tailed prairie dog colonies of suitable size and density within the Bolten Ranch Prairie Dog Complex, ferret surveys would be required.

BLM biologists will determine the presence/absence of prairie dog colonies at each proposed development site during ROW application field reviews for subsequent PODs. Prairie dog colonies in the Application Area will be mapped and burrow densities determined by a BLM-approved PCW-financed biologist, as necessary and in association with proposed development plans. Colonies that meet USFWS criteria as potential black-footed ferret habitat (USFWS 1989), in non block-cleared areas, will be surveyed for black-footed ferrets by an USFWS-certified PCW-financed surveyor prior to BLM authorizing disturbance of these colonies. Surveys will be conducted as deemed necessary, during consultation with the BLM and/or USFWS. Black-footed ferret surveys will be conducted in accordance with USFWS guidelines (USFWS 1989) and approved by BLM and USFWS.

Pygmy Rabbit

The year prior to construction, protocol level surveys (Ulmschneider 2004) will be conducted in suitable and occupied habitat within 300 feet of any infrastructure associated with the project. During the protocol level surveys, any areas of occupied habitat will be mapped with a global positioning system (GPS) unit.

Wyoming Pocket Gopher

Prior to construction activities in suitable Wyoming pocket gopher habitat (Keinath and Beauvais 2006), presence/absence surveys will be conducted by a wildlife biologist familiar with pocket gopher life history and their associated habitat. Survey protocol will be provided by the BLM Rawlins Field Office. During the protocol level surveys, any areas of occupied habitat will be mapped with a global positioning system (GPS) unit.

Greater Sage-Grouse

As suggested by the WGFD wind energy guidelines, PCW is participating in a multi-state industry supported research program to determine greater sage-grouse response and population performance to wind development. The research is being coordinated through the National Wind Coordinating Collaborative Sage-Grouse Collaborative (NWCC-SGC) and involves research at a proposed facility in Idaho, the proposed CCSM facility in Wyoming, and the existing Seven Mile Hill facility in Wyoming. The NWCC-SGC project is for research on male greater sage-grouse, but PCW is currently funding their own research on female greater sage-grouse. Research response variables include population and habitat parameters such as nesting success, chick survival, lek attendance, and any changes in distribution, movements, and habitat use.

The CCSM is not within a greater sage-grouse Core Area (as described in WY EO 2011-5); therefore, the following data collection/monitoring will be followed:

- Conduct lek counts (using WGFD protocol) within a 2 mile buffer of the Application Area boundary.
- Map habitat within a 2 mile buffer area of the Application Area.
- Compare lek counts with a suitable nearby reference area.

Greater sage-grouse lek inventories will be conducted by the BLM and Wyoming Game & Fish Department within the Application Area and a two mile buffer to determine lek locations every 5 years, or as deemed appropriate by the BLM. Surveys may be conducted aerially, with PCW-provided financial assistance for aircraft rental, or on the ground, in order to determine lek locations.

Selected leks within two miles of existing and proposed disturbance areas will be monitored annually to determine lek attendance by the BLM or a BLM-approved PCW-financed biologist, between March 1 and May 15, such that all leks on these areas are monitored every year. Monitoring efforts will be implemented at all leks present on affected sections, two mile buffers, and selected undeveloped comparison areas. The BLM will direct lek monitoring efforts such that efforts are made to have the same individuals monitor the same leks within and across years. Data collected during these surveys will be provided on greater sage-grouse lek record forms. Standard site- and species-specific greater sage-grouse lek surveys will be conducted as necessary in association with all ROW application field reviews for subsequent PODs.

Mountain Plover

Mountain plover habitat will be mapped within proposed disturbance areas (as identified in annual reports) prior to development of these areas by the BLM or a BLM-approved PCW-financed biologist. In addition, these areas will be surveyed annually by the BLM or a BLM-approved PCW-financed biologist to detect the presence of plovers. Surveys will be conducted during the period of May 1 through June 30. Data collected during these surveys will be provided on mountain plover route survey forms. Standard site-specific habitat surveys will be conducted as necessary in association with all ROW application field reviews.

