



U.S. Fish and Wildlife Service

Environmental Assessment

For the Issuance of an Incidental Eagle Take Permit for High Plains and McFadden Ridge I Wind Energy Project WindEnergy Projects

Wyoming

Prepared by:

U.S. Fish and Wildlife Service, Upper Colorado Basin Region
Division of Migratory Bird Management
134 Union Boulevard, Lakewood, Colorado 80228

November 2021

Contents

1. Introduction	3
1.1 Purpose and Need	4
1.2 Authorities	4
1.3 Background	5
1.4 Scoping, Consultation and Coordination	9
1.4.1 Tribal Coordination	9
2. Proposed Action and Alternatives	10
2.1 Proposed Action	10
2.2 Alternative 1: No Action	11
2.3 Other Alternatives Considered but Not Evaluated in this Environmental Assessment	12
2.3.1 Alternative 2: Deny Permit	12
3. Affected Environment	12
Current Adaptive Management	13
Pre-construction Surveys	13
Post-construction Surveys	14
3.1 Bald Eagle	14
3.2 Golden Eagle	15
Ongoing Monitoring	16
3.2.2 Pre-construction Surveys for Migratory Birds	16
3.2.3 Post-construction Surveys for Migratory Birds	17
3.4 Species listed under the Endangered Species Act	17
3.5 Cultural and Socio-economics Interests	17
3.6 Climate Change	18
4. Environmental Consequences	18
4.1 Proposed Action	18
4.1.1 Estimating Eagle Fatalities	19
4.1.2 Estimating Golden Eagle Take	19
4.1.3 Estimated Bald Eagle Take	19
4.2 Cumulative Effects	20
4.2.1 Bald Eagles	21
4.2.2 Golden Eagles	22

4.2.3 <i>Summary of Cumulative Effects on Bald and Golden Eagles</i>	22
4.2.4 <i>Reasonably Foreseeable Future</i>	23
4.3 Cumulative Effects of Alternative 1 – No Action.....	23
4.4 Comparison of Effects of Alternatives.....	24
Mitigation and Monitoring	25
List of Abbreviations and Acronyms	26
List of Preparers	26
References	27
Attachment A. Eagle Conservation Plan for the High Plains and McFadden Ridge I Wind Energy Project Wind Energy Projects	
Attachment B. Intrastate Section-7 Biological Evaluation Form	

This EA was prepared using NEPA regulations that expired on September 14, 2020. Agencies have the option of proceeding under the expired NEPA regulations if a project was begun prior to September 14, 2020, as is the case here. See 40 C.F.R. § 1506.13

1. Introduction

This Environmental Assessment (EA) is prepared to analyze the environmental consequences of the U.S. Fish and Wildlife Service (Service) issuing an incidental eagle take permit (IETP) for the take of bald (*Haliaeetus leucocephalus*) and golden (*Aquila chrysaetos*) eagles associated with the existing and operating High Plains and McFadden Ridge I Wind Energy Projects (collectively “Project”), pursuant to the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] §§ 4321–4347). NEPA’s supporting regulations are at 40 C.F.R. Part 1500; see also 46 C.F.R. Part 46. It is a discretionary Federal action for the Service to issue an IETP under the Bald and Golden Eagle Protection Act (Eagle Act), (16 U.S.C. §§ 668–668d; see also 50 C.F.R. § 22.26). This Federal action is therefore subject to NEPA. This EA assists the Service in ensuring compliance with NEPA, and in making a determination as to whether any “significant” impacts could result from the analyzed actions that would require preparation of an Environmental Impact Statement (EIS). This EA evaluates the effects of alternatives for our decision whether to issue an IETP.

The Eagle Act authorizes the Service to issue eagle take permits only when the take is compatible with the preservation of each eagle species, defined (Service 2016) as “consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations throughout the geographic range of each species.” The Eagle Act authorizes incidental take of eagles when take is associated with, but not the purpose of, an activity (50 C.F.R. §22.26).

The applicant, PacifiCorp DBA Pacific Power/Rocky Mountain Power (Applicant), is requesting Eagle Act take coverage for operational activities associated with the 157.25 megawatt (MW) total output wind farm located in Carbon and Albany Counties, Wyoming. The Project consists of 85 wind turbines and associated infrastructure (roads, transmission lines, etc.) and has been operational since January 2009. The expected life of the project is at least 30 years. The Applicant submitted an IETP application and Eagle Conservation Plan (ECP; Attachment A) to the Service on January 16, 2020, requesting the maximum 30-year permit.

The Applicant is requesting an IETP for the take of up to 2.5 bald eagles and 2.8 golden eagles annually, over the 30-year project. This EA evaluates whether issuance of the IETP will have significant impacts on the existing human environment. “Significance” under NEPA is defined at 40 CFR § 1508.27 (of the expired NEPA regulations) and requires consideration of both short and long-term effects. *Id.* Significance requires consideration of both context and intensity. *Id.*

This proposal conforms with, and carries out, the management approach analyzed in, and adopted subsequent to, the Service’s Programmatic Environmental Impact Statement for the

Eagle Rule Revision, December 2016 (PEIS; Service 2016). The PEIS is incorporated herein by reference, as authorized by 50 C.F.R. 1501.12. As authorized by the NEPA regulations, this EA tiers from the 2016 PEIS (50 C.F.R. 1501.11).

Project-specific information not considered in the PEIS (Service 2016) will be considered in this EA as described below.

Since the project became operational in 2009, it has been responsible for the deaths of seven golden eagles and three bald eagle. On December 19, 2014, the Applicant pled guilty in U.S. District Court of Wyoming, to two counts of misdemeanor unlawful take of migratory birds. This resulted in fines, restitution, and community service in the form of a probationary period including a list of Mandatory Conditions of Probation. This includes the implementation of a Migratory Bird Compliance Plan (MBCP), which was developed with assistance from the Service. The purpose of the MBCP is to outline a framework for implementation of avoidance and minimization measures to ensure compliance under requirements of the Migratory Bird Treaty Act (MBTA), 16 U.S.C. § 703-712, and the Eagle Act. The MBCP will remain in place until it is replaced by an IETP. Despite the implementation of the avoidance and mitigation measures outlined in the MBCP, some incidental take of migratory birds and eagles may still occur. As part of the Plea Agreement, as long as the Applicant continues to implement the MBCP and diligently pursues obtaining the IETP, the government would extend its “non- prosecution” agreement under the Eagle Act. The Plea Agreement remains in place until either ten years after the sentencing, or the Applicant obtains an IETP which replaces the MBCP.

1.1 Purpose and Need

The Service’s purpose in considering the proposed action is to fulfill our authority under the Eagle Act and its implementing regulations. Applicants whose otherwise lawful activities may result in take of eagles, can apply for an IETP so that their projects may proceed without potential violations of the Eagle Act. Under the Eagle Act regulations, the Service may issue an IETP for eagle take that is associated with, but not the purpose of, an activity (50 C.F.R. § 22.26). Such permits can be issued by the Service when the take that is authorized is compatible with the Eagle Act preservation standard; is necessary to protect an interest in a particular locality; is associated with, but not the purpose of, the activity; and cannot be practicably avoided. *Id.*; see also 81 Fed. Reg. 91494 (2016)). The preservation standard under the Eagle Act means to be consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations throughout the geographic range of each species (50 C.F.R § 22.3).

The need for this action is a decision on an IETP application from the Applicant. The decision must comply with the Eagle Act and all applicable regulatory requirements, and must be compatible with the preservation of eagles.

1.2 Authorities

Service authorities are codified under multiple statutes that address management and conservation of natural resources from many perspectives, including, but not limited to the effects of land, water, and energy development on fish, wildlife, plants, and their habitats. This analysis is based on the Eagle Act (16 USC §§ 668–668e) and its regulations (50 C.F.R, Part 22). The PEIS (Service 2016) has a full list of authorities that apply to this action (PEIS Section 1.6, pages 7-12), which are incorporated herein by reference.

