



U.S. Fish and Wildlife Service

**Environmental Assessment
for the Issuance of Two Incidental Eagle Take Permits for
Mountain Wind I and Mountain Wind II
Wind Energy Projects Uinta County, Wyoming**

Prepared by:

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

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Attachment A. Eagle Conservation Plan for the Mountain Wind I Wind Energy Project

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Appendix A. Eagle-Risk Analysis

Appendix B. Cumulative Effects Analysis

List of Acronyms

ACHP	Advisory Council on Historic Preservation
APLIC	Avian Power Line Interaction Committee
ACPs	Advanced Conservation Practices
BLM	Bureau of Land Management
BMPs	Best Management Practices
C.F.R.	Code of Federal Regulations
CRM	Collision Risk Model
EA	Environmental Assessment
ECP	Eagle Conservation Plan
ECPG	Eagle Conservation Plan Guidance
EIS	Environmental Impact Statement
EMU	Eagle Management Unit
ESA	Endangered Species Act
F.R.	Federal Register
IETP	Incidental Eagle Take Permit
LAP	Local Area Population
MBTA	Migratory Bird Treaty Act
met	Meteorological
MW	Megawatt
MW-I	Mountain Wind I Wind Energy Project
MW-II	Mountain Wind II Wind Energy Project
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	Nation Register of Historic Places
PEIS	Programmatic Environmental Impact Statement
SHPO	State Historic Preservation Office
TRC	TRC Mariah Associates, LLC
U.S.C.	U.S. Code
WGFD	Wyoming Game and Fish Department
WTG	Wind Turbine Generator

1 Introduction

This Environmental Assessment (EA) is prepared to analyze the environmental consequences of the U.S. Fish and Wildlife Service (Service) issuing two Incidental Eagle Take Permits (IETPs), or permits, for the take of bald (*Haliaeetus leucocephalus*) and golden (*Aquila chrysaetos*) eagles associated with the existing and operating Mountain Wind I (MW-I) and Mountain Wind II (MW-II) Wind Energy Projects (Projects), pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C. §§ 4321–4347). The Bald and Golden Eagle Protection Act (Eagle Act) allows the Secretary of the Interior to issue regulations to authorize the take of eagles for various purposes (16 U.S.C. §§ 668–668d; *see also*, 50 C.F.R. § 22.80). The Service promulgated its regulations governing take of wildlife and plants at 50 C.F.R. Chapter 1. Issuance of a permit by the Service for take that is incidental to otherwise lawful activities under the Eagle Act constitutes a discretionary Federal action that is 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 two IETPs.

The Service’s regulations allow the issuance of IETPs only when the take is compatible with the preservation of each eagle species, defined 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.” (50 C.F.R. § 22.6). Thus, the Service’s regulations authorize incidental take of eagles when take is associated with, but not the purpose of, an activity (50 C.F.R. § 22.80).

The Applicants, Mountain Wind Power, LLC, and Mountain Wind Power II, LLC, (individually, Applicant, and collectively, Applicants) are requesting Eagle Act and applicable Federal regulatory take coverage for operational activities associated with MW-I and MW-II (individually, Project, and collectively, Projects). The Projects are adjacent, located in Uinta County, Wyoming. Mountain Wind I consists of 29 Suzlon 2.1-megawatt (MW) turbines and associated infrastructure (e.g., roads, transmission lines), has a 60.9 MW total output, and has been operating since July 2008. Mountain Wind II consists of 38 Suzlon 2.1-MW turbines and associated infrastructure, has a 79.8 MW total output, and has been operating since September 2008. The expected life of each Project is 30 years. The Applicants submitted 5-year IETP applications for MW-I and MW-II to the Service on July 12, 2017, and two amended applications on March 20, 2023, requesting the maximum 30-year permits under the Service’s 2016 Eagle Rule regulations (*see* 50 C.F.R. § 22) rather than under the newly published 2024 regulations. The Applicants also submitted two Eagle Conservation Plans (ECPs) (Attachments A and B) in support of the applications.

The Applicants are requesting two IETPs, one for each Project, for the take of up to 0.01 bald eagles and 0.6 golden eagles annually, over the 30-year permit, at MW-I and for the take of up to 0.01 bald eagles and 2.81 golden eagles annually, over the 30-year permit, at MW-II. This EA evaluates whether issuance of the IETPs will have significant impacts on the existing human environment. “Significance” under NEPA is defined at 40 C.F.R. § 1501.3 and requires

consideration of the potentially affected environment and the degree of effects to that environment.

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 2016c). The PEIS is incorporated herein by reference, and this EA is tiering to the PEIS (40 C.F.R. § 1508.1(ff)). Project-specific information not considered in the PEIS will be considered in this EA as described below.

1.1 Purpose and Need

The Service's purpose in considering the proposed action (*see infra*, Chapter 2) is to fulfill our authority under the Eagle Act and its implementing regulations by issuing two IETPs for eagle take while ensuring the conservation of bald and golden eagles. 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 or Federal regulations. Under Federal 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. § 22.80(e)(2)(iv)). 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* 50 C.F.R. pt. 22. The preservation standard under the Service's regulations means to be "consistent with the goals of maintaining stable or increasing breeding populations of bald and golden eagles in all eagle management units and the persistence of local populations throughout the geographic range of each species" (50 C.F.R. § 22.6).

The need for the Service's proposed action is to respond to the Applicants' IETP applications for incidental take of bald and golden eagles resulting from the operation of the Projects. The decision must comply with all applicable statutory and 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 U.S.C. §§ 668–668e) and the Service's regulations (50 C.F.R. pt. 22). The PEIS (Service 2016c) 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 Projects, fully operational as of 2008, are in Uinta County, Wyoming, approximately 20 miles (32 kilometers) east of Evanston, Wyoming (Figure 1). The ECPs provide an overview of the environmental setting for the Projects. The Projects are separately owned and permitted projects that independently contract with Clearway to operate both Projects. The Applicants submitted amended applications for an IETP for each Project in March 2023 pursuant to 50 C.F.R. § 22 and are requesting IETPs for a 30-year period.

Mountain Wind I consists of 29 Suzlon S88/2100 2.1-MW wind turbine generators (WTGs) with a 144-foot (44 meter) rotor radius and 262-foot (80 meter) hub height (total height of 407 feet (124 meters) to fully extended blade tip). The total nameplate capacity for MW-I is 60.9 MW. Mountain Wind I also includes approximately 11 miles (18 kilometers) of underground collector lines and approximately 10 miles (16 kilometers) of turbine access roads (Figure 2).

Mountain Wind II consists of 38 Suzlon S88/2100 2.1-MW WTGs with a 144-foot (44 meter) rotor radius and 262-foot (80 meter) hub height (total height of 407 feet (124 meters) to fully extended blade tip) with a total nameplate capacity of 79.8 MW. Mountain Wind II includes approximately 6 miles (9 kilometers) of underground collector lines and approximately 9 miles (15 kilometers) of turbine access roads (Figure 2).

The Projects each have their own permanent meteorological (met) tower, and share one access road and parking lot, substation, and generation transmission line (gen-tie line), and an operations and maintenance building. The above ground gen-tie line was constructed following the publication of the Avian Power Line Interaction Committee (APLIC) guidelines (2006).

As a commitment to the protection and conservation of bald and golden eagles, the Applicants have developed an ECP for each Project (Attachments A and B, incorporated herein by reference). Each Project's ECP is the foundation for each IETP application. The Project-specific ECPs were written in coordination with the Service and follow the Eagle Conservation Plan Guidance (ECPG) titled *Recommended Approach for Development and Submission of Eagle Conservation Plans submitted to Region 6, Migratory Management Office in support of an Eagle Incidental Take Permit Application for Wind Energy Project* (Service 2019). The ECPs document how the Projects' siting, design, and planned operation will accomplish (or are 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.