Other Special Status Species

Surveys for other SSS will be conducted by the BLM or a BLM-approved PCW-financed biologist in areas of potential habitat within 0.5 mile of proposed disturbance sites prior to disturbance. These surveys may be implemented in conjunction with surveys for other species or as components of ROW application processes. If any SSS are observed, the observations will be noted on appropriate data forms and efforts will be made to determine their activities (e.g., breeding, nesting, foraging, hunting, etc.). If any management agency identifies a potential for concern regarding any of these species, additional inventory and monitoring and mitigation may be implemented as specified in annual reports.

2.2.2 Other Wildlife Species

Big Game

Data on big game use of crucial winter ranges on the Application Area and an adjacent one mile buffer will be requested annually by the BLM from the WGFD, as deemed necessary by the BLM. This information will be used to assess the effectiveness of protection measures implemented for the project.

The following baseline data and monitoring recommendations for wind development projects in regard to big game should occur assuming a cooperative research program is developed that measures big game responses to wind development. If the research program is not operational additional research actions will be recommended. At a minimum, research response variables should include habitat use and migration route characteristics. If warranted, a more in-depth study could include body condition assessments that relate to survival and reproduction.

Since the project occurs on lands designated as crucial winter range and or will bisect known migration corridors, the following baseline data and post-development data will be collected to help identify any associated impacts and provide for future mitigation options for affected big game species:

- Equip a sample of female mule deer in the affected region with GPS-collars (number of collars to be determined in coordination with WGFD).
- Collect GPS data 2 years prior to development and 3 years post development to determine habitat use patterns and identify migration routes. The same animals should be followed through the 5-year time period.
- Examine habitat use and migration patterns before and after development to assess potential impacts of the CCSM.

These data will be collected, analyzed, and provided in an annual report to BLM. At the end of three years post-construction if it is determined that significant avoidance of important habitats is occurring or migration routes are being negatively affected by the wind energy development, a mitigation plan should be developed in collaboration with BLM/WGFD to compensate for the impact(s).

Amphibians

Baseline monitoring for amphibians will be accomplished through incidental observations while performing other wildlife surveys. Incidental observations will allow for trend data, which could reveal possible shifts in species assemblages resulting from energy development. All amphibians encountered incidentally during wildlife surveys will be documented with the following information; species, geographic coordinates (preferably decimal degrees or UTM), date, age class (adult, juvenile, larval, or egg), general vegetation type, and general comments for each observation. Incidental observations will be collected for the duration that other wildlife surveys within the study area are being performed. Pre- and post-construction time frames ensure that surveys can be conducted in a wide range of environmental condition and that the rare or cryptic species are not overlooked as can occur during a one-year survey. If a Species of Greatest Conservation Need (SGCN) is discovered during

the incidental observations additional monitoring may be recommended.

The northern leopard frog habitat, a SGCN, is known to occur within the CCSM, thus additional monitoring is required. Habitat maps for the wind development project in relation to northern leopard frog habitat will be developed. In conjunction with mapping terrestrial habitats, the following water features will also be mapped: ephemeral drainages, perennial waters, vernal pools and playas. Because of breeding chronology and the secretive nature of some species, two years of surveys will be conducted two years prior to construction. During predevelopment surveys, important amphibian areas (such as breeding sites) will be designated for avoidance during construction. Surveys will be conducted at least three years post-construction to determine possible effects of development on amphibian species.

Reptiles

Baseline monitoring for reptiles will be accomplished through incidental observations while performing other wildlife surveys. Incidental observations will allow for trend data, which could reveal possible shifts in species assemblages resulting from wind energy development. All reptiles encountered incidentally during wildlife surveys will be documented with the following information; species, geographic coordinates (preferably decimal degrees or UTM), date, age class (adult, juvenile, or egg), general vegetation type, and general comments for each observation. Incidental observations will be collected for the duration that other wildlife surveys within the study area are being performed. Pre- and post-construction time frames ensure that surveys can be conducted in a wide range of environmental condition and that the rare or cryptic species are not overlooked as can occur during a one-year survey.

Fish

Fish population monitoring within the Application Area is currently conducted by the WGFD. The WGFD will continue to conduct these efforts in coordination with the BLM. The frequency of monitoring would remain at the same level for each water body within the Application Area. In addition to this data collection effort, the watershed monitoring plan would be used to assess aquatic habitat within the Application Area.