1.3 Background

The Applicant is the developer and operator of the Project located in Carbon and Albany Counties, Wyoming, approximately two miles (three kilometers) east of McFadden, Wyoming (Figure 1). The Project is located on a combination of leased private-fee and State of Wyoming owned lands (Figure 1). The sites encompass approximately 7,500 acres (3,035 hectares) of land that extends approximately 3.4 mi (5.5 km) from north to south and is approximately 5-miles (8-kilometers) wide. This land ranges in elevation from approximately 7,000 to 7,200 feet (2,133 to 2,195 meters) above mean sea level. The most common land cover types in the Project area are mixed-grass prairie vegetative.

On-site project construction occurred from March 10, 2008 through December 31, 2008. The Project was operational in January 2009. The initial Project development consisted of 85 GE 1.5 megawatt (MW) wind turbine generators (WTG) rated at 127.5 MW. These WTG had 269-foot (82-m) rotor diameters, 262-ft (80-m) hub height, and 397 feet (121 meter) total height. The Project was repowered from August 2019 through December 2019 and all 85 WTG were upgraded with new nacelles and rotors. The repowered WTG have 299-feet (91-meter) rotor diameters, 80-meter hub height, 413 feet (126-meter) total height, and are rated at 1.85 MW. Two permanent metrological (MET) towers occur onsite. The MET towers are unguyed, lattice structures approximately 260-ft (80-m) tall. Two substations were constructed for the Project which transform energy delivered by the 29.3 mi (47.2 km) of underground collection lines from 34.5 kilovolt (kV) to 230 kV. An approximately 10-mi (16-km) overhead transmission line (230 kV), which was built across private fee lands, interconnects the Project with the existing Foote Creek Substation. All above ground lines currently meet the Avian Power Line Interaction Committee (APLIC) 2006 standards. One Operations and Maintenance (O&M) building was constructed for the Project. The Project includes approximately 30 miles of new access roads. New roads were approximately 40-ft (12-m) wide during construction and were narrowed to approximately 10-feet (3-meter) wide during operation.

PacifiCorp has conducted a variety of pre- and post-construction surveys for the Project. Baseline avian studies and early post-construction studies were conducted prior to the establishment of the USFWS *Land-based Wind Energy Guidelines* (USFWS 2012), *Eagle Conservation Plan Guidance* (USFWS 2013), or Eagle Rule (USFWS 2016). Therefore, survey methods did not meet current standards and were typically focused on all birds, not specifically eagles.

Numerous pre- and post-construction biological surveys have been conducted for the Project including: standardized avian surveys (pre-construction), eagle nest surveys as part of the

baseline monitoring, ten additional years of nest surveys (post-construction), avian mortality monitoring plot surveys, and eagle-specific post construction mortality (PCM) monitoring. Biological survey efforts are further discussed in chapter 3- Affected Environment. Detailed methods for each survey effort are included in the respective reports (ECP; Appendix, A, B, and D).

As a commitment to the protection and conservation of bald and golden eagles, the Applicant has developed an ECP for the Project (Attachment A, incorporated herein by reference). The Project-specific ECP has been written in coordination with the Service and follows the Eagle Conservation Plan Guidance, Version 2 (ECP Guidance, Service 2013a), and the Service regional guidance memo “Final Outline and Components of an Eagle Conservation Plan (ECP) for Wind Development, Recommendations from USFWS Region 6” (Service 2013) for successful development and compliance with the Eagle Act. The ECP documents how the Project’s siting, design, and planned operation will accomplish (or is currently accomplishing) avoidance and minimization of bald and golden eagle take when the take is associated with, but not the purpose of, an otherwise lawful activity, and cannot practicably be avoided. The ECP further details the implementation of compensatory mitigation, necessary to mitigate the potential take of golden eagles at the Project site.