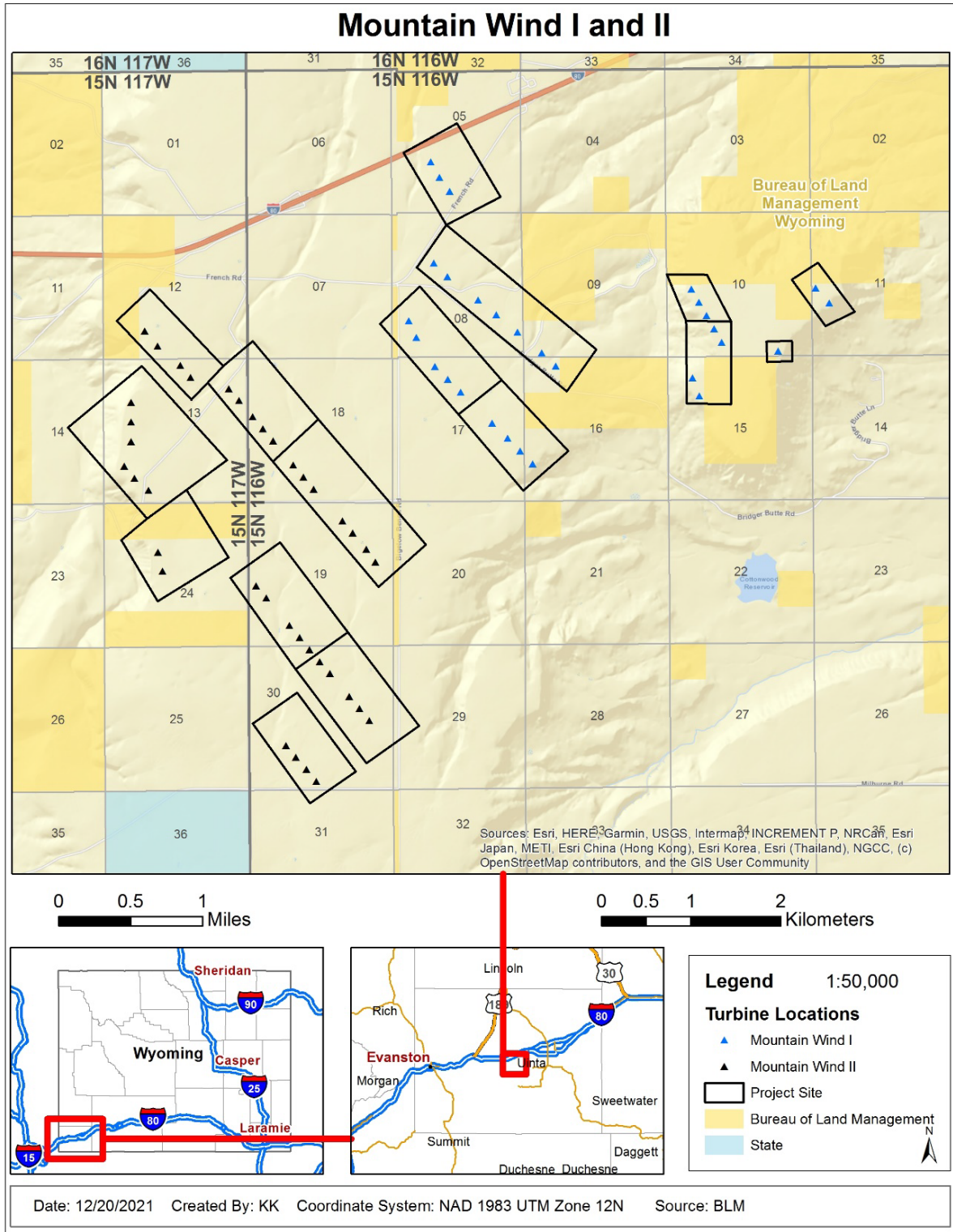


Figure 1. Location of the Mountain Wind I and Mountain Wind II Wind Energy Projects, Uinta County, Wyoming.

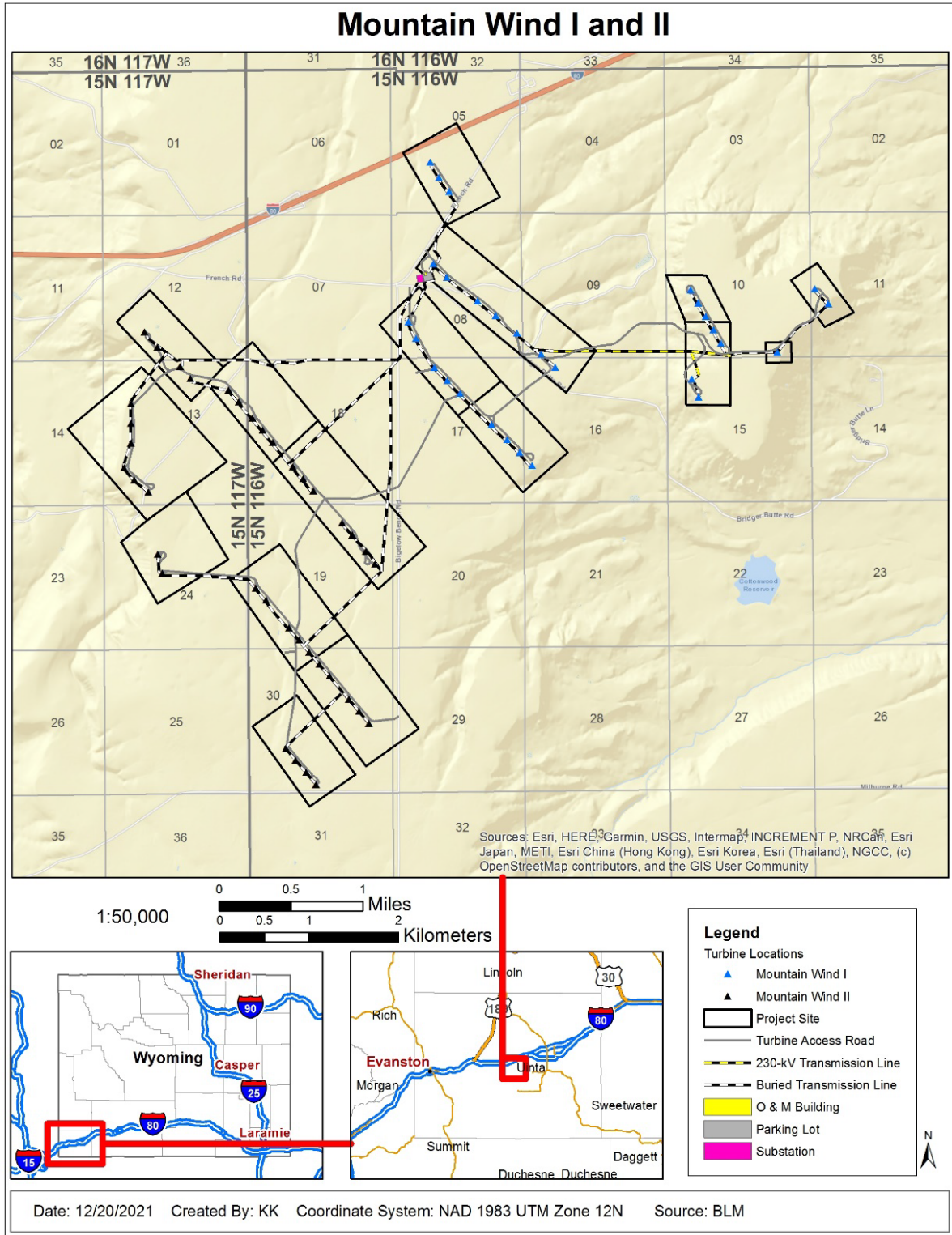


Figure 2. Infrastructure in Mountain Wind I and Mountain Wind II Wind Energy Projects, Uinta County, Wyoming.

1.4 Scoping, Consultation, and Coordination

This EA incorporates, by reference, the scoping performed for the PEIS (Chapter 6, page 175). The Applicants worked with the Service to develop the ECPs in support of their applications to avoid, minimize, and mitigate adverse effects on eagles.

Prior to permitting and constructing the Projects, the Applicants contacted the Wyoming Game and Fish Department (WGFD) in 2004 to discuss the Projects and any potential wildlife concerns. In 2007, Mountain Wind Power, LLC also worked with biologists from the Bureau of Land Management (BLM) to address potential impacts related to overhead lines. After the Projects were operational and beginning in 2012, the Applicants have been in regular communication with the Service regarding the Projects and impacts to eagles.