2.2.3 Other Inventory and Monitoring Measures

Additional inventory and monitoring measures may be applied for other species as specified in annual reports. Surveys will be conducted in adherence with protocol to be established by the BLM, other agencies, and PCW. PCW may provide financial assistance for these investigations.

BLM staff will be responsible for maintaining records of selected wildlife species observed during the course of their activities on the Application Area. PCW personnel may also provide data on wildlife observations. The information provided will include observations of wildlife species, their numbers, location, activity, and other pertinent data as applicable and identified on the General Wildlife Observation Data Sheet. Where PCW personnel are uncertain of the GPS coordinates for an observation, a general description of the location may be provided and in instances where species or sex information is questionable, PCW personnel will identify the observation as such.

2.3 Protection Measures

The wildlife protection measures proposed have been developed through the review of other wildlife monitoring and protection plans for projects occurring within similar habitat including Gateway West Transmission Line Project and Atlantic Rim Natural Gas Project; consideration of the BLM Resource Management Plan, and the *Wildlife Protection Recommendations for Wind Energy Development in Wyoming* document prepared by the Wyoming Game and Fish Commission (WGFC 2010). Additional measures may be included and/or existing measures may be modified in any given year as allowable and as deemed appropriate by BLM in consultation with the Review Team. These measures will be

specified in annual reports. Protection measures will be implemented by PCW with assistance from and/or in consultation with the BLM. In addition, these measures may be modified on a site-specific basis as deemed appropriate by the BLM during/after completion of the ROW application field reviews.

The principal protection measure for most wildlife will be species- and project-specific measures as well as general wildlife protection measures. Implementation of these measures may benefit other wildlife species found on and adjacent to the project area. Sensitive/crucial habitats should be avoided where possible.

PCW is in the process of collecting additional data on bat use of the Application Area through acoustic and radar surveys. These data, along with data previously collected in the Application Area, will be used to develop a Bat Protection Plan (BPP) that will include measures to avoid and minimize impacts to bats when designing and operating the facility. The BPP will include measures to mitigate bat mortality, if fatality rates exceed certain thresholds agreed to by the USFWS, BLM and WGFD. Any project constraints and mitigation measures identified through the development of the BPP will be incorporated into any additional NEPA analyses required prior to issuance of any ROW grants for the Chokecherry and Sierra Madre Wind Energy Project and, in turn, may be considered as stipulations of approval in the ROW grants.

In addition to the BPP, data from current and ongoing extensive avian studies along with data previously collected in the Application Area will be used to develop an Avian Protection Plan (APP) that will include measures to avoid high use areas as well as minimize impacts to raptors when designing and operating the facility, including turbines, met towers, and overhead power lines. Since issuance of the NOI, the BLM has coordinated closely with the USFWS through their cooperating agency process and the renewable energy pilot program in the Rawlins Field Office. The APP will be developed in consultation with the BLM, USFWS, and WGFD, and will require approval from those agencies before it is finalized. Any project constraints and mitigation measures identified through the development of the APP will be incorporated into any additional NEPA analyses required prior to issuance of any ROW grants for the project and, in turn, may be considered as stipulations of approval in the ROW grants. The measures included in the APP to avoid and minimize raptor fatalities will likely result in observed raptor fatality rates below those predicted above. If raptor fatality rates exceed certain thresholds agreed to by the USFWS, BLM and WGFD, additional avoidance, minimization and mitigation measures would be developed in consultation with the USFWS, BLM, and WGFD to reduce impacts to raptors.

PCW is also in the process of collecting additional data on eagle use of the Application Area, including diurnal point count and radar surveys as well as additional nest surveys. Data from these studies, along with data previously collected in the Application Area, will be used to identify locations of breeding territories, communal roosts, and important foraging areas, and to develop an Eagle Conservation Plan (ECP) that will include measures to avoid, minimize and mitigate impacts to eagles when designing and operating the facility. The ECP will likely be a large component of the APP. Similar to the BPP and APP, the ECP will be developed in consultation with the BLM, USFWS, and WGFD, and will require approval from those agencies before it is finalized. BLM IM 2010-156 states that the BLM authorized officer may issue a Record of Decision or Decision Record approving the project; however, the BLM authorized officer will not issue a Notice to Proceed until the USFWS letter of concurrence for the APP (ECP) is received for the project.

2.3.1 Special Status Species

Consultation and coordination with appropriate state and federal agencies will be conducted for all protection activities relating to SSS and their habitats. Where possible, these actions will be specified in advance in the annual reports.