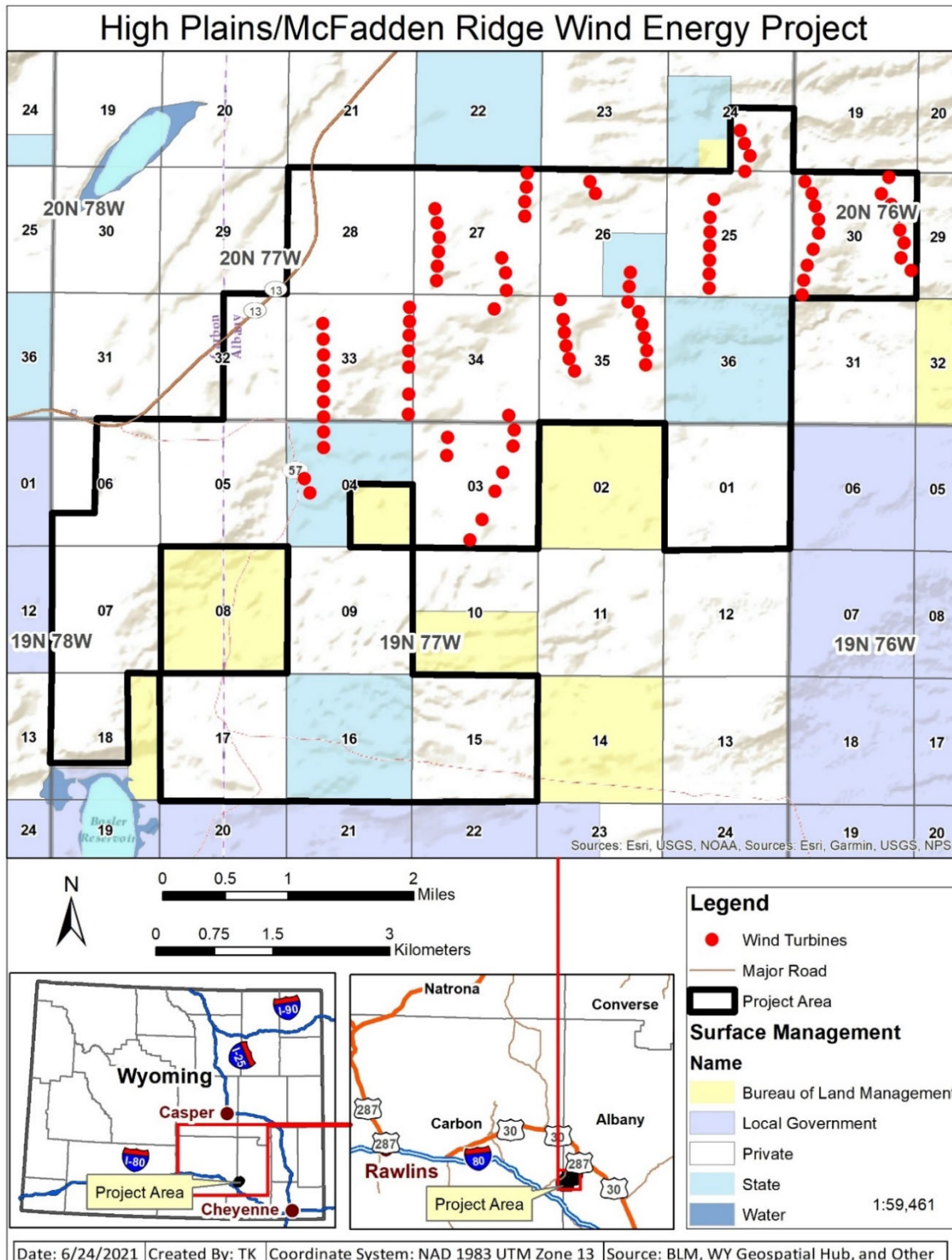


Figure 1. High Plains McFadden Ridge Wind Energy Project Area and Turbines

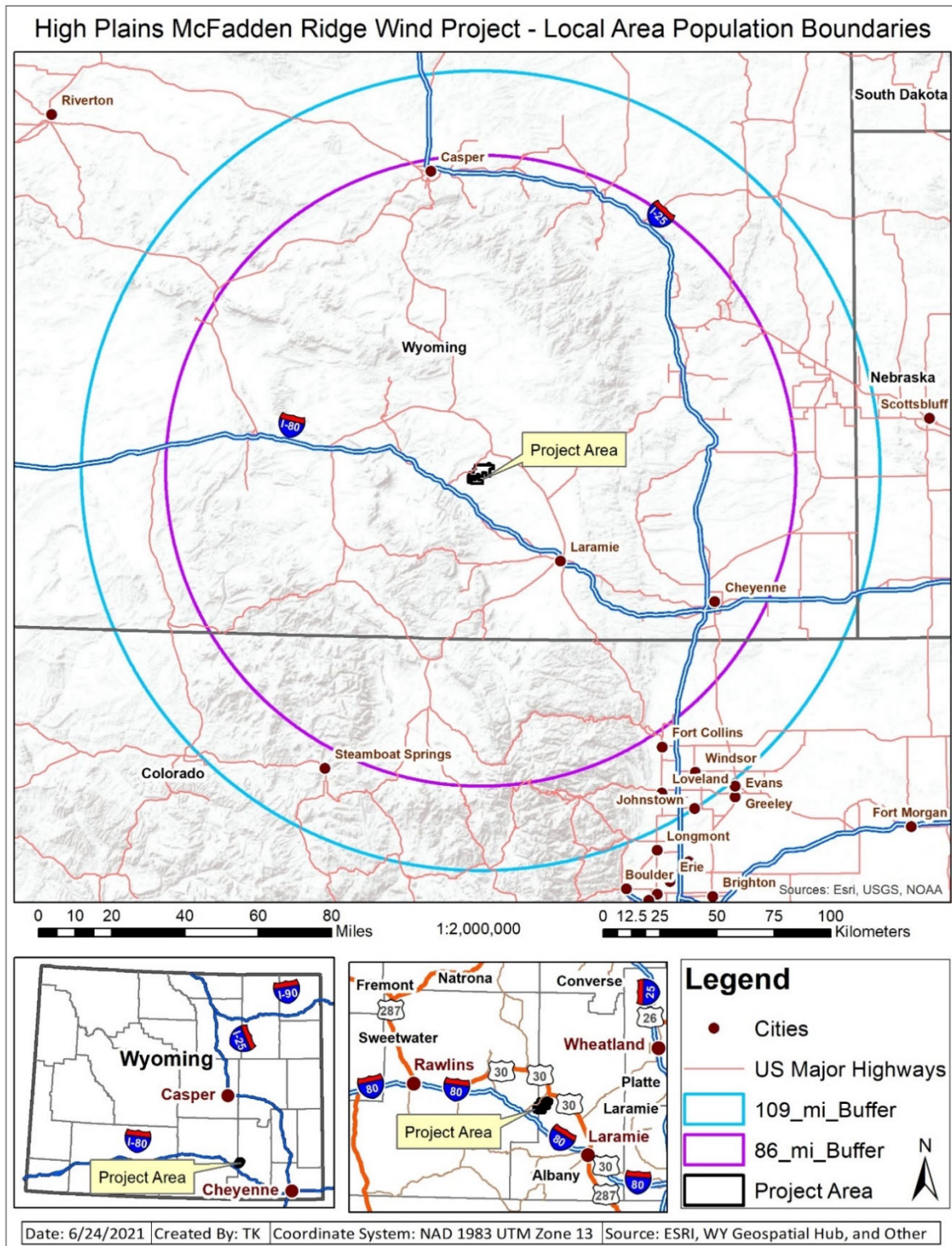


Figure 2. High Plains McFadden Wind Project Boundary and Local Area Population (LAP) Boundary Map

1.4 Scoping, Consultation and Coordination

This EA incorporates by reference the scoping performed for the PEIS (Chapter 6, page 175). Additionally, the Applicant worked closely with the Service and the Wyoming Game and Fish Department (WGFD) to develop the ECP in support of its application to avoid, minimize, and mitigate adverse effects on eagles; however, the Service was not involved in the siting of Project infrastructure. Furthermore, the Project was built and in operation prior to the release of *U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines* (Service 2012) and *Eagle Conservation Plan Guidance Module 1 – Land-based Wind Energy* (Service 2013a). Guidance and recommendations in these documents that have since been encouraged and enforced, further aid to reduce impacts associated with wind energy development.

The Applicant has communicated with the Service and the WGFD about the Project since 2008. WGFD was also a member of the Technical Advisory Committee established with the Service and other stakeholders for the Project in 2008. Agency communications, recommendations, and involvement are described throughout the ECP.

The Wyoming Industrial Siting Council issued a permit to the Applicant to construct and operate the Project on October 1, 2008, after jurisdictional and open house meetings on the Project. As part of the ISC permit process, PacifiCorp met with several state, federal, and local agencies, including the Wyoming Department of Environmental Quality and the WGFD, on March 3 and 4, 2008 in Cheyenne, Wyoming. The meetings were held to provide an overview of the Project and the ISA process, discuss baseline data collected, address any issues and concerns (including pre- and post-construction monitoring), and answer questions. The public open house was held in Rock River, Wyoming in May 2008. Other state and county agency meetings were held in March, May, June, and July 2008 in Cheyenne, Laramie, Rawlins, and Rock River, respectively. The public was invited to all state and local agency meetings. PacifiCorp also engaged the Service in September and October of 2008 regarding the Project and modified Project siting to avoid and minimize impacts to raptor nests.

The Project was developed prior to any issuance of guidance documents and before eagle risk data was publicly available. Throughout Project development, Applicant evaluated and adopted conservation measures into the infrastructure layout and design, construction/clean-up, operations, and decommissioning/restoration plans for the Project to avoid and minimize impacts to eagles. The location of a Project-related transmission line was selected to concentrate impacts within an existing roadway, railroad, and power line corridor.

1.4.1 Tribal Coordination

The Service currently manages bald and golden eagles at the Eagle Management Unit (EMU) level, which is defined as the four administrative flyways with some modifications. This Project occurs in the Central Flyway. At the time this draft EA is made available for the 30-day public comments period, we will contact ten native sovereign nation tribal leaders through formal letters, and other tribes potentially affected by this Project via email, to offer the opportunity for formal

consultation concerning this potential federal action. The letters informed the tribal leaders and other potentially affected tribes of the receipt of the IETP application and preparation of this EA by the Service.

Coordination with tribal governments is an ongoing process. If the Service issues a 30-year IETP to the Applicant and the Applicant chooses to apply for a new permit when the IETP expires, the tribes will again be notified and offered the opportunity for consultation.

2. Proposed Action and Alternatives

2.1 Proposed Action

We propose to issue a 30-year IETP to take up to 2.5 bald eagles and up to 2.8 golden eagles annually (for a total authorized take of up to 75 bald eagles and up to 84 golden eagles over the life of the 30-year permit) with associated conditions, as allowed by regulation. The Applicant will implement all measures required by other agencies and jurisdictions to conduct the activity at this site including Applicant-committed measures, the conservation commitments described in the Applicant's ECP and Avoidance and Minimization, Compensatory Mitigation, Post Construction Monitoring, and Adaptive Management.

Compensatory Mitigation - The Applicant has committed, and will be required, to fully offset the authorized take of golden eagles, after the April 2009 environmental baseline cutoff date as discussed in the 2016 PEIS, by implementing compensatory mitigation as part of the conditions of the IETP. Specifically, this potential golden eagle take is related to the re-power construction after the Project became operational. Compensatory mitigation for this Project will consist of retrofitting high-risk power poles proportional to the predicted and adjusted golden eagle take estimate calculated by the Service, and will be located in the Central Flyway EMU. Together, these conservation and mitigation measures aim to ensure there will be no significant impacts to golden eagle populations. Compensatory mitigation must be additional or additive and is calculated using the Service's Resource Equivalency Analysis (REA) model for eagles, as outlined in the Eagle Conservation Plan Guidance Module 1-Land-based Wind Energy Version 2 (USFWS 2013).

Compensatory mitigation will be completed for the 30-year permit period by retrofitting high-risk power poles to reduce eagle mortality. Retrofitting refers to installing eagle-safe perches, installing perching deterrents, and insulating electrified phases. The number of retrofits was derived using our REA based on the estimated annual golden eagle mortalities. The Applicant's commitment to retrofit power poles to meet or exceed the Avian Power Line Interaction Committee's (APLIC) recommendations would minimize the risk of bird electrocution and collision (APLIC 2012) on the retrofitted power poles.