Communication with the Service has included numerous phone calls, e-mails, site visits, and in-person meetings. Protocols for biological monitoring (biomonitoring) and standardized eagle mortality monitoring have been developed in coordination with the Service and recommendations from the Service to reduce impacts to eagles have been implemented (e.g., informed curtailment, restricting domestic sheep (sheep; *Ovis aries*) grazing in the Projects, implementing carcass removal, and retrofitting overhead lines). The Applicants intend to coordinate with the Service throughout the eagle permit process. In addition, the Applicants intend to continue working with the Service to avoid and minimize impacts to migratory birds. The Applicants are committed to operating the Projects in an environmentally responsible manner, have and will continue to minimize potential impacts on the environment, and have and will continue to work with the Service to avoid and minimize impacts to bald and golden eagles and other migratory birds at the Projects.

1.4.1 Tribal Coordination and Public Comment Period

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. These Projects occur in the Central Flyway. At the time the draft EA was made available for the 30-day public comment period, we contacted eleven native sovereign nation tribal leaders of Tribes potentially affected by these Projects via email, with an attached formal letter, and offered 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 applications and preparation of the draft EA by the Service.

The Service published the draft EA on May 23, 2023, opening a 30-day public comment period which ended on March 10, 2023. We did not receive any comments or requests for Tribal consultation from any Tribes during the public review period. We received one letter from the Wyoming Game and Fish Department (WGFD) containing comments and recommendations during the public review period. The WGFD comments were regarding whether the cost cap would adequately serve to minimize impacts to eagles, why the appendices are missing from the EA, and why permit conditions are not included in the EA. A response to comments and recommendations was provided by the Service. It has been determined that there is no new significant information, and the Service has prepared this FONSI in accordance with NEPA regulations (40 C.F.R. § 1508.13). Coordination with tribal governments is an ongoing process (*see* Exec. Order No. 13175 for details on consultation and coordination policy). If the Service

issues two 30-year IETPs to the Applicants and the Applicants choose to apply for new permits when the IETPs expire, 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 0.01 bald and 0.60 golden eagles annually (for a total authorized take of up to 1 bald eagle and 18 golden eagles over the life of the 30-year IETP) with associated conditions, at MW-I as allowed by regulation. We propose to issue a 30-year IETP to take up to 0.01 bald and 2.81 golden eagles annually (for a total authorized take of up to 1 bald eagle and 85 golden eagles over the life of the 30-year IETP) with associated conditions, at MW-II as allowed by regulation. The Applicants 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 ECPs; and Avoidance and Minimization, Eagle Conservation Measures, Post-Construction Monitoring, and Adaptive Management sections of this EA and in the ECPs.

2.1.1 Compensatory Mitigation

Both Projects were operational prior to the final Service regulations, *see* 50 C.F.R. pt. 22; therefore, these Projects do not require compensatory mitigation for an IETP. Compensatory mitigation is required for any permitted take above baseline levels. Baseline population size and take levels were calculated in 2009; therefore, any take that was occurring before this time is included as part of the baseline and does not need to be mitigated. If the Applicants repower the Projects during the 30-year permit period, a new take estimate will be calculated, and the permit will be amended to require compensatory mitigation for any take above the current estimated levels.

2.1.2 Eagle Conservation Measures

To mitigate the risk to the golden eagle nest (Nest #30) adjacent to the Projects, and any future nests that may be built within two miles of the Project boundaries, the Service will require as a condition of a permit (if issued), that the following curtailment measures be implemented at the Projects for the entire duration of the permit, unless formally determined otherwise by the Service:

a. Seasonal curtailment during the golden eagle breeding and nesting season of all wind turbines within a 2-mile distance of all occupied (activity observed at the nest in the last 5 years) golden eagle nests. Specifically, wind turbines within the 2-mile buffer will be diurnally curtailed each year from sunrise to sunset, starting on January 15 and continuing through August 31, or until (1) May 1 if the golden eagle nest is determined to be not in use that year, (2) when the young fledge are no longer dependent on the nest, or (3) until the nest fails (becomes inactive). Nest status will be determined by surveys conducted by a third-party qualified biologist and will follow the Service's Region 6, Recommended Protocol for Conducting Pre-construction Eagle Nest Surveys at Wind Energy Projects (2021). Survey efforts need to be clearly identified to determine courtship and nesting behavior associated with a specific nest.

OR

b. Informed curtailment during the eagle breeding and nesting season (January 15 and continuing through August 31). Specifically, all wind turbines within a 2-mile distance of all occupied (activity observed at the nest in the last 5 years) golden eagle nests will obtain 100 percent coverage by using biological observers or autonomous curtailment. No cost restrictions will apply. Survey efforts to determine the status of each golden eagle nest will be conducted by a third-party qualified biologist and will follow Service's Region 6, Recommended Protocol for Conducting Pre-construction Eagle Nest Surveys at Wind Energy Projects (2021).

2.1.3 Post-Construction Mortality Monitoring

The Applicants will conduct post-construction mortality monitoring for all years of the permit including an intensive monitoring effort for the first two full years after the IETPs are issued, as part of the conditions 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 the Adaptive Management Plan. 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 sites. Fatality estimates would be updated to reflect Project-specific conditions. Annual monitoring reports will be prepared within three months of completing each year of post-construction monitoring required by the IETPs, with each report including all raw monitoring data upon which the reports are based and cumulative results of post-construction monitoring performed to date. Additionally, any bald or golden eagle found injured or dead 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.

2.1.4 Adaptive Management

The Applicants have developed Adaptive Management Plans 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 ECPs). The stepwise process identified in the ECPs 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, the Service would deny the permit applications and not issue two IETPs. 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 (MBTA), or the Eagle Act disqualifies any such person from receiving or exercising the privileges of a permit).

The no action alternative analyzes predictable outcomes of the Service not issuing two IETPs. Under the no action alternative, the Projects would likely continue to operate without IETPs being issued. Thus, for purposes of analyzing the no action alternative, we assume that the

Applicants will continue to implement all measures required by other agencies and jurisdictions to operate the Projects, but the conservation measures proposed in the IETP application packages (that have not already been implemented by the Applicants) would not be implemented.

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

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. The pre-construction and post-construction surveys that provide eagle data for the Projects are summarized below. It is important to note the Projects were 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 pre-construction surveys and methodologies not followed at the Projects.

3.1 Bald Eagles

General information on the taxonomy, ecology, distribution, and population trends of bald eagles is given in Section 3.2.1 of the PEIS (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 Projects occur (Central Flyway), the Local Area Population (LAP) (within 86 miles [138 kilometers] of the Projects) (Figure 3), and the area of the Projects (the actual footprint of the Projects and an associated 1.0-mile [1.6-kilometer] buffer for pre-construction surveys and an associated 2.0- to 2.5-mile [3.2- to 4.0-kilometer] buffer for post-construction surveys). The estimated median population size of bald eagles in the Central Flyway EMU is 30,427 (Service 2020). Based on the Service's process to calculate the LAP, the population size of the combined LAP for MW-I and MW-II is estimated to be 62 bald eagles. In addition to the summary below, survey efforts for bald eagles and their nests are discussed in detail in the ECPs (Attachments A and B).

3.2 Golden Eagles

General information on the taxonomy, ecology, distribution, and population trends of golden eagles is given in Section 3.3.1 of the PEIS (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 Projects occur (Central Flyway), the LAP (within 109 miles [175 kilometers] of the Projects) (Figure 3), and the Project areas (the actual footprint of the Projects and an associated 1-mile buffer for pre-construction surveys and an associated 2.0- 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 2016a). Based on the Service's process to calculate the LAP, the population size in the LAP is estimated to be 832 golden eagles.