Black-footed Ferret and White-tailed Prairie Dog

In general, all prairie dog colonies on the Application Area will be avoided, where practical. If prairie dog colonies, in non block-cleared areas, of sufficient size (greater than 200 acres) and burrow density for black-footed ferrets are scheduled to be disturbed, black-footed ferret surveys of these colonies will be conducted pursuant to BLM and/or USFWS decisions made during informal consultations. Survey protocol will adhere to USFWS guidelines (USFWS 1989) and will be conducted by a USFWS-qualified biologist a maximum of one year in advance of the proposed disturbance. Reports identifying survey methods and results will be prepared and submitted to the USFWS and BLM in accordance with Section 7 of the *Endangered Species Act of 1973*, as amended, and the Interagency Cooperation Regulations. Surveys will be financed by PCW.

Pygmy Rabbit

Protection measures for the pygmy rabbit focus on habitat preservation. Where feasible and if needed, the infrastructure will be micro-sited to avoid mapped occupied habitat. If the surveys conclude that the pygmy rabbits occur, the "Habitat Preservation and Restoration" conservation measures would apply (Keinath and McGee 2004). The measures what would apply to CCSM include evaluating the extent, connectivity and relative quality of the habitat; selecting priority areas for habitat acquisition and management; and conducting monitoring activities. Within 30 days prior to construction, previously occupied habitat will be revisited to document presence. Occupied habitat will be re-mapped electronically and flagged in the field to allow additional micro-siting to avoid the occupied habitat to the extent possible.

Wyoming Pocket Gopher

Protection measures for the Wyoming pocket gopher will be achieved through avoidance. Where feasible and if needed, the infrastructure will be micro-sited to avoid mapped occupied habitat. Previously documented occurrences will be avoided during operation and maintenance activities.

If active Wyoming pocket gopher mounds are identified, the proposed surface disturbing activities would avoid the active pocket gopher mounds by 75 m (BLM 2009f). However, if the proponent does not wish to avoid the active pocket gopher mounds by 75 m; classification surveys (via live capture) must be completed to identify the pocket gopher to the species level responsible for the mounds. If the results conclude that the Wyoming pocket gopher is responsible for the mounds the *Occupied Wyoming Pocket Gopher Habitat Protection Measures* would apply (BLM 2009f). If the results conclude that the associated species is a Northern pocket gopher, then the proposed surface disturbance may proceed without mitigation. If the classification survey fails to conclusively identify the associated pocket gopher to the species level, then it will be assumed that the species is a Wyoming pocket gopher and the *Occupied Wyoming Pocket Gopher Habitat Protection Measures* will apply (BLM 2009f).

Greater Sage-Grouse

PCW has committed to a variety of protection measures to reduce impacts to greater sage-grouse (see Appendix N of the POD). In addition, no facilities or surface disturbance will occur in Wyoming Sage-Grouse Core Management Area Version 3 (finalized June 29, 2009). Outside Core Areas, surface disturbance or occupancy will be prohibited within 0.25 miles of the perimeter of occupied and undetermined status greater sage-grouse leks. Within 0.25 – 1.0 mile of occupied or undetermined sage-grouse leks, high-profile structures such as buildings, storage tanks, overhead power lines, wind turbines, towers and windmills will be authorized on a case-by-case basis. Human activity would be avoided between 6:00 p.m. and 9:00 a.m. from March 1 to May 20 within 0.25 miles of the perimeter of occupied or undetermined greater sage-grouse leks. Surface disturbing and disruptive activities will not be allowed within two miles of an occupied or undetermined greater sage-grouse lek or in nesting and early brood-rearing habitat within mapped areas important for connectivity, from March 1 to July 15. Surface disturbing and disruptive activities will not be allowed between November 15 and March 14 in mapped or modeled sage-grouse winter concentration areas that support Core Area populations.