If the estimated take is less than mitigated take at the end of the 30-year period, the excess take will be credited to the Project if the operators apply for and receive an IETP for future Project

operations. If take is higher, increased mitigation will be required. In either case, compensatory mitigation for any potential subsequent IETP would be re-evaluated based on actual take levels observed/estimated at the Project as compared with permitted levels of take. The re-evaluation will be subject to current regulations in place at the time of the renewal.

Post Construction Monitoring - The Applicant will conduct Post Construction Mortality Monitoring (PCMM) for all years of the permit including an intensive monitoring effort for the first two full years after the IETP is issued, as part of the condition(s) of approval. This data will be used to verify that take limits are not being exceeded, to update take estimates, and to evaluate the overall eagle mortality as related to meeting the objectives of Adaptive Management. This monitoring also includes searcher efficiency trials (to estimate rates of observer bias) and carcass persistence trials (to better understand carcass persistence on the landscape). These trials are designed to address uncertainty and to develop robust estimates of mortality at the Project site.

Fatality estimates would be updated to reflect project-specific conditions and compensatory mitigation would be adjusted accordingly. Annual monitoring reports will be prepared within three months of completing each year of post-construction monitoring required by the IETP, with each report including all raw monitoring data upon which the reports are based and cumulative results of post-construction monitoring performed to date. All monitoring reports shall document annual fatalities for eagles, other birds, and bats on a per-turbine basis. Additionally, any bald or golden eagle found dead or injured must be reported to the Migratory Bird Permit Office within 24 hours of discovery. Eagle remains will be handled and processed according to current Service procedures. All post construction monitoring will be conducted on existing disturbance, using existing roads, and conducted on foot.

Adaptive Management—The Applicant has developed an Adaptive Management Plan to monitor for impacts and avoid, minimize, and mitigate impacts to eagles and other avian species based on the Project specifics and data available (Section 11 of the ECP). The stepwise process identified in the ECP will be used to guide the implementation of additional conservation measures as needed, and applies before actual take exceeds the permitted take levels.

2.2 Alternative 1: No Action

Under the no action alternative, we would take no further action on the IETP application. In reality, the Service must take action on the IETP application, determining whether to deny or issue the permit. We consider this alternative because regulations require evaluation of a no action alternative, and it provides a clear comparison of any potential effects to the human environment from the proposed action. The no action alternative in this context analyzes predictable outcomes of the Service not issuing an IETP. Under the no action alternative, the Project would likely continue to operate without an IETP being issued. Thus, for purposes of analyzing the no action alternative, we assume that the applicant will continue to implement all measures required by other agencies and jurisdictions to operate the Project, but the conservation measures proposed in the IETP application package (that have not already been implemented by the Applicant) would not be required.

As outlined by the MBCP per court Plea Agreement, the Applicant would continue to offset any observed golden eagle fatalities by retrofitting at a rate of 9.26 poles per each golden eagle fatality related to the existing Project. No post-construction eagle mortality monitoring would occur, and no additional data would be available to the Service to contribute to the overall refining efforts of the Collision Risk Model (CRM).

The Applicant may choose to implement some, none, or all of those conservation and adaptive management measures. Under this alternative, we assume that the Applicant will take some reasonable steps to avoid taking eagles, but the Applicant would be liable for violating the Eagle Act should take of an eagle occur after December 2024.

2.3 Other Alternatives Considered but Not Evaluated in this Environmental Assessment

2.3.1 Alternative 2: Deny Permit

Under this alternative, the Service would deny the permit application, and not issue an IETP because the Applicant falls under one of the disqualifying factors and circumstances denoted in 50 C.F.R. § 13.21; the application fails to meet all regulatory permit issuance criteria and required determinations listed in 50 C.F.R § 22.26; or because the Service determines that the risk to eagles is so low that a take permit is unnecessary for the Project.

Our permit issuance regulations at 50 C.F.R. § 13.21(b) & (c) set forth a variety of circumstances that disqualify an Applicant from obtaining a permit (e.g., a conviction, or entry of a plea of guilty or *nolo contendere*, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Eagle Act disqualifies any such person from receiving or exercising the privileges of a permit). The Applicant does not meet any of the disqualifying factors or circumstances denoted in 50 C.F.R. § 13.21. We next considered whether the Applicant meets all issuance criteria for the type of permit being issued. For eagle take permits, those issuance criteria are found in 50

C.F.R § 22.26(f) in the 2009 regulations (74 FR 46878, Sept. 11, 2009). The Project application meets all the regulatory issuance criteria and required determinations (50 C.F.R. § 22.26) for permits.

When an applicant for a permit is not disqualified under 50 C.F.R. § 13.21 and meets all the issuance criteria of 50 C.F.R. § 22.26, denial of the permit is not a reasonable option. Therefore, this alternative denial of the permit was eliminated from further consideration.

3. Affected Environment

This section describes the current status of the environmental resources and values that are affected by the proposed action and no action alternative. It is important to note that the Project was built and operational prior to the release of the Service's *Land-Based Wind Energy*

Guidelines (Service 2012) and *Eagle Conservation Plan Guidance Module 1 – Land-based Wind Energy* (Service 2013). These documents provide recommendations and guidelines for preconstruction surveys and methodologies not followed at the Project. The ECP was prepared, and consultation with the Service was completed with general consideration of the recommendations and guidance provided in these documents.

Current Adaptive Management

The Applicant will continue to remove and/or evaluate potential source(s) of eagle attractions in the Project area (e.g., carrion, prey and/or prey habitat) in accordance with applicable state and federal laws. The Applicant has carrion removal contracts in place with vendors at all Wyoming wind energy facilities to collect and remove observed carrion, which could create an attraction for foraging eagles, raptors, and other scavengers. Depending upon the carcass(es) observed, the Applicant will contact applicable carcass owners to request permission before relocating or disposing of the carcass(es). All PacifiCorp employees and contractors are actively engaged in the location and reporting process. The Applicant will make all attempts to remove or tarp carcass within 24 hours as allowed by safety, weather, landowners, or other contributing factors.

While no specific advanced conservation practices (ACP) have been implemented at the Project, the Applicant has evaluated the effectiveness of multiple ACP at other nearby wind energy facilities. These ACP include research/development associated with an automated detection and deterrent systems; experimental and informed curtailment program, habitat modification to reduce prey resources, power line retrofit, undergrounding lines, removal of old infrastructure (specifically with the goal of reducing perch opportunities), and covering culverts to reduce prey shelter. Lessons learned from these ACP activities can be used when/if needed at the Project to further reduce eagle attraction and mortalities at the site. These studies will provide the basis for the implementation of ACPs and avoid prolonged a research and development phase.

Pre-construction Surveys

Fixed-point avian use surveys were conducted at twelve plots across the Project area in the spring (March 15 – May 31, 2007), fall: (September 1 – November 15, 2007), summer: June 1 – August 31, 2008; and winter: November 16, 2008 – March 14, 2009) seasons. Twenty golden eagles and four bald eagles were observed during the 111 hours of 20-minute fixed point survey effort. Golden eagle use was consistently low throughout the survey year (0.07 golden eagles/800-meters plot/20-minute survey in spring and winter, 0.05 in summer and 0.03 in fall). Bald eagles were only observed in spring (0.03 bald eagles/800-m [2,626-ft] lot/20-min survey) and fall (0.01 bald eagles/800-meters plot/20-min survey). Golden eagle use was only documented from the central portion of the Project and eastward.

Eagle nest surveys were conducted in spring of 2007, throughout the proposed Project area with a one-mile buffer, as part of the baseline monitoring study. This was the only pre-construction nest survey conducted for the Project and included one round of ground-based survey. One golden

eagle and one bald eagle nest were identified within the study area during the pre-construction (2007) surveys.

Post-construction Surveys

Multiple post-construction monitoring studies have been conducted since the Project went operational including standard three year post-construction monitoring (PCM) study (October 2009 – October 2012), multiple year eagle specific PCM (May 2014-September 2020), and raptor nest surveys (2011-2020).