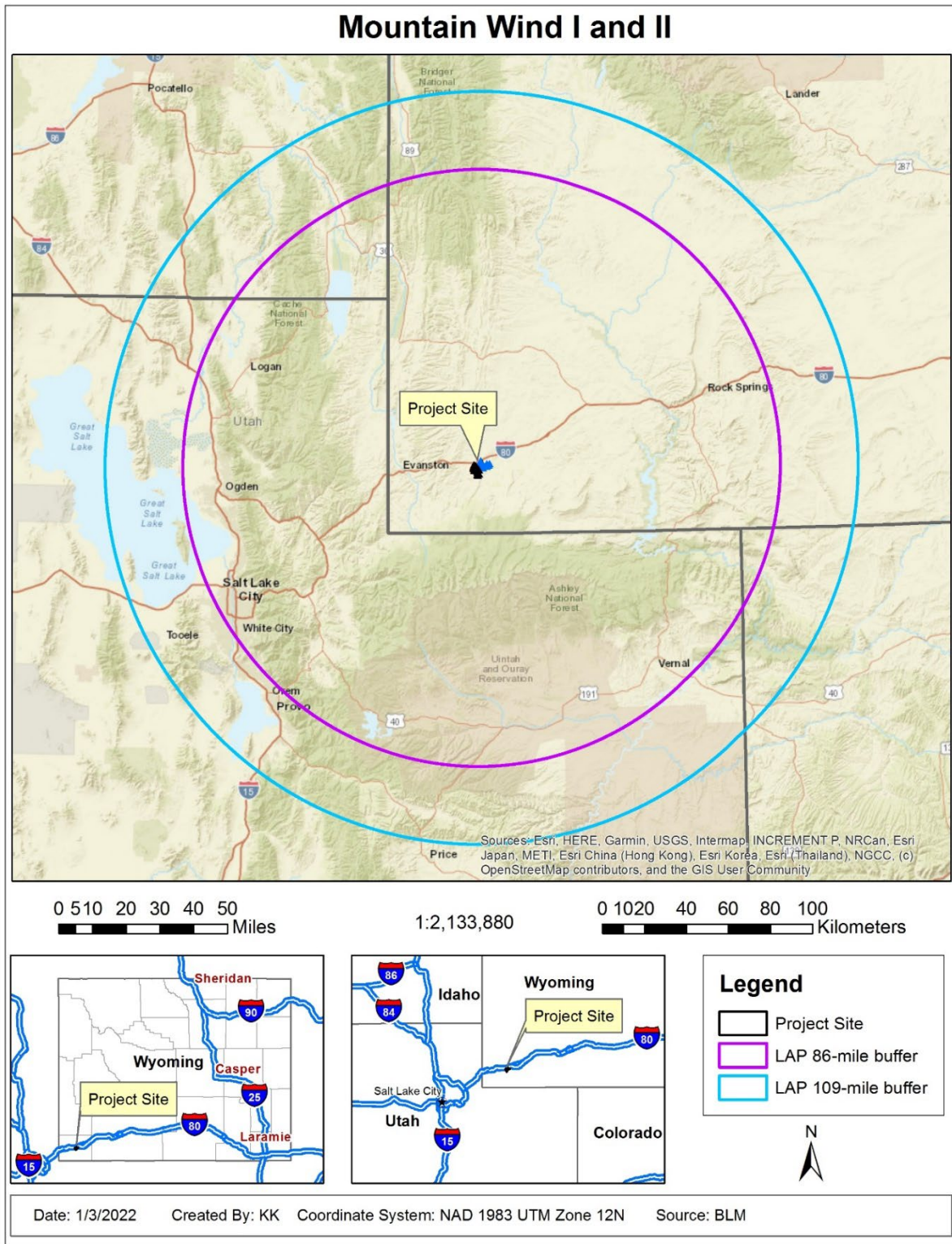


Figure 3. Local Area Population Boundaries for the Mountain Wind I and Mountain Wind II Wind Energy Projects, Uinta County, Wyoming.

3.3 Current and Past Adaptive Management

The Applicants, as part of their Adaptive Management Plans, have implemented monitoring of eagles (biomonitoring) and curtailment of wind turbines at the Projects since July of 2014. Biomonitoring and curtailment efforts are still ongoing and the methods are described in detail below. Post-construction monitoring and raptor nest surveys have been conducted to inform Adaptive Management Plans.

Additional measures that have been implemented include:

- Agreement with local landowners to restrict sheep from grazing during lambing on the Projects has been adopted based on recommendations from Service.
- A notification system to the Range Rider to remove any sheep, alive or dead, from the Projects has been adopted based on recommendations from Service to restrict sheep from grazing during lambing on the Projects.
- A carcass removal program was developed and implemented in coordination with WGFD to minimize carrion that could attract eagles.

3.3.1 Eagle Biological Monitoring

To reduce the likelihood of eagle mortality due to collision with a wind turbine, eagle biomonitoring efforts at the Projects began in July 2014 and are currently ongoing. Initially, a full-time observer (biomonitor) watched for eagles, and if observed, the closest turbines were curtailed. This is considered an experimental advanced conservation practice (ACP) that is consistent with the ECPG (Service 2013). One biomonitor roamed the Project areas to search for eagles. In coordination with the Service, a protocol change (Revision 2) occurred in December of 2015 to standardize the methods and observation data. The protocol implemented two biomonitors that watched for eagles at fixed observation locations. Biomonitors were directed to conduct most of their observations from these locations unless eagle activity necessitated otherwise or if site and road conditions restricted access to the primary observation stations. Biomonitors also collected eagle flight path and perch location data to assist in assessing the level of use and temporal or spatial use patterns in the Project areas. In June of 2016, a third revision to the biomonitoring protocol occurred; biomonitors only watched for eagles at the fixed observation locations and did not collect flight path and perch location data.

An autonomous eagle detection and WTG curtailment system (IdentiFlight) was deployed at MW-II and MW-I in 2020 and 2021, respectively (Figure 4). The IdentiFlight system is an automated eagle detection and curtailment system that consists of a series of towers equipped with a camera system that constantly monitors the airspace within approximately 5,250 feet (1,600 meters) of an IdentiFlight tower. The IdentiFlight towers use computer vision algorithms to detect and identify bald and golden eagles with high accuracy. The IdentiFlight towers are integrated into the Supervisory Control and Data Acquisition (commonly, SCADA) system for the Projects, which enables them to automatically initiate and conclude turbine curtailments based on observed eagle flight paths.

In 2022, a fourth revision to the biomonitoring and curtailment protocol was finalized in consultation with the Service using the IdentiFlight system. Eagle monitoring is done by the IdentiFlight system and one biomonitor at a newly constructed observation tower (Figure 4). Four IdentiFlight towers monitor and control curtailment for 16 turbines at MW-II and four IdentiFlight towers monitor and control 10 turbines at MW-I. The one biomonitor is stationed at an observation tower constructed and located to maximize eagle detection for both MW-I and MW-II turbines that are not monitored and curtailed by the IdentiFlight system. An observer is stationed in the tower and provided binoculars, a spotting scope, and a detailed map of MW-I and MW-II showing relevant distances around the turbines. Observers also have access to the IdentiFlight system dashboard on a desktop computer. This enables them to monitor eagle activity occurring on the perimeter of the Projects and maintain awareness of all automated curtailments and eagle activity near the Projects. Additional information regarding biomonitoring and curtailment at the Projects is available in the Applicants' Biological Monitoring and Curtailment Protocol (Appendix C of Attachments A and B).

3.4 Pre-construction Surveys

Prior to permitting and constructing the Projects, WGFD was contacted in 2004 to discuss the Projects and any potential wildlife concerns. Additionally, in 2004, TRC Mariah Associates, LLC conducted pre-construction surveys for raptor nests, special status species (identified as threatened, endangered, proposed, or candidate species, and BLM sensitive species), greater sage-grouse (*Centrocercus urophasianus*) leks, greater sage-grouse habitat use, and big game habitat use. These surveys were conducted at both Projects. Because the pre-construction surveys occurred prior to 2013, the ECPG (Service 2013) and the 2016 Final Eagle Rule (Service 2016b) were not available to guide the survey methods. Results from the pre-construction surveys are further discussed in the bald and golden eagle sections and in the Applicant's ECPs (Attachments A and B).

The Applicants also worked with biologists from the BLM to address potential impacts related to overhead lines in 2007. After the Projects were operational and beginning in 2012, the Applicants have been in regular communication with the Service regarding the Projects and impacts to eagles.