Mountain Plover

Mountain plover habitat will be avoided where practical. Where these habitats will be disturbed, reclamation will utilize procedures designed to reestablish suitable plover habitat. The primary protection measure for mountain plover on the Application Area will be avoidance of plover habitat during the breeding season. All surface-disturbing activities will be restricted from April 10 to July 10 in mountain plover habitat. Additional protection measures may be implemented in identified mountain plover occupied habitat (i.e., areas where broods and/or adults have been observed in the current year or documented in at least 2 of the past 3 years). In the event surface-disturbing activities cannot avoid the breeding season, pre-construction protocol level surveys (USFWS 2002) will be conducted during the appropriate seasonal timeframe in suitable habitat, to identify active nests within 0.25 mile of the surface disturbance. If no nests are found, construction can commence.

- If an active nest is found during the protocol level surveys, monitoring will be conducted until the young have fledged or the nest fails, whichever occurs sooner, and no surface-disturbing activities will occur within 0.25 mile of the nest while the nest is active.
- If no active nests are discovered during the pre-construction surveys (USFWS 2002), construction will be permitted for the remainder of the nesting season without further monitoring.

Other Special Status Species

If crucial features for any SSS are found during surveys of areas within 0.5 miles of proposed disturbance sites, avoidance of these features will be accomplished in consultation and coordination with the BLM, USFWS, and WGFD. Construction activities in these areas will be curtailed until there is concurrence between BLM, USFWS, and WGFD on what activities can be authorized. Activities will, in most cases, be delayed until such time that no adverse effects will occur.

It is assumed that the protocol specified for general wildlife will likely benefit SSS as well. If any management agency identifies a potential for impacts to any SSS, additional measures may be implemented as specified in annual reports.

2.3.2 Other Wildlife Species

Big Game

No construction activities or prolonged maintenance actions will be conducted within big game crucial winter range between November 15 and April 30. If right-of-way fencing is required, it will be kept to a minimum, and the fences will meet BLM/WGFD approval for facilitating wildlife movement. Wildlife-proof fencing will be used only to enclose areas that are potentially hazardous to wildlife species, or reclaimed areas where it is determined that wildlife species are impeding successful vegetation establishment. Snow fences, if used, will be limited to segments of 0.25 miles or less. Project personnel will also be advised to minimize stopping and exiting their vehicles in big game winter habitat during crucial winter periods. In addition, escape openings will be provided along roads in big game crucial winter ranges, as designated by the BLM, to facilitate exit of big game animals from snowplowed roads. Additional habitat protection/improvement measures may also be applied in any given year as directed by the BLM, in consultation with PCWs and other agencies, and specified in annual reports.

Amphibians

The BLM recommends a 500 meter buffer around amphibian habitats. This buffer was designed to incorporate the amphibian SGCN average home range and migration distances (Hammerson 1999, Ernst and Ernst 2003, Werner et al. 2004, Lannoo 2005, Parker and Anderson 2007). In addition, measures contained in PCW's Watershed Monitoring Plan and Erosion Control Plan would be effective at reducing impacts to amphibians. If the project is designed such that habitat disturbance

cannot be avoided, PCW and the BLM will determine the type and level of additional amphibian monitoring needed. Mitigation may be recommended if sensitive habitats or species are impacted, particularly in areas where there is cooperative management taking place in the watershed. Reclamation plans of disturbed habitat sites for SGCN species will be developed.

Reptiles

No SGCN reptiles are known to occur within the CCSM area, however, if one is discovered during the incidental observations additional monitoring may be recommended. To the extent practicable, reptile habitats such as fallen trees, prairie dog colonies, and potential basking rocks should be left intact. It is assumed that the protocol specified for general wildlife will likely benefit reptiles as well. If any management agency identifies a potential for impacts to any SGCN reptile, additional measures may be implemented as specified in annual reports.

Fish

The BLM recommends a 500 foot buffer around riparian areas, including fish habitat. In addition, measures contained in PCW's Watershed Monitoring Plan and Erosion Control Plan would be effective at reducing impacts to fisheries. If the project is designed such that aquatic habitat cannot be avoided (e.g., stream crossings), PCW and the BLM will determine the type and level of additional fish monitoring needed. Mitigation may be recommended to the WGFD, especially where cooperative management efforts are taking place and appropriate protection measures implemented.

2.3.3 Other Protective Measures

Unless otherwise indicated, the following protection measures will be applied for all wildlife species. Additional measures primarily designed to minimize impacts to other Application Area resources (e.g., vegetation and surface water resources, including wetlands, steep slopes, etc.) are identified in the EIS in Chapter 4.0 and **Appendix C, Tables C-2 and C-3**, and may provide additional protection for wildlife. Additional actions may be applied in any given year to further minimize potential impacts to wildlife. These actions will be specified in annual reports.