3.1 Bald Eagle

General information on the taxonomy, ecology, distribution, and population trends of bald eagles is given in Section 3.2.1 of the PEIS (Service 2016a, pages 44-60) and is incorporated herein by reference. The rest of this section focuses on bald eagle occurrences in the EMU in which the Project occurs (Central Flyway), the local area population (LAP; within 86 miles of the Project), and the Project area (the actual footprint of the Project and an associated one-mile buffer for pre-construction surveys and an associated 2- to 2.5-mile buffer for post-construction surveys). The estimated median population size of bald eagles in the Central Flyway EMU is 3,209 (Service 2016b). Based on the Service's process to calculate the LAP, the population size in the LAP is estimated to be 54 bald eagles.

A total of 111, 20 minute fixed-point avian surveys were conducted as part of the pre-construction surveys of the Project area, spanning March 2007 through March 2009. Four bald eagle observations were recorded during the survey period. One bald eagle nests were recorded in the Project area during the pre-construction survey effort. Detailed pre-construction survey information can be found in the ECP.

Post-construction monitoring to assess avian mortality and raptor nesting activity began with a standard 3-year carcass monitoring study and continued with eagle-specific mortality monitoring from 2012 – present. The objective of the standardized carcasses surveys was to systematically search wind turbines for bird and bat casualties that were attributable to collision with Project facilities. From October 2009 – October 2012, 1,647 wind turbine search plots were conducted. No bald eagle carcasses were found during standardized carcass surveys 28 of the Project's 85 turbines, however, one dead bald eagle was found incidentally.

The second PCM effort was eagle-specific and occurred from May 2014-December 2015. Four hundred forty eight wind turbine plot searches were conducted in 2014 and 714 plot searches in 2015 at the same 28 wind turbines as previously surveyed. All wind turbines that were not surveyed using the plot search method were visited using the scanned method. One bald eagle mortality was detected in 2014 during standard searches and no eagles were detected during the 2015 survey effort.

In addition, searcher efficiency trials were completed simultaneous to PCM surveys. Searcher efficiency trials estimated the percentage of casualties found by observers. One hundred percent and 83% of turkey skin decoys were detected during survey year 2014 and 2015 respectively at surveyed plots. Twenty five percent and 30% of turkey skin decoys were detected during survey year 2014 and 2015 respectively at scanned plot trails.

Raptor and eagle specific nest surveys conducted within the Project footprint as well as a one-mile buffer around the Project were conducted from May 2007-2020. Five bald eagle nests were found, all located more than one-mile from the nearest turbine

3.2 Golden Eagle

General information on the taxonomy, ecology, distribution, and population trends of golden eagles are given in Section 3.3.1 of the PEIS (Service 2016a, pages 71-81) and is incorporated herein by reference. The rest of this section focuses on golden eagle occurrences in the EMU in which the Project occurs (Central Flyway), the LAP (within 109 miles of the Project; see Figure 2), and the Project Area (the actual footprint of the Project and an associated 1-mile buffer for pre-construction surveys and an associated 2- to 2.5-mile buffer for post-construction surveys). The estimated median population size of golden eagles in the Central Flyway EMU is 15,327 (Service 2016b). Based on the Service's process to calculate the LAP, the population size in the LAP is estimated to be 891 golden eagles.

A total of 111, 20 minute fixed-point avian surveys were conducted as part of the pre-construction surveys of the Project area, spanning March 2007 through March 2009. Twenty golden eagle observations were recorded during the survey period. No golden eagle nests were recorded in the Project area during the pre-construction survey effort. Detailed pre-construction survey information can be found in the ECP.

Post-construction monitoring to assess avian mortality and raptor nesting activity began with a standard 3-year carcass monitoring study and continued with eagle-specific mortality monitoring from 2012 – present. The objective of the standardized carcasses surveys was to systematically search wind turbines for bird and bat casualties that were attributable to collision with Project facilities. From October 2009 – October 2012, 1,647 wind turbine search plots were conducted. One golden eagle carcasses were found during standardized carcass surveys 28 of the Project's 85 turbines. Additionally, three golden eagle mortalities was found incidentally.

The second PCM effort was eagle-specific and occurred from May 2014- December 2015. Four hundred forty eight wind turbine plot searchers were conducted in 2014 and 714 plot searches in 2015 at the same 28 wind turbines as previously surveyed. All wind turbines that were not surveyed using the plot search method were visited using the scanned method. No golden eagle mortalities were detected during this survey period.

In addition, searcher efficiency trials were completed simultaneous to PCM surveys. Searcher efficiency trials estimated the percentage of casualties found by observers. One hundred percent

and 83% of turkey skin decoys were detected during survey year 2014 and 2015 respectively at surveyed plots. Twenty five percent and 30% of turkey skin decoys were detected during survey year 2014 and 2015 respectively at scanned plot trails.

Raptor and eagle specific nest surveys conducted within the Project footprint as well as a one-mile buffer around the Project were conducted from May 2007-2020. Two golden eagle nests were found, all located more than one-mile from the nearest turbine.

Ongoing Monitoring

Eagle-specific ongoing mortality monitoring was initiated in January 2016 and continues in the present. This PCM effort is also eagle-specific and included searcher efficiency trails. A total of 1,568 wind turbine plot searchers were conducted at the same 28 wind turbines as previously surveyed during this period (2016-2020). Two eagle mortalities were found during the scheduled searches; one golden eagle and one bald eagle. All wind turbines that were not surveyed using the plot search method were visited using the scanned method. The average detection rate for the searcher efficiency trials was 91.2% (years 2016-2020) for searched plots. Detailed information on the methods and results of this survey effort can be found in the ECP.

3.2.1 Migratory Birds

General information on migratory birds protected under the Migratory Bird Treaty Act (MBTA) is discussed in Section 3.5.1 of the PEIS (Service 2016a, 97-98) and is incorporated by reference herein. Species most likely affected by our permit decision evaluated for this Project are those that might benefit from the mitigation options developed in the ECP, primarily power pole retrofits that protect birds from electrocution. The Applicant entered into a Plea Agreement with the Department of Justice and the Service in December 2014. As part of the Plea Agreement, a MBCP was developed to provide a framework for the Applicant to implement measures that will ensure compliance with the requirements of the MBTA and Eagle Act during the term of the MBCP. A brief summary of the actions required under the MBCP can be found in section 1.1 of the ECP.

3.2.2 Pre-construction Surveys for Migratory Birds

The Applicant's ECP describes pre-construction avian survey methods and results; incorporated by reference is a summary of avian use results. One hundred eleven, 20-minute fixed-point surveys were conducted throughout the year from 2007-2009, prior to Project construction. During the study, 492 single birds or groups totaling 1,481 individuals were observed flying during fixed-point bird use surveys. For all species combined, 96.8% of birds were observed flying below the likely zone of risk, 2.1% were within the zone of risk for collision with turbine blades, and 1.1% were observed flying above the zone of risk for typical turbines that could be used in the Project's resource area. Bird types most often observed flying within the wind turbine zone of risk were raptors (22.3%) and shorebirds (3.2%). For species with at least 10 separate groups of flying birds, golden eagles were observed most often within the zone of risk. Based on

the use (measure of abundance) of the study area by each species and the flight characteristics observed for that species, three species of raptors – ferruginous hawk, golden eagle, and red-tailed hawk, have the highest probability of turbine exposure, with an exposure index of 0.02.

3.2.3 Post-construction Surveys for Migratory Birds

A total of 47 bird carcasses were found between 14 October 2009 and 31 October 2011 during scheduled individual plot searches and incidental finds. Bird mortality was comprised of 21 species with nine carcasses that could not be identified down to the species level. All 21 species are protected under the Migratory Bird Treaty Act (MBTA). Detailed information on post-construction surveys for migratory birds is available in ECP, appendix C (Attachment A).

3.4 Species listed under the Endangered Species Act

The Endangered Species Act (ESA) directs the Service to identify and protect endangered and threatened species and their critical habitat, and to provide a means to conserve their ecosystems. The ESA requires specifically that [the], “... Federal agency shall... insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species...” (16 U.S.C. 1536 (a)(2)). Because issuance of an IETP is a Federal Agency action, the ESA is applicable and addressed in this draft EA.

Five species listed as federally endangered or threatened under the Endangered Species Act (ESA) may occur in the Project Area or have potential to be affected by the proposed action. These species include the Ute ladies'-tresses (*Spiranthes diluvialis*), and four Platte river species: piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), and western prairie fringed orchid (*Platanthera praeclara*).