3.5 Post-Construction Surveys

After documenting eagles at the Project sites using the Wildlife Incident Reporting Procedure, the Applicants contracted with Western EcoSystems Technology, Inc. to conduct post-construction surveys. The post-construction surveys that provide eagle data for the Projects include eagle biomonitoring, standardized eagle mortality monitoring, and eagle nest surveys.

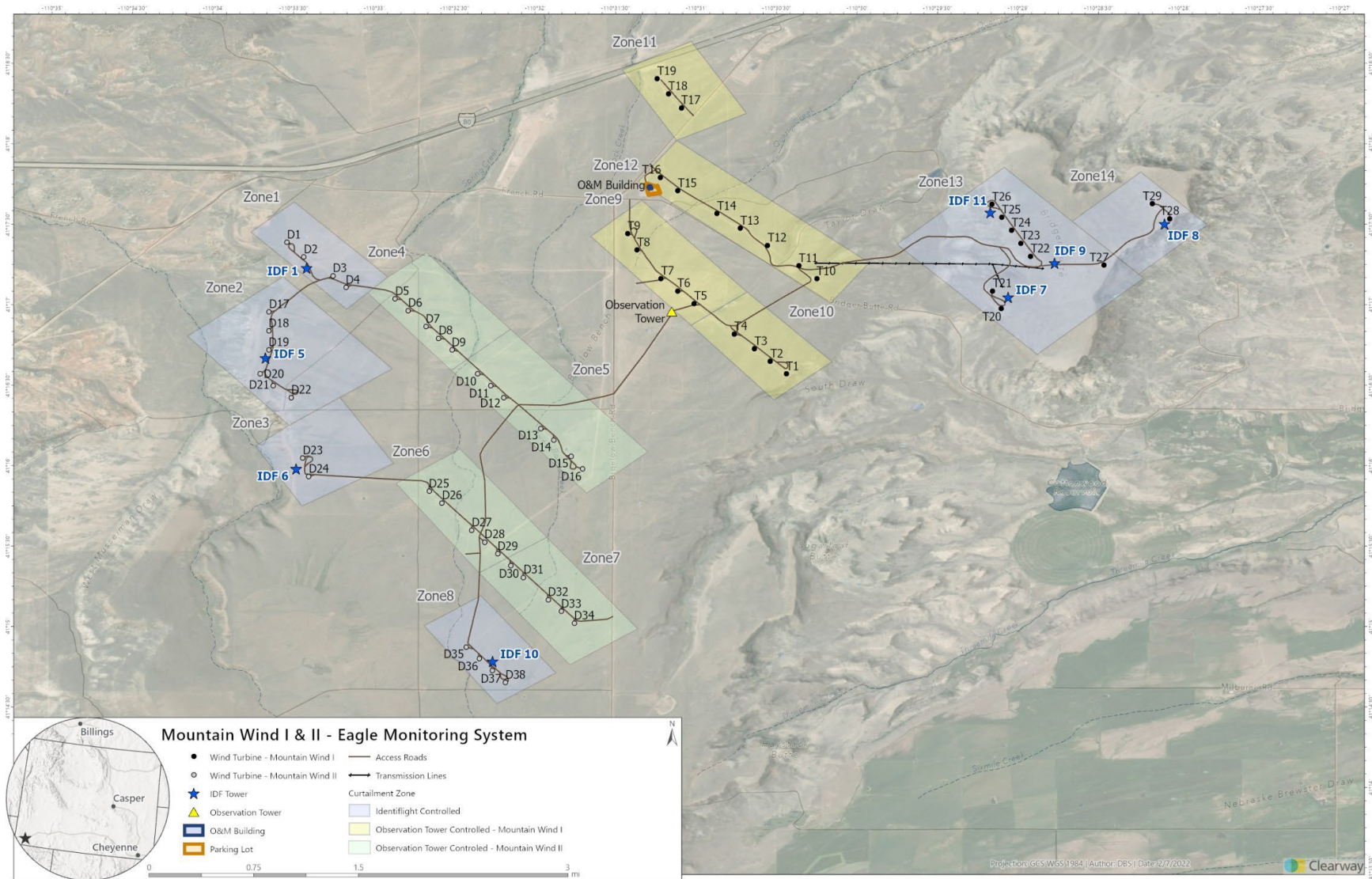


Figure 4. Location of the observation tower and the eight Identiflight towers at the Mountain Wind I and Mountain Wind II Wind Energy Projects, Uinta County, Wyoming.

3.5.1 Mortality Monitoring

In coordination with the Service, two years (June 2016 through May 2018) of standardized eagle mortality monitoring were implemented at the Projects to provide a means of measuring the amount of eagle take that occurs. Mortality monitoring included searching 100% of the turbines once a month by walking transects spaced approximately 30 feet (10 meters) apart within a 160 x 160-meter (525 x 525 foot) search plot. In addition to the searches, experimental bias trials were conducted to allow for estimation of carcass persistence (how long a carcass remains to be detected) and searcher efficiency (the ability of searchers to detect carcasses). Protocols for the standardized eagle mortality monitoring were developed with and approved by the Service. Protocols, final reports, and the data have been provided to the Service.

It should be noted that standardized mortality monitoring was conducted while the Projects were implementing the best management practices (BMPs) and experimental ACPs described in the avoidance and minimization measures section of the ECP.

3.5.2 Eagle Nest Surveys

During the 2018 nesting season, two qualified biologists and a pilot conducted two aerial eagle nest surveys from a helicopter. The purpose of the surveys was to identify nest locations, determine the status and species of nests, and to assess the size of the nest structure to help inform whether the nest is potentially suitable for use by an eagle. The survey area was defined as a 10-mile buffer established around existing turbine locations, an area of approximately 462 square miles (1,197 square kilometers) (Figure 5). The first survey was completed February 26-27, and the second survey was completed May 1-3. The surveys were timed to target the courtship and mid-incubation periods, respectively, for eagles in the region. Surveys involved a comprehensive search of all suitable eagle nesting habitat (e.g., cliffs, large trees, rocky outcrops), and flying transects over areas without obvious nesting habitat to ensure complete coverage of the survey area. All eagle and potential eagle nests detected within the survey area were recorded.