All roads on and adjacent to the Application Area that are required for the proposed project will be appropriately constructed, improved, maintained, and signed to minimize potential wildlife/vehicle collisions and facilitate wildlife, most notably big game, movement through the project area. Appropriate speed limits will be adhered to on all project roads, and PCW will advise employees and contractors regarding these speed limits. Some existing roads on the project area and surrounding transportation planning area may be reclaimed if they become redundant or closed (gated and locked) to deny unnecessary access.

To protect important habitat in portions of the project area (i.e., ephemeral draws dominated by basin big sagebrush) areas with sagebrush greater than three feet tall will be avoided where possible.

Additional non-species-specific wildlife mitigations include the following:

- If dead or injured raptors, big game, migratory birds, or unusual wildlife are observed on the project area, PCW personnel will contact the appropriate BLM and WGFD offices. Under no circumstances will dead or injured wildlife be approached or handled by PCW personnel.
- Employee and contractor education will be conducted regarding wildlife laws. If violations are discovered on the project area, PCW will immediately notify the appropriate agency. If the violation is committed by an employee or contractor, said employee or contractor will be disciplined and may be dismissed by the PCW and/or prosecuted by the WGFD and/or USFWS.

- PCW will implement policies designed to control off-site activities of operational personnel and littering, and will notify all employees (contract and company) that conviction of a violation can result in disciplinary action, including dismissal.

3 Literature Cited

- Baxter, G. T. and M. D. Stone. 1980. Amphibians and reptiles of Wyoming. Wyoming Game and Fish Department, Bulletin No. 16. 137 pp.
- Bureau of Land Management (BLM). 2008. Rawlins Resource Management Plan and Environmental Impact Statement. Rawlins Field Office, Wyoming.
- Bureau of Land Management (BLM). 2009. Final Wyoming Pocket Gopher Protection Measures (November 2009). Rawlins Field Office – Wyoming Pocket Gopher 2009.
- Ernst C. H. and E. M. Ernst. 2003. Snakes of the United States and Canada. Smithsonian Institution Press. Washington D.C. 668 pp.
- Hammerson G. 1999. Amphibians and Reptiles of Colorado. University Press of Colorado and Colorado Division of Wildlife. Niwot, CO. 2nd edition, 484 pp.
- Keinath, D. A. and G. P. Beauvais. 2006. Wyoming Pocket Gopher (*Thomomys clusius*): A Technical Conservation Assessment. Prepared for the USDA Forest Service, Rocky Mountain Region, Species Conservation Project. August 31.
- Keinath, D. A. and M. McGee. 2004. Species Assessment for Pygmy Rabbit (*Brachylagus idahoensis*) in Wyoming. Prepared for USDI Bureau of Land Management, Wyoming State Office, Cheyenne, Wyoming. March.
- Lannoo M. (editor). 2005. Amphibian Declines – The Conservation Status of United States Species. University of California Press. Berkeley and Los Angeles, California. 1,094 pp.
- Parker, J. M. and S. H. Anderson. 2007. Ecology and Behavior of the Midget Faded Rattlesnake (*Crotalus oreganus concolor*) in Wyoming. Journal of Herpetology.41(1):41–51.
- Ulmschneider, H. 2004. Surveying for Pygmy Rabbits (*Brachylagus idahoensis*), Fourth Draft. June 3. Boise District, Idaho BLM.
- U.S. Fish and Wildlife Service (USFWS). 2002. Mountain Plover Survey Guidelines – Montana. March.
- U.S. Fish and Wildlife Service (USFWS). 1989. Black-footed Ferret Survey Guidelines for Compliance with the *Endangered Species Act*. U.S. Fish and Wildlife Service, Denver, Colorado, and Albuquerque, New Mexico (April 1989). 10 pp. + append.
- Werner, J. K., B. A. Maxwell, P. Hendricks, and D. L. Flath. 2004. Amphibians and Reptiles of Montana. Mountain Press Publishing Company. Missoula, Montana. 262 pp.
- Wyoming Game and Fish Department (WGFD). 2010. Wildlife Protection Recommendations for Wind Energy Development in Wyoming. Approved by the Wyoming Game and Fish Commission November 17, 2010.