On June 21, 2021, the Service initiated an intra-service Section-7 consultation for the issuance of an IETP for the Project (Attachment B). It was determined that the Project will have “no effect” on five federally listed species: Ute ladies'-tresses, and four Platte river species: piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid. Our decision regarding the IETP will not alter the physical footprint of the Project and will not alter its impacts to federally threatened and endangered species; therefore, no further evaluation of impacts to species listed under the ESA is warranted for the Service’s decision of whether or not to issue an IETP.

3.5 Cultural and Socio-economics Interests

The National Historic Preservation Act (NHPA) is the principal federal law guiding federal actions with respect to the treatment of cultural, archaeological, and historic resources. Section 106 (54 U.S.C. § 306108) of the NHPA requires federal agencies, prior to taking action to implement an undertaking, to take into account the effects of their undertaking on historic properties and to give the Advisory Council on Historic Preservation (ACHP) and the State

Historic Preservation Office (SHPO) a reasonable opportunity to comment regarding the undertaking. Historic properties are “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register...” of Historic Places [NRHP] (54 U.S.C. § 300308). The criteria used to evaluate the NRHP eligibility of properties affected by federal agency undertakings are contained in 36 CFR § 60.4.

No new ground-disturbing activities will occur as part of or related to issuing an IETP.

Eagles can be considered a feature or element of a Traditional Cultural Property under the NHPA. 74 Fed. Reg. 46844 (Sept. 11, 2009). Resources or issues of interest to the Tribes that could have a bearing on their traditional use and/or religious freedom include eagles (e.g., ceremonial use of eagle feathers). The Religious Freedom Restoration Act of 1993 ensures that interests in religious freedom are protected. In addition, some Tribes and tribal members may consider eagle nests sacred sites (or traditional cultural properties) or potential historic properties of religious and cultural importance, as provided for in the American Indian Religious Freedom Act. Section 1.6.1 describes our effort to coordinate with tribal governments to ensure tribes are given the opportunity to consult with us on matters related to potential issuance of an IETP for this Project.

3.6 Climate Change

Climate change was considered in the PEIS (Service 2016; Section 3.9, page 144) and is incorporated herein by reference. The proposed action, of issuing a permit, will have no direct impact on Climate Change. The project is existing and currently operational. It will likely continue to operate regardless of the decision whether or not to issue an IETP.

4. Environmental Consequences

This section summarizes the effects on the environment of implementing the proposed action and the no action alternative. The discussion of overall effects of the IETP program is provided in the

PEIS (Service 2016) and is incorporated by reference here. This section of this draft EA analyzes only the effects that may result from the issuance of an IETP for this specific Project.

4.1 Proposed Action

In determining the significance of effects of the Project on eagles, we screened the proposed action against the analysis provided in the PEIS (Service 2016) and the Service’s 2016 report, “Bald and Golden Eagles: Status, trends, and estimation of sustainable take rates in the United States.” We also used our eagle-risk analysis (Service 2013, Appendix D), and Cumulative Effects Analysis (Service 2013, Appendix F) to quantify eagle fatality risk and cumulative local area population level effects.

The proposed action is consistent with 50 C.F.R. § 22.26(a) Purpose and scope, where the “permit authorizes take of bald and golden eagles where the take is compatible with preservation of the bald and golden eagle; is necessary to protect an interest in a particular locality; is associated with, but not the purpose of, the activity; and cannot practicably be avoided.” Additionally, under the court Plea Agreement, the Applicant is required to actively pursue an IETP.

4.1.1 Estimating Eagle Fatalities

In the absence of defensible project-specific eagle use information, the Service uses the upper 80th credible interval around the estimated number of annual eagle fatalities for permit decisions in an effort to avoid underestimating fatality rates at wind projects. In these instances, the Service uses the “priors-only” CRM to estimate the annual fatality rate at a project. This estimate is based on a conservative approach that is expected to overestimate annual and cumulative take at the outset of the permit. Eagle-specific post-construction monitoring is required for the IETP and is included as a permit condition. The required postconstruction fatality monitoring also includes searcher efficiency trials and carcass persistence trials designed for the purpose of addressing uncertainty and for developing robust estimates of mortality at the project site. This project-specific, robust estimate of mortality is then used for the purpose of updating our eagle-risk analysis, to yield a refined estimate of mortality for the Project.

4.1.2 Estimating Golden Eagle Take

Under the proposed action, we estimate that 2.8 golden eagles could be taken annually. This number is multiplied by the number of years in the permit term (30) and rounded up to the next whole number (for a total authorized take of up to 84 golden eagles over the life of the 30-year permit). Eagle-specific post-construction monitoring is required for the IETP and is included as a permit condition. The required post-construction fatality monitoring also includes searcher efficiency trials and carcass persistence trials designed for the purpose of addressing uncertainty and for developing robust estimates of mortality at the project site. This project-specific, robust estimate of mortality is then used for the purpose of updating our eagle-risk analysis, to yield a refined estimate of mortality for the Project. Monitoring is a critical component of adaptive management. The proposed conservation measures include adaptive management that could result in additional monitoring and operational adjustments. Adaptive management measures will be implemented based on the stepwise process identified in the adaptive management framework; will be used to guide the implementation of additional conservation measures as needed; and apply before actual take exceeds the permitted take levels. To fully offset the authorized take, the Applicant will commit to retrofitting high-risk power poles proportional to the predicted and adjusted eagle take estimate, calculated by the Service, as compensatory mitigation for the loss of golden eagles. Together, these conservation and mitigation measures aim to ensure there will be no significant impacts to golden eagle populations.

4.1.3 Estimated Bald Eagle Take

Under the proposed action, we estimate that up to 2.5 bald eagles could be taken annually. This

number is multiplied by the number of years in the permit term (30) and rounded up to the next whole number (for a total authorized take of up to 75 bald eagles over the life of the 30-year permit). Eagle-specific post-construction monitoring is required for an IETP and is included as a permit condition. The required post-construction fatality monitoring also includes searcher efficiency trials and carcass persistence trials designed for the purpose of addressing uncertainty and for developing robust estimates of mortality at the Project site. This project-specific robust estimate of mortality is then used for the purpose of updating our eagle-risk analysis, to yield a refined estimate of mortality for the Project. Monitoring is a critical component of adaptive management. The proposed conservation measures include adaptive management that could result in additional monitoring and operational adjustments. Adaptive management measures will be implemented based on the stepwise process identified in the adaptive management framework; will be used to guide the implementation of additional conservation measures as needed; and apply before actual take exceeds the permitted take levels. Together, these conservation measures ensure there will be no significant impacts to bald eagle populations. The annual take of bald eagles that would be authorized by this permit does not exceed the EMU take limit; therefore, compensatory mitigation for bald eagles is not required. However, compensatory mitigation required per golden eagle take offset will likely benefit bald eagles by retrofitting high-risk power poles and alleviating the risk of electrocution associated with those structures, and will be located in the Central Flyway EMU. The actual location of the compensatory mitigation has not been determined; however, the Service recommends that the Applicant implement it within the bald eagle LAP area related to the Project.

4.2 Cumulative Effects

Take of eagles has the potential to affect the larger eagle population. Accordingly, the 2016 PEIS, incorporated herein by reference, analyzed the cumulative effects of permitting take of bald and golden eagles in combination with ongoing unauthorized sources of human-caused eagle mortality and other present or foreseeable future actions affecting bald and golden eagle populations. As part of the analysis, the Service determined sustainable limits for permitted take of bald eagles within each EMU. The bald eagle take that would be authorized by this permit does not exceed the EMU take limit for bald eagles, so it will not significantly impact the EMU bald eagle population. Take limits for golden eagles in all EMUs are set to zero; therefore, all permits for golden eagles take must incorporate offsetting compensatory mitigation after all appropriate and practicable avoidance and minimization measures are employed. Golden eagle take being considered under this application would require mitigation, described in further detail below. The avoidance and minimization measures and mitigation for golden eagles that would be required under the permit, along with the additional adaptive management measures, are designed to further ensure that the permit is compatible with the preservation of bald and golden eagles at the regional EMU population scale. Additionally, to ensure that eagle populations at the local scale are not depleted by cumulative take in the local area, the Service analyzed in the 2016 PEIS the amount of take that can be authorized while still maintaining the LAP of eagles. In order to issue an IETP, cumulative authorized take should not exceed 5%, nor can cumulative unauthorized take exceed 10%, of a LAP, unless the Service can demonstrate why allowing take to exceed that limit is still compatible with the preservation of eagles. The IETP regulations

require the Service to conduct an individual LAP analysis for each permit application as part of our application review.