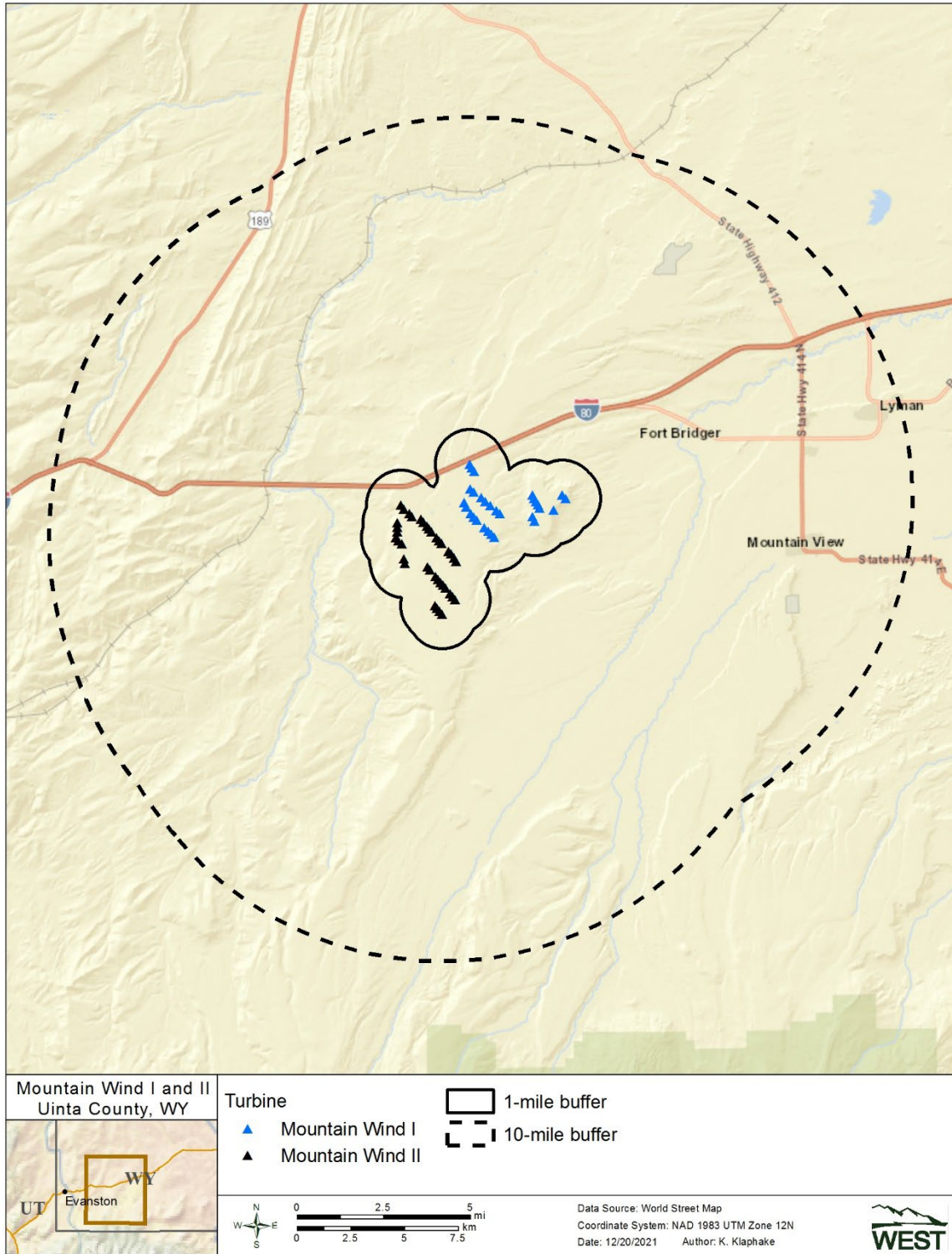


Figure 5. Map of the raptor nest 1-mile and 10-mile survey buffer areas surrounding the Mountain Wind I and Mountain Wind II Wind Energy Projects, Uinta County, Wyoming.

3.6 Bald Eagle Survey Results

3.6.1 Post-Construction Survey Results

Overall, from July 2014 through November 2016, approximately 16,974 hours of survey effort were conducted during biomonitoring efforts. From December 2015 through November 2016, after implementation of the four, fixed primary observation stations, approximately 10,195 hours of survey effort were conducted. The results present a summary of the eagle use data through November of 2016, which includes one full year of observational eagle use data collected primarily from the fixed observation locations.

The eagle biomonitoring from July 2014 through November 2016 resulted in 284 bald eagle observations. Biomonitoring from four, fixed primary observation stations from December 2015 through November 2016 yielded 164 bald eagle observations resulting in overall mean bald eagle use of approximately 0.02 bald eagles/800 m (2,625 ft) plot/60-minute survey. An analysis of temporal patterns in eagle use based on the data from December 2015 through November 2016 suggest that bald eagle use appeared variable throughout the day, with the highest use occurring from approximately 0900 to 1700 hours. Seasonally, mean bald eagle use was highest in the winter season peaking in February and March.

3.6.2 Mortality Monitoring Results

During the 2-year standardized mortality monitoring study, there were no bald eagles discovered at either of the Projects, either incidentally or during standardized searches, from June 6, 2016, through May 23, 2018. Additionally, no bald eagles were discovered incidentally before or since the two years of standardized searches.

3.6.3 Nest Survey Results

The aerial raptor nest survey was completed on April 20, 2004, and the ground-based surveys were completed on April 21 and 22, 2004. No bald eagle nests are indicated to occur within the area of the 2004 surveys.

During the 2018 nest survey, two occupied and active bald eagle nests were recorded within the survey area. Both nests are well outside of the recommended 2-mile buffer between turbine locations and eagle nests (5 and 6 miles from the nearest turbines).

3.7 Golden Eagle Survey Results

3.7.1 Post-Construction Survey Results

Overall, 12,287 golden eagle observations were recorded during approximately 16,974 hours of biomonitoring effort from July 2014 through November 2016. Biomonitoring at the four, fixed primary observation stations from December 2015 through November 2016 resulted in approximately 10,195 hours of biomonitoring effort and 4,975 golden eagle observations. This results in an overall mean eagle use of approximately 0.50 golden eagles/800-meter plot/60-minute survey at the four primary observation stations.

An analysis of temporal patterns in eagle use based on the data from December 2015 through November 2016 suggests that golden eagle use generally peaked in the middle of the day with

the highest use occurring from 1100 to 1600 hours. Seasonally, mean golden eagle use (number of golden eagles/hour/within an 800-meter radius and flying lower than 200 meters) started to increase in October, although use was highest in the winter season (January through March).

3.7.2 Mortality Monitoring Results

During the 2-year standardized mortality monitoring study (June 6, 2016, through May 23, 2018) at MW-I, there were no golden eagles discovered incidentally or during standardized searches. However, there were six golden eagles discovered prior to the start of the standardized study and three golden eagles were discovered after the completion of the 2-year study. One additional golden eagle was found incidentally in May of 2023, though the condition of the remains (bones and some feathers) suggests that it was on the landscape for an extended time (See Table 3 of the MW-I ECP for more details on dates and locations of all fatalities).

At MW-II, four golden eagles were discovered incidentally (not during standardized searches) between June 6, 2016, through May 23, 2018. Prior to the start of the standardized surveys, five golden eagles were discovered. After the completion of the 2-year study, in June of 2018, two golden eagles were discovered during ongoing standardized searches. One additional golden eagle was found incidentally in March of 2022 (See Table 3 of the MW-II ECP for more details on dates and locations of all fatalities).

3.7.3 Nest Survey Results

The aerial raptor nest survey was completed on April 20, 2004, and the ground-based surveys were completed on April 21 and 22, 2004. There were no eagle nests identified during surveys. Two historic golden eagle nests from the BLM database were not located during the aerial or ground surveys in 2004; however, a pair of eagles was observed hunting in the vicinity.

During the 2018 nest survey, 72 eagle or potential eagle nests were identified within the survey area. Of those, five nests were occupied and active golden eagle nests and seven were occupied, but inactive. There was one additional occupied inactive golden eagle nest (Nest ID #2) located outside the survey area. One occupied golden eagle nest (Nest ID #30) is within two miles of several turbines. Maps of nest locations are found in the ECPs (Attachments A and B).

Based on recommendations from the Service, Nests #29, #30, #41, #55, and #80 (all within two miles of turbines) were visited from the ground on March 28, 2023. Nest #30 was identified as occupied and active with an adult golden eagle sitting in the nest. Nest #29 was also located but there was no evidence of occupancy observed at the nest. Nests #41, #55, and #80 were not located. In 2018, Nest #55 was identified as being a poor condition tree nest and Nest #80 was identified as being a fair condition tree nest. Observable trees and brush did not have obvious nests or anything resembling old nests during the 2023 nest check. Nest #41 was identified as a poor condition nest with a rock substrate in 2018. Due to the amount of snow cover present during the 2023 nest check, it is possible that this nest was under snow and unobservable.

3.8 Migratory Birds

General information on migratory birds protected under the MBTA is discussed in Section 3.5.1 of the PEIS (Service 2016c, pages 97–98) and is incorporated by reference herein. Species most

likely to be affected by our permit decisions evaluated for these Projects are those that might benefit from the mitigation options developed in the ECP. Additionally, each Project has a MBTA 21.27 Special Purpose Utility permit, and no further analysis will occur.

3.9 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 EA.

On February 20, 2024, the Service initiated an intra-service Section 7 consultation for the issuance of two IETPs for the Projects (Attachment C). It was determined that issuance of IETPs for the Projects will have “no effect” on eight federally listed species: Ute ladies’-tresses (*Spiranthes diluvialis*), the western U.S. distinct population segment of the yellow-billed cuckoo (*Coccyzus americanus*), North American wolverine (*Gulo gulo luscus*), monarch butterfly (*Danaus plexippus*; currently a candidate for federal listing), and four fish species: bonytail chub (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and razorback sucker (*Xyrauchen texanus*).

Our decision regarding the IETPs will not alter the physical footprint of the Projects 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 to issue the IETPs.