Table 1 Summary of Primary Protocol Components

Action	Dates	Responsible Entity
Annual tentative plan of development	By October 15, annually	PCW
Annual inventory, monitoring and protection data	By October 15, annually	
Annual reports	Annually: Draft – early November Final – early January	PCW
Annual meeting	December and as necessary	BLM with participation by other agencies and PCW
Inventory/ Monitoring		
Raptor nest inventory	At least every five years, prior to development	BLM or BLM approved PCW financed biologist with PCW provided financial assistance for aircraft rental, as necessary
Raptor monitoring	Annually from April to July	BLM or BLM approved PCW financed biologist with PCW provided financial assistance for aircraft rental, as necessary
Pygmy rabbit	Annually	BLM or BLM approved PCW financed biologist
Wyoming pocket gopher	Annually	BLM or BLM approved PCW financed biologist
Greater sage-grouse lek inventory	At least every five years	BLM or BLM approved PCW financed biologist with PCW provided financial assistance for aircraft rental, as necessary
Greater sage-grouse lek monitoring	Annually from March to mid-May	BLM or BLM approved PCW financed biologist
Big game crucial winter range use/monitoring	As available	BLM will request data from WGFD
Mountain Plover surveys	Annually from May to June	BLM or BLM approved PCW financed biologist
Amphibians	Annually from May to August	BLM or BLM approved PCW financed biologist
Reptiles	Annually from May to September	BLM or BLM approved PCW financed biologist
Fish	Annually	BLM or WGFD biologist

Table 2 Standard Protocol for Right-of-Way Application Field Reviews

Protection Measure	Dates	Responsible Entity
Raptor nest survey/inventory within 0.75 to 1.0 miles of proposed disturbance	Yearlong	BLM, PCW
Raptor nest season avoidance within 0.75 to 1.0 miles	February 1 to July 31	BLM, PCW
Raptor nest avoidance with 825 feet (1,200 feet for ferruginous hawk nests)	Yearlong	BLM, PCW
SSS surveys	Yearlong, as necessary	BLM, PCW
SSS avoidance	Yearlong, as necessary	BLM, PCW
Prairie dog colony mapping	Yearlong, as necessary	BLM, PCW
Prairie dog colony avoidance	Yearlong, where practical	BLM, PCW
Black-footed ferret surveys	As appropriate in accordance with USFWS guidelines	PCW financed USFWS-approved biologist
Pygmy rabbit habitat surveys	Yearlong	BLM, PCW
Wyoming pocket gopher mound surveys	Spring and Summer	BLM, PCW
Mountain plover habitat surveys	Yearlong	BLM, PCW
Mountain plover nest/brood avoidance	April 10 to July 10	BLM, PCW
Greater sage-grouse lek/nesting habitat avoidance within 2.0 miles of proposed disturbance	March 1 to June 30	BLM, PCW
Greater sage-grouse lek avoidance within 0.25 miles of proposed disturbance	Yearlong	BLM, PCW
Big game crucial winter range avoidance	November 15 to April 30	BLM, PCW
Amphibians	Spring and Summer	BLM, PCW
Reptiles	Summer	BLM, PCW
Fish	Yearlong	BLM, WGFD

Attachment A



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
5353 Yellowstone Road, Suite 308A
Cheyenne, Wyoming 82009



APR 20 2011

In Reply Refer To:
ES-61411/WY11CPA0147

Memorandum

To: Field Manager, Bureau of Land Management, Rawlins Field Office, Rawlins, Wyoming

From: Field Supervisor, U.S. Fish and Wildlife Service, Wyoming Field Office, Cheyenne, Wyoming

Subject: Avian Protection Plan Concurrence for the Sierra Madre-Chokecherry Wind Energy Project

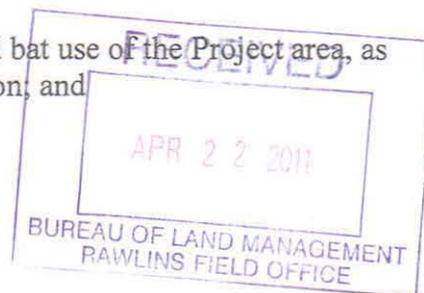
Thank you for your letter of December 9, 2011, regarding the proposed Power Company of Wyoming's (PCW) Sierra Madre-Chokecherry Wind Energy Project (Project). The proposed Project is located south/southwest of the city of Rawlins, Carbon County, Wyoming. The Project is a proposed 2,000-MW electrical generating facility consisting of up to 1,000 2-MW wind turbines.