We, therefore, considered cumulative effects to the LAP surrounding the Project to evaluate whether the take to be authorized under this permit, together with other sources of permitted take and unpermitted eagle mortality, may be incompatible with the persistence of the Project LAP. We incorporated data provided by the applicant, our data on other eagle take authorized and permitted by the Service, and other reliably documented unauthorized eagle mortalities (i.e., known eagle take at nearby wind farms, electrocution, and documented mortalities due to anthropogenic and natural causes) to estimate cumulative impacts to the LAP. The scale of our LAP analysis is an 86-mile radius around the project site for bald eagles and a 109-mile radius for golden eagles (Figure 2). We conducted our cumulative effects analysis as described in the Service's ECP Guidance (Service 2013; Appendix F).

4.2.1 Bald Eagles

The LAP of bald eagles for the Project is approximately 54 eagles and the annual 1% and 5% benchmarks for this local area population are about 0.5 and 2.7 bald eagles, respectively.

Five currently permitted wind energy projects overlap this Project's LAP boundary for bald eagles. Taken together, this Project's take and the overlapping take of the other projects could result in a total annual take of 13 bald eagles (or 24% of the LAP). The overlapping LAPs effect is discussed in more detail in the Section 4.2.4 (*Reasonably Foreseeable Future*). This is above the 5% benchmark; however, the North American Breeding Bird Survey (BBS) population trend (1966-2019) estimate for bald eagles in Project LAP is 9.9% and 18.6% respectively (Sauer et al. 2017; USGS-PWRC 2020). Analyses conducted by the Service showed that over most of the United States, bald eagle populations are growing at a rate of approximately 5% per year (USFWS 2016c). Additionally, a recently published report (Service 2020) estimated that bald eagle population have increased by a factor of 4.4 since 2009 across EMUs, excluding the southwestern U.S. and Alaska. Based on these results, the Service (2020) concluded that the bald eagle population has continued to increase rapidly since our previous survey.

This indicates that a take rate of approximately 11% (5% due to annual population growth plus 6% sustainable take from a stable population) would be consistent with the preservation standard in most LAPs. This and other data indicate that the bald eagle population in the LAP is likely considerably above the 2009 population level, which is the management objective specified in the 2016 PEIS (Service 2016a). The population growth in excess of 2009 population provides considerable additional capacity for take above the LAP benchmark, and our determination that a take rate in this LAP of up to 24% is consistent with the management objective of eagle populations.

Thus, despite the fact that take at the LAP level of 24% exceeds the 5% benchmark for the LAP associated with the Project, this level of bald eagle take from the local area is consistent with the management objective established in the PEIS and codified in regulations. The impact to bald

eagle populations at both the LAP and EMU scales are therefore not significant. It is reasonable to assume that bald eagles in the project vicinity are increasing and the conservative take estimate at the Project would not contribute to declines in the overall bald eagle population in the EMU.

We also documented, through an assessment of unpermitted take, that bald eagles are not experiencing atypically high levels of unpermitted mortality in this LAP. Based on the Service's eagle mortality database (which tracks sources of unpermitted take), there were 40 reported bald eagle mortalities within the LAP between 2001 and 2021, for an average of 2.1 per year. These mortalities are all considered to be unpermitted take and are largely due anthropogenic causes (e.g., electrocution, shooting, poisoning, collision with wind turbines, etc.) and less due to natural causes or undetermined. On an annual basis, 2.1 unpermitted bald eagle takes equals about 3.8% of the total estimated bald eagle population in the LAP associated with the Project. This amount of unpermitted take is well below the 10% threshold level for unpermitted take within the LAP.

4.2.2 Golden Eagles

The LAP of golden eagles for the Project is approximately 891 eagles and the 1% and 5% benchmarks for this local area population are nine and 44.5, respectively. Five currently permitted wind energy projects overlap this Project's LAP boundary for golden eagles. Taken together, this Project's take and the overlapping take of the other projects could result in a total annual take of 27 golden eagles (or 3.02% of the LAP). The overlapping LAPs effect is discussed in more detail in the Section 4.2.4 (*Reasonably Foreseeable Future*). Based on the Service's eagle mortality database, there were 441 reported golden eagle mortalities within the LAP between 1995 and 2021, for an average of 17 per year. These mortalities are all considered to be unpermitted take and are largely due anthropogenic causes (e.g., electrocution, shooting, poisoning, collision with wind turbines, etc.) and less due to natural causes or undetermined. On an annual basis, 17 unpermitted golden eagle takes equals about 1.9% of the total golden eagle population in the LAP associated with the Project. This amount of unpermitted take is well below the 10% threshold level for unpermitted take within the LAP.

4.2.3 Summary of Cumulative Effects on Bald and Golden Eagles

The take that would be authorized by this permit does exceed 5% of the LAP for bald eagles (see Cumulative Effects – Bald Eagle section) but does not exceed 5% of the LAP for golden eagles. The authorized take for bald eagles does not exceed the EMU level for bald eagles. As described above, the EMU take level for golden eagles is zero, therefore issuance of this permit would exceed the EMU take level. Accordingly, compensatory mitigation is required for the anticipated take of golden eagles by the Project. This take would be offset by commitments from the Applicant to retrofit high-risk power poles proportional to the predicted and adjusted eagle take estimate; therefore, the proposed action will not significantly impact golden eagle populations.

See the "Mitigation and Monitoring" section below for more discussion.

4.2.4 Reasonably Foreseeable Future

As described briefly above, the Service has issued five IETPs for the take of bald and golden eagles that overlap the Project's LAP boundaries. The Choke Cherry Sierra Madre (CCSM) wind project is expected to become operational (in part) in approximately two or more years (in 2024 or later) and the initial permit expires at the end of 2023. Take of eagles at CCSM is not authorized prior to 2022 due to operations of the project. Because this project is not yet built nor operational, but we anticipate that take could occur in the reasonably foreseeable future (beginning in 2024)

The Service is aware of operational wind projects in the LAP that have contributed to unauthorized take of bald and golden eagles. Some of these projects are currently operating under court-approved settlement agreements and are working with the Service to pursue and possibly attain an IETP. This known unauthorized bald and golden eagle take is included in our unpermitted take analysis and therefore accounted for in our cumulative effects analysis. Even with those impacts, the EMU take limits are not expected to be exceeded, as demonstrated by accounting for this unauthorized take in these analyses. While additional future wind developments and other activities may further increase take in the LAP during the permit tenure, the Service cannot reasonably predict the resulting impacts to eagles of such projects when important aspects of the projects (size, location, configuration, and lifespan) are currently unknown. There is no reasonable basis to consider such speculative impacts in this draft EA.

4.3 Cumulative Effects of Alternative 1 – No Action

Even though we would take no action on the permit application under the no action alternative, the project would likely continue to operate without authorization for take of eagles. The Project is currently operating under a District Court Plea Agreement, which states that as long as the Applicant continues to implement the MBCP and diligently pursues obtaining an IETP, the government would extend its "non-prosecution" agreement under the Eagle Act. This agreement would remain in place until either ten years after the sentencing (2024), or the Applicant obtains an IETP which would replace the MBCP.

Because no additional measures would be required to avoid or minimize risk to eagles under this no action alternative, the risk to eagles is expected to be higher under this alternative as compared to the proposed action. Under this alternative, direct impacts of the Project on the eagle populations are anticipated to be up to 159 eagles (2.8 golden eagles and 2.5 bald eagles per year over 30 years). No adaptive management measures would be triggered should take exceed that level. None of the impacts to golden eagles would be offset by compensatory mitigation, beyond what is required in the settlement agreement as outlined in the MBCP, resulting in potential negative impacts to the golden eagle populations.