3.10 Cultural and Socio-economic 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 consider 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 C.F.R. § 60.4.

No new ground-disturbing activities will occur as part of or related to issuing two IETPs. Eagles can be considered a feature or element of a Traditional Cultural Property (TCP) pursuant to Federal regulations (50 C.F.R. pt. 22.22). 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. The IETP will include permit conditions to ensure all recoverable eagle remains, parts, and feathers are sent to the National Eagle Repository and

could then be used for Native American cultural and religious purposes. In addition, some Tribes and tribal members may consider eagle nests sacred sites (or TCPs) or potential historic properties of religious and cultural importance, as provided for in the American Indian Religious Freedom Act (42 U.S.C. § 1996). Section 1.4.1 described 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 IETPs for these Projects.

3.11 Climate Change

Climate change was considered in the PEIS (Service 2016c; Section 3.9, page 144) and is incorporated herein by reference. The proposed action, of issuing two IETPs, will have no direct impact on climate change. The Projects are existing and currently operational. They will likely continue to operate regardless of the decision on whether to issue the IETPs.

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 2016c). This section of this EA analyzes only the effects that were not analyzed in the PEIS that may result from the issuance of the IETPs for these specific Projects.

4.1 Proposed Action

In determining the significance of effects of the Projects on eagles, we screened the proposed action against the analysis provided in the PEIS (Service 2016c) and the Service's 2016 report, "Bald and Golden Eagles: Population Demographics and Estimation of Sustainable Take in the United States" (Service 2016a). We also used our eagle-risk analysis (Service 2013, Appendix A), and Cumulative Effects Analysis (Service 2013; Appendix B) to quantify eagle fatality risk and cumulative LAP-level effects.

Under the proposed action, we estimate that up to 0.01 bald eagles could be taken annually at MW-I and up to 0.01 bald eagles could be taken annually at MW-II (up to one bald eagle at each Project over the life of the permits). Taken together, this Project's take with overlapping take of the other projects could result in a total annual take of 0.03 bald eagles (or 0.05% of the LAP). The impacts to bald eagle populations at both the LAP and EMU scales are, therefore, not significant.

Under the proposed action, we estimate that 0.60 golden eagles could be taken annually at MW-I and 2.81 golden eagles could be taken annually at MW-II (for a total authorized take of up to 18 golden eagles over the life of the 30-year permit at MW-I and 85 golden eagles over the life of the 30-year permit at MW-II). As the Projects were operational prior to the final Service regulations, *see* 50 C.F.R. pt. 22, any take occurring at this facility is considered part of the baseline level of take, and therefore the Projects do not require compensatory mitigation for the IETPs.

Given these estimates, the proposed action is consistent with 50 C.F.R. § 22.80(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.”

4.1.1 Estimating Eagle Fatalities

The Service’s CRM uses pre-construction eagle use of a wind facility (eagle exposure), the probability that an eagle collides with a turbine (collision probability), and the hazardous space of a wind facility operating during daylight hours (expansion factor) to estimate the annual number of eagle fatalities at a wind facility. These parameters are modeled in a Bayesian framework where uncertainty surrounding eagle exposure and collision probability are defined by national prior-probability distributions (priors) for each parameter. Wind facility-specific pre-construction use and post-construction mortality monitoring data can be used to update these priors, improving estimates of annual eagle fatalities at a wind facility. The expansion factor may also be adjusted based on applicant-provided operational daylight hour data collected during monitoring years (New et al. 2015).

We then used the Evidence of Absence (EoA) program (Dalthorp et al. 2017) to estimate eagle fatalities at the Projects during the years that mortality monitoring occurred. Evidence of Absence estimates the total eagle mortality from the number of fatalities detected, the total area searched where fatalities could have been found, search frequency, and data from searcher efficiency and carcass persistence trials. This estimate accounts for biases from imperfect searcher efficiency, unsearched areas, and carcass removal rates. The post-construction fatality estimate was used to update collision probability in the Service’s CRM with site-specific information.

Under current Service policy, projects that conduct robust post-construction monitoring are eligible to be permitted at the mean annual estimate for golden eagles; therefore, golden eagle fatality estimates presented in this document represent the mean annual fatality estimates for each species. Bald eagle fatality estimates presented in this document represent the 60th quantile.

4.1.2 Estimating Bald Eagle Take

Under the proposed action, we estimate that up to 0.01 bald eagles could be taken annually at MW-I and up to 0.01 bald eagles could be taken annually at MW-II, over the life of the IETPs (i.e., thirty years). This number is multiplied by the number of years in the permit term (thirty years) and rounded up to the next whole number (for a total authorized take of up to 1 bald eagle over the life of the 30-year permit at MW-I and 1 bald eagle over the life of the 30-year permit at MW-II). These estimates are based on a conservative approach that is expected to overestimate annual and cumulative take at the outset of the IETPs. We anticipate these estimates will decrease as we incorporate Project-specific monitoring data into the estimates as part of the IETP’s adaptive management process. 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 above and in the ECPs, will be used to guide the implementation of conservation measures as needed, and apply before actual take exceeds the permitted take levels.

The eagle fatality monitoring associated with this alternative will be determined by the Service (e.g., evaluating all turbines during a monitoring year) which will allow the Service to estimate

the total number of annual eagle fatalities at each Project. Monitoring is a critical component of adaptive management. Together, these conservation measures ensure there will be no significant impacts to bald eagles. The take of bald eagles that would be authorized by these IETPs does not exceed the EMU take limit; therefore, compensatory mitigation for bald eagles is not required.

Under the proposed action, the Service may formally determine that the Applicants may reduce or eliminate the biomonitoring and curtailment program, provided that take remains below the permitted level and that there are no active eagle nests requiring monitoring and curtailment. The Applicants would then use monitoring and adaptive management to ensure that eagle take remains within permitted levels. In communication with the appropriate agencies, the Projects will discuss the need for and implementation of mitigation or experimental ACPs if it is determined that eagle take is higher than anticipated based on eagle take estimates. A stepwise process will be used to guide the implementation of additional conservation measures as needed (Attachment A and B). Together, the monitoring and conservation measures aim to ensure there will be no significant impacts to the bald eagle population.

4.1.3 Estimating Golden Eagle Take

Under the proposed action, we estimate that 0.60 golden eagles could be taken annually at MW-I and 2.81 golden eagles could be taken annually at MW-II. This number is multiplied by the number of years in the permit term (thirty years) and rounded up to the next whole number (for a total authorized take of up to 18 golden eagles over the life of the 30-year permit at MW-I and 85 golden eagles over the life of the 30-year permit at MW-II). These estimates are based on a conservative approach that is expected to overestimate annual and cumulative take at the outset of the IETPs. We anticipate the estimates will decrease as we incorporate Project-specific monitoring data into the estimates as part of the IETP's adaptive management process. 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 ECPs and will be used to guide the implementation of additional conservation measures, as needed, and applies before actual take exceeds the permitted take levels (Attachments A and B).

The eagle fatality monitoring associated with this alternative will be determined by the Service (e.g., evaluating all turbines during a monitoring year) which will allow the Service and permittee to estimate the total number of annual eagle fatalities. Monitoring is a critical component of adaptive management. Together, these conservation measures ensure there will be no significant impacts to golden eagles. Additionally, as the Projects were operational prior to the final Service regulations, *see* 50 C.F.R. pt. 22, any take occurring at this facility is considered part of the baseline level of take, and therefore the Projects do not require compensatory mitigation for the IETPs.

Under the proposed action, the Service may formally determine that the Applicants may reduce or eliminate the biomonitoring and curtailment program, provided that take remains below the permitted level and that there are no active eagle nests requiring monitoring and curtailment. The Applicants would then use monitoring and adaptive management to ensure that eagle take remains within permitted levels. In communication with the appropriate agencies, the Applicants

will discuss the need for and implementation of mitigation or experimental ACPs if it is determined that eagle take is higher than anticipated based on eagle take estimates. A stepwise process will be used to guide the implementation of additional conservation measures as needed.