You have requested that the U.S. Fish and Wildlife Service (Service) determine if an Avian Protection Plan (APP) is appropriate for this Project to minimize the potential "take" of eagles. Our response to your request is based on the two-step process identified in the Bureau of Land Management's (Bureau) Instruction Memorandum No. 2010-156 (IM-2010-156), which is:

- 1) The Service determines that developing an APP is an appropriate option for this Project to avoid and minimize the potential for golden eagle take; therefore, the Bureau's Authorized Officer may issue a Record of Decision approving the project; and
- 2) The Bureau's Authorized Officer shall not authorize a Notice to Proceed for this Project until the Service has evaluated the APP and determines that it is adequate.

Following the two-step process, we have determined that developing an APP is an appropriate option to avoid and minimize the potential take of eagles (based on the Bureau's IM-2010-156), and migratory birds and bats based on PCW's commitment to meeting the following criteria:

- a) Three years of surveys evaluating eagle, migratory bird and bat use of the Project area, as per Service guidance, conducted prior to Project construction; and



- b) Turbine numbers and layout are adjusted to provide effective buffers for eagle and other raptor nest sites as well as areas with high bird and bat utilization, as evidenced by the survey data.

To avoid and minimize impacts to migratory bird species protected by the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, as well as eagles protected under the Bald and Golden Eagle Protection Act (Eagle Act), 16 U.S.C. 668, the APP will need to address all migratory bird species. The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for allowing unauthorized take, the Service realizes that some birds may be killed even if all reasonable measures to protect them are used. The Service's Office of Law Enforcement (OLE) carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and industries that have taken effective steps to minimize their impacts on migratory birds, and by encouraging others to enact such programs. It is not possible to absolve individuals, companies, or agencies from liability even if they implement avian mortality avoidance or similar conservation measures. However, the OLE focuses its resources on investigating individuals and companies that take migratory birds without regard for their actions or without following an agreement to avoid take.

We advise the Bureau's Authorized Officer to not authorize a "Notice to Proceed" until the completed APP is delivered to the Service for evaluation and the Service determines the APP is adequate as documented in formal correspondence. The Service's determination as to the adequacy of the APP will depend upon the quality of the survey results used to develop the APP, how survey information was used to design a project layout that minimizes impacts, and how conservation measures will be applied during construction and operation.

We suggest that a programmatic APP, containing conservative conservation measures (e.g., no turbines within 4 miles of a golden eagle nest), be developed initially to provide guidance in lieu of area-specific information. This APP should be incorporated into the Project's Environmental Impact Statement (EIS). Any subsequent Project phases that rely upon an Environmental Assessment, which tiers to the EIS, will also form the basis for an individual Plan of Development (POD) APP. We expect that site-specific PODs will have higher levels of information about bird use, and their APP can be tailored to each specific area. We caution that it may not be reasonable to expect that the entire Project area can be developed (e.g., some Project areas may not be suitable for construction and should remain undeveloped).

The Service appreciates the Bureau's efforts to conserve golden eagles, other migratory birds, and bats in Wyoming. If you have questions regarding this letter or the MBTA and the Eagle Act, please contact Travis Sanderson of my staff at the letterhead address or phone (307) 328-4333.

cc: BLM, High Desert District Manager, Rock Springs, WY (J. Ruhs)
BLM, RECO Wildlife Biologist, Rawlins, WY (C. Morton)
BLM, Project Manager, Rawlins, WY (P. Murdoch)
BLM, RECO Project Manager, Cheyenne, WY (T. Engles)
BLM, State RECO Manager, Cheyenne, WY (M. Valle)
USFWS, Regional Energy Coordinator, Lakewood, CO (T. Modde)
USFWS, Branch Chief Energy, Water, Climate, Lakewood, CO (P. Repp)
USFWS, Chief, Branch of Conservation Planning Assistance, Washington, D.C (L. Bright)
WGFD, Non-Game Coordinator, Lander, WY (B. Oakleaf)
WGFD, Statewide Habitat Protection Coordinator, Cheyenne, WY (M. Flanderka)