This alternative does not meet the purpose and need for the action because the Service must either issue or deny a permit if it is in receipt of a completed IETP application. 50 C.F.R.

§13.21. The no action alternative also does not meet the purpose of and need for the action because it would result in the adverse, unmitigated effects to golden eagles described above, effects that are not compatible with the preservation of golden eagles.

4.4 Comparison of Effects of Alternatives

The following table compares the effects of the proposed action and alternative.

	Proposed Action – Issue Permit	Alternative 1 – No Action
Eagle Take Levels	Up to 74 bald eagles and up to 85 golden eagles over 30 years	Up to 74 bald eagles and up to 85 golden eagles over 30 years
Avoidance and Minimization	Project is operational and will continue to operate	Project is operational and will continue to operate
Compensatory Mitigation	The Applicant has committed, and will be required, to retrofit high-risk power poles proportional to the predicted and adjusted eagle take estimate as compensatory mitigating, for the loss of golden eagles as a condition of approval related to the IETP	9.26 retrofits, mitigating loss of each eagle fatality, for the term of the MBCP (ending December 19, 2024).
Unmitigated Eagle Take	Zero	Up to 74 bald eagles and up to 85 golden eagles over 30 years
Adaptive Management	The plan is to avoid and minimize impacts to avian resources	The plan is to avoid and minimize impacts to avian resources
Data Collected by Service	Annual monitoring report of fatalities; reporting of injured eagles; information on the effects of specific, applied, conservation measures	None
Company Liability for Eagle Take	No (if in compliance with permit conditions)	No as long as covered by the duration and conditions of MBCP under Settlement

Table 1. Comparison of the Effects of the No Action and the Proposed Action Alternatives.

Mitigation and Monitoring

Bald Eagles

The proposed action incorporates measures to minimize and avoid take to the maximum degree practicable, as required by regulation. To ensure that regional eagle populations are maintained consistent with the preservation standard, our regulations require that any take that cannot practicably be avoided and is above EMU take limits must be offset by compensatory mitigation. In this case, authorized take remains below the EMU take thresholds and no compensatory mitigation is needed to meet the Eagle Act preservation standard. However, compensatory mitigation required per golden eagle take offset will likely benefit bald eagles by retrofitting high-risk power poles and alleviating the risk of electrocution associated with those structures, and will be located in the Central Flyway EMU. The actual location of the compensatory mitigation has not been determined; however, the Service recommends that the Applicant implement it within the bald eagle LAP area related to the Project.

Golden Eagles

The proposed action incorporates measures to minimize and avoid take to the maximum degree practicable, as required by regulation. To ensure that regional eagle populations are maintained consistent with the preservation standard, regulations require that any golden eagle take that cannot practicably be avoided and is above EMU take limits must be offset by compensatory mitigation at a 1.2 to 1 ratio. As golden eagle take limits for all EMUs were determined to be zero (Service 2016), compensatory mitigation is necessary to offset any authorized take of golden eagles. The applicant will commit to retrofitting high-risk power poles proportional to the predicted and adjusted eagle take estimate as compensatory mitigation, for the loss of golden eagles as a condition of approval related to the IETP.

The Applicant will be required to monitor eagle fatalities using independent, third party monitors that report directly to the Service, according to protocols consistent with Service's national guidelines as outlined in the terms and conditions of the IETP. After the two-year interval, the Service will review the eagle mortality data and other pertinent information, as well as information provided by the Applicant and independent third-party monitors. The Service will assess whether the Applicant is in compliance with the terms and conditions of the permit and has implemented all applicable adaptive management measures specified in the IETP, and ensure eagle take has not exceeded the amount authorized within that time frame. We will update fatality predictions, authorized take levels and compensatory mitigation, as needed, for future years of the IETP. If authorized take levels for the period of review are exceeded in a manner or to a degree not addressed in the adaptive management conditions of the IETP, based on the observed levels of take using approved protocols for monitoring and estimating total take, the Service may require additional actions including but not limited to: adding, removing, or adjusting avoidance, minimization, or compensatory mitigation measures; modifying adaptive management conditions; modifying monitoring requirements; and suspending or revoking the IETP.

List of Abbreviations and Acronyms

EA	Environmental Assessment
ECP	Eagle Conservation Plan
EIS	Environmental Impact Statement
IETP	Incidental Eagle Take Permit
EMU	Eagle Management Unit
ESA	Endangered Species Act
LAP	Local Area Population
MBTA	Migratory Bird Treaty Act
MBCP	Migratory Bird Compliance Plan
NEPA	National Environmental Policy Act
PEIS	Programmatic Environmental Assessment

List of Preparers

Tomas Kamienski, Wildlife Biologist, NEPA coordination and analysis, USFWS
National Eagle Support Team (NEST), analysis, USFWS

References

- Avian Power Line Interaction Committee (APLIC). 2012. Reducing Avian Collisions with Power Lines: The State of the Art in 2012. October. Edison Electric Institute and APLIC. Washington, D.C. Available at: http://www.aplic.org/uploads/files/11218/Reducing_Avian_Collisions_2012watermarkLR.pdf
- Bald and Golden Eagle Protection Act (Eagle Act). 1940. 16 United States Code § 668–668d. June 8, 1940. Available at: <https://www.gpo.gov/fdsys/pkg/USCODE-2010-title16/pdf/USCODE-2010-title16-chap5A-subchapII-sec668.pdf>
- Chapman, S.S., S.A. Bryce, J.M. Omernik, D.G. Despain, J. ZumBerge, and M. Conrad. 2004. Ecoregions of Wyoming (color poster map, descriptive text, summary tables, and photographs). U.S. Geological Survey (map scale 1:1,400,000), Reston, Virginia. Available at: <https://uwdigital.uwyo.edu/islandora/object/wyu:130160>
- Dalthorp, D., M. M. P. Huso, and D. Dail. 2017. Evidence of absence version 2.0 software user guide. U.S. Geological Survey (USGS) Data Series 1055, Reston, Virginia, USA.
- Federal Register. Vol 81, 91494, December 16, 2016
- Sauer, J. R., D. K. Niven, J. E. Hines, D. J. Ziolkowski, Jr, K. L. Pardieck, J. E. Fallon, and W. A. Link. 2017. The North American Breeding Bird Survey, Results and Analysis 1966 - 2015. Version 2.07.2017 USGS Patuxent Wildlife Research Center, Laurel, MD
- United States Fish and Wildlife Service (Service). 2009. 50 C.F.R. 13 and 22. Eagle Permits; Take Necessary to Protect Interests in Particular Localities. 74 FR 46836. September 11, 2009. Available at: <https://www.fws.gov/policy/library/2009/E9-21589.pdf>
- U.S. Fish and Wildlife Service (Service). 2013. Eagle Conservation Plan Guidance. Module 1: Land-based Wind Energy Development. Version 2. April 2013. Available at: <https://www.fws.gov/migratorybirds/pdf/management/eagleconservationplanguidance.pdf>
- U.S. Fish and Wildlife Service (Service). 2016a. Programmatic Environmental Impact Statement for the Eagle Rule Revision. 81 FR 91494. December 16, 2016. Available at: <https://www.fws.gov/migratorybirds/pdf/management/FINAL-PEIS-Permits-to-Incidentally-Take-Eagles.pdf>
- United States Fish and Wildlife Service (Service). 2016b. Bald and Golden Eagles: Population demographics and estimation of sustainable take in the United States, 2016 update. Available at: <https://www.fws.gov/migratorybirds/pdf/management/EagleRuleRevisions-StatusReport.pdf>

- U.S. Fish and Wildlife Service. 2016c. U.S. Fish and Wildlife Service. 2016. Bald and Golden Eagles: Population demographics and estimation of sustainable take in the United States, 2016 update. Division of Migratory Bird Management, Washington D.C., USA.
- U.S. Fish and Wildlife Service (Service). 2020. Final Report: Bald Eagle Population Size: 2020 Update. U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C. U.S.A
- (USGS-PWRC) United States Geologic Survey-Putextent Wildlife Research Center. North American Breeding Bird Survey. 2020. Available at: <https://www.pwrc.usgs.gov/bbs/>