4.2 Cumulative Effects

Take of eagles has the potential to affect the larger eagle population. Accordingly, the PEIS 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 to permitted take of bald and golden eagles within each EMU. The bald eagle take that would be authorized by these permits 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 (PEIS 2016). Golden eagle take being considered under this application would normally require mitigation; however, as the Projects were operational prior to the final Service regulations, (*see* 50 C.F.R. pt. 22), the Projects do not require compensatory mitigation for the IETPs. 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 permits are 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's PEIS analyzed the amount of take that can be authorized while still maintaining the LAP of eagles. To issue an IETP, cumulative authorized take must not exceed 5%, and cumulative unauthorized take cannot 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 IETP application as part of our application review.

We, therefore, considered cumulative effects to the LAP surrounding the Projects 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 Projects' LAP. We incorporated data provided by the Applicants, our data on other eagle take authorized and permitted by the Service, and other reliably documented unauthorized eagle mortalities (including both anthropogenic and natural causes) to estimate cumulative impacts to the LAP. The scale of our analysis is an 86-mile radius around the Project sites for bald eagles and a 109-mile radius for golden eagles (Figure 5) around the Project sites for permitted take, and a 172-mile radius for bald eagles and a 218-mile radius for golden eagles for unpermitted take. We conducted our cumulative effects analysis as described in the Service's ECPG (2013). Because the two Project sites are very close to one another (1.5 miles apart), their LAPs were combined, and a single cumulative effects analysis was run for the Projects (Appendix B).

Two permitted projects overlap the LAP for bald eagles and four permitted projects overlap the LAP for golden eagles.

4.2.1 Bald Eagles

The LAP of bald eagles for the Projects is approximately 62 eagles and the annual 1% and 5% benchmarks for this LAP are about one and three bald eagles, respectively. There are two short-term projects currently permitted for disturbance take that overlap this Project's LAP boundary for bald eagles. Taken together, this Project's take with overlapping take of the other projects could result in a total annual take of 0.03 bald eagles (or 0.05% of the LAP). The overlapping LAPs effect is discussed in more detail in the Section 4.2.4 (Reasonably Foreseeable Future).

The impacts 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 Projects' vicinity are increasing and the conservative take estimate at the Projects 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 45 reported bald eagle mortalities within the LAP between 2013 and 2022 for an average of 4.5 per year. These mortalities are all considered to be unpermitted take. Of the 45 mortalities, five deaths resulted from unknown causes, 10 were due to non-anthropogenic causes, and the remaining 30 were due to anthropogenic causes (e.g., electrocution, shooting, poisoning). On an annual basis, 4.5 unpermitted bald eagle takes equals about 7.3% of the total estimated bald eagle population in the LAP associated with the Project. This amount of unpermitted take is below the 10% threshold level for unpermitted take within the LAP.

4.2.2 Golden Eagles

The LAP of golden eagles for the Projects is approximately 832 eagles and the 1% and 5% benchmarks for this LAP are 8 and 42, respectively. There is one currently permitted wind energy project that overlaps the Project's LAP boundary for golden eagles, along with three short-term projects with disturbance take permits. Taken together, the take of the Projects and overlapping take of the other permitted projects could result in a total annual take of 4.3 golden eagles (or 0.52% of the LAP). The overlapping LAPs effect is discussed in more detail in Section 4.2.4 (Reasonably Foreseeable Future). Based on the Service's eagle mortality database, there were 133 reported golden eagle mortalities within the LAP between 2013 and 2022, for an average of 13.3 per year. These mortalities are all considered to be unpermitted take. Of the 133 mortalities, 32 deaths resulted from unknown causes, six were due to non-anthropogenic causes, and the remaining 95 were due to anthropogenic causes (e.g., electrocution, shooting, poisoning, collision with wind turbines). On an annual basis, 13.3 unpermitted golden eagle takes equals about 1.6% of the total golden eagle population in the LAP associated with the Projects. 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 the two permits does not exceed 5% of the LAP for either bald eagles or 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 the two permits would exceed the EMU take level. Normally, any take of golden eagles under an IETP must be offset by compensatory mitigation. However, because both Projects were in operation prior to the 2009 final Service regulations, *see* 50 C.F.R pt. 22, the Projects were part of the initial baseline take calculations and do not require compensatory mitigation for an IETP.

4.2.4 Reasonably Foreseeable Future

As described briefly above, the Service has issued one long-term IETP and four short-term disturbance permits for bald and golden eagles with at least partial overlap of the Projects' LAP boundaries. Three of the short-term permits will expire by the end of 2023, and the fourth will expire at the end of 2025. This will reduce the cumulative annual permitted take of golden eagles from 4.3 to 3.41, and bald eagles from 0.03 to 0.02.

The Service is aware of operational wind projects with overlapping LAPs that have contributed to unauthorized take of golden eagles. One of these projects is currently operating under a court-approved settlement agreement and is working with the Service to pursue and potentially obtain an IETP. 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.

One project with an overlapping LAP, Chokecherry Sierra Madre, has applied for a permit and plans to begin commercial operation in 2024. This will increase the permitted take within the LAP, but take estimates have not yet been calculated. While additional future wind developments and other activities may further increase take in the LAP during the permit tenures, 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 EA.

4.3 Comparison of Effects of Alternatives

Table 1 compares the effects of the proposed action and alternative I.

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

	Proposed Action – Issue Permits	Alternative 1 – No Action
Eagle Take Levels	Up to 1 bald eagle and up to 18 golden eagles over 30 years at MW-I and up to 1 bald eagle and up to 85 golden eagles over 30 years at MW-II. In practice we anticipate lower take levels due to avoidance and minimization actions that will be required under the permits.	Up to 1 bald eagle and up to 18 golden eagles over 30 years at MW-I and up to 1 bald eagle and up to 85 golden eagles over 30 years at MW-II.
Avoidance and Minimization	Project is operational and will continue to operate.	Project is operational and will continue to operate.
Compensatory Mitigation	As the Projects were operational prior to the final Service regulations, <i>see</i> 50 C.F.R. pt. 22, the Projects do not require compensatory mitigation for the IETPs.	None
Unmitigated Eagle Take	Project take is considered part of the baseline level of take and mitigation is not required.	Up to 1 bald eagle and up to 18 golden eagles over 30 years at MW-I and up to 1 bald eagle and up to 85 golden eagles over 30 years at MW-II.
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 and dead eagles; information on the effects of specific, applied, and conservation measures.	Reporting of injured and dead eagles.
Company Liability for Eagle Take	No (if in compliance with permit conditions).	Yes

5 Mitigation and Monitoring

5.1 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, the 2016 PEIS requires that any take that cannot practicably be avoided and is above EMU take limits must be offset by compensatory mitigation (Service 2016c). In this case, authorized take remains below the EMU take thresholds and no compensatory mitigation is needed to meet the Eagle Act preservation standard.

5.2 Golden Eagles

The proposed action incorporates measures to minimize and avoid take, to the maximum degree practicable, as required by regulation (50 C.F.R. § 22.26). 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, compensatory mitigation is necessary to offset any authorized take of golden eagles (PEIS 2016). However, as the Projects were operational prior to the 2009 final Service regulations in 50 C.F.R. pt. 22, any take is considered part of the baseline level of take and compensatory mitigation is not required for the IETPs.

The Applicants 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 IETPs (Service 2013). After the five-year check-in period as required by permit conditions, the Service will review the eagle mortality data and other pertinent information, as well as information provided by the Applicants and independent third-party monitors. The Service will assess whether the Applicants are in compliance with the terms and conditions of the permits and have implemented all applicable adaptive management measures specified in the IETPs and ensure that eagle take has not exceeded the amount authorized within that time frame. We will update fatality estimates, authorized take levels, and compensatory mitigation, as needed, for future years of the IETPs. 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 IETPs, and 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 IETPs.

6 List of Preparers

- Anna Joy Lehmicke, Wildlife Biologist, NEPA coordination, USFWS
- National Eagle Support Team (NEST), NEPA analysis, USFWS
- Carmen Boyd, Associate Biologist, Western EcoSystems Technology, Inc.
- Julia Preston-Fulton, Senior Technical Editor, Western EcoSystems Technology, Inc.
- Kenton Taylor, Senior Wildlife Biologist, Western EcoSystems Technology, Inc.

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