

Final Environmental Assessment
for
the Proposed Issuance of an Eagle Incidental Take Permit
for Red Horse Wind 2 Energy Facility

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Contents

Chapter 1: Introduction	1
1.1 Purpose and Need.....	2
1.2 Authorities	2
1.3 Background	2
1.4 Scoping, Consultation, and Coordination	4
1.5 Tribal Coordination	4
Chapter 2: Proposed Action and Alternatives	5
2.1 Proposed Action.....	5
2.2 Alternative 1: No Action.....	5
2.3 Alternative 2: 5-Year Permit	6
2.4 Other Alternatives Considered but Not Evaluated in this Environmental Assessment.....	6
2.4.1 Alternative: Deny Permit	6
Chapter 3: Affected Environment.....	7
3.1 Golden Eagle	7
3.2 Bald Eagle.....	9
3.3 Migratory Birds	9
3.4 Species Listed under the Endangered Species Act.....	11
3.5 Cultural and Socio-economic Interests	12
3.6 Climate Change	12
Chapter 4: Environmental Consequences.....	12
4.1 Golden Eagle	12
4.1.1 Proposed Action.....	13
4.1.2 Alternative 1 – No Action.....	15
4.1.3 Alternative 2 – 5-Year Permit.....	15
4.2 Bald Eagle.....	16
4.3 Migratory Birds	16
4.4 Species Listed under the Endangered Species Act.....	16
4.5 Cultural and Socio-economic Interests	16
4.6 Climate Change	17

4.7 Comparison of Effects of Alternatives 17

4.8 Cumulative Effects 20

 4.8.1 Golden Eagle 20

Chapter 5: Mitigation and Monitoring..... 22

Chapter 6: List of Preparers 23

Chapter 7: References 24

Tables

Table 1. Birds of Conservation Concern in the Project Vicinity Based on eBird and PCMM Studies..... 10

Table 2. Adaptive Management Trigger Levels..... 13

Table 3. Comparison of Effects of the Proposed Action and Alternatives..... 18

Figures

Figure 1. Project Location 3

Appendices

- Appendix A. Eagle Conservation Plan for the Red Horse Wind 2 Energy Facility
- Appendix B. Tribal Coordination
- Appendix C. Intra-Service Section 7 Biological Evaluation
- Appendix D. Compensatory Mitigation Addendum

List of Acronyms

AGFD	Arizona Game and Fish Department
Applicant	Red Horse Wind 2, LLC
CEQ	Council on Environmental Quality
C.F.R.	Code of Federal Regulations
EA	Environmental Assessment
Eagle Act	Bald and Golden Eagle Protection Act
Eagle ITP	Eagle Incidental Take Permit
ECP	Eagle Conservation Plan
ECPG	Eagle Conservation Plan Guidance
EMU	Eagle Management Unit
LAP	Local Area Population
MBTA	Migratory Bird Treaty Act
MW	Megawatts
NEPA	National Environmental Policy Act
PEIS	Service's Programmatic Environmental Impact Statement for the Eagle Rule Revision, December 2016
PCMM	Post-Construction Mortality Monitoring
Project	Red Horse 2 Wind Facility
RHW2	Red Horse Wind 2, LLC
Service	U.S. Fish and Wildlife Service

Chapter 1: Introduction

This Environmental Assessment (EA) has been prepared to analyze the environmental consequences of the U.S. Fish and Wildlife Service (Service) issuing an Eagle Incidental Take Permit (ITP) for the incidental take of golden eagles (*Aquila chrysaetos*) associated with the operation of the Red Horse Wind 2 Energy Facility (Project), pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C. §§ 4321–4347). Issuance of an Eagle ITP by the Service for take that is incidental to otherwise lawful activities under the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. §§ 668–668d and 50 C.F.R. § 22.26) 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. This EA evaluates the effects of alternative actions for our decision whether to issue an Eagle ITP.

The Eagle Act authorizes the Service to issue Eagle ITPs only when the take is compatible with the preservation of each eagle species, defined (in USFWS 2016a) as “consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units (EMUs) and the persistence of local populations throughout the geographic range of each species.”

The Applicant, Red Horse Wind 2, LLC (RHW2), is requesting Eagle Act take coverage for continued operation of the Project. This company is an affiliate of D.E. Shaw Renewable Investments. The Applicant has requested a 17-year Eagle ITP for golden eagles under the Eagle Act at the Project. The Applicant’s Eagle Conservation Plan (ECP; Appendix A) is the foundation of the permit application for the Project. The Applicant is requesting an Eagle ITP for the take of up to 13 golden eagles over the first 2 years and 110 golden eagles over the 17-year term of the Eagle ITP. This EA evaluates whether issuance of the Eagle ITP will have significant impacts on the existing human environment. “Significance” under NEPA is defined by regulation at 40 C.F.R. § 1508.27, and requires short- and long-term consideration of both the context of a proposal and its intensity. In this EA we are proceeding under the expired CEQ regulations, pursuant to 40 C.F.R. § 1506.13 which provides “The regulations in this subchapter apply to any NEPA process begun after September 14, 2020. An agency may apply the regulations in this subchapter to ongoing activities and environmental documents begun before September 14, 2020.”

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; USFWS 2016a; <https://www.fws.gov/migratorybirds/pdf/management/FINAL-PEIS-Permits-to-Incidentally-Take-Eagles.pdf>). Accordingly, this EA tiers from the 2016 PEIS. Project-specific information not considered in the PEIS (USFWS 2016a) will be considered in this EA, as described below.

1.1 Purpose and Need

The need for this action is a decision on a 17-year Eagle ITP application received from RHW2. The decision must comply with all applicable regulatory requirements and be compatible with the preservation of eagles (50 C.F.R. § 22.26(e)(2)(i)).

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 its regulations (50 C.F.R. Part 22). The PEIS has a full list of authorities that apply to this action (USFWS 2016a; PEIS Section 1.6, pages 7-12), which are incorporated by reference here.

1.3 Background

The Project is a wind energy generating facility that began commercial operation in September 2015. The Project has a nameplate capacity of 30 megawatts (MW), and is located approximately 15 miles west of the city of Willcox, Arizona (Figure 1). Project infrastructure includes two meteorological towers, 15 Vestas 2.0-MW wind turbines, buried electrical collection lines, access roads, an operations and maintenance building, a switchyard at the point of interconnection, and an overhead transmission line. The maximum blade tip height of the turbines is 443 feet (135 meters), measured from the ground to the top of the turbine blade; each turbine has an 262-foot (80-meter) hub height, a 361-foot (110-meter) rotor diameter, a cut-in speed of 9.8 feet per second (3 meters per second), and a cut-out speed of 82 feet per second (25 meters per second). The Project Area and a transmission line are located on state lands.

As part of RHW2's efforts to reduce eagle take to the extent practicable (USFWS 2016a) the initial Project design was evaluated and then modified to minimize the risk of eagle take. A suite of pre-construction and post-construction surveys were conducted at the Project. Further discussion on those surveys is provided in Sections 2.2.4 and 4 of Appendix A. The Project footprint was reduced in size from an initial Project Area of 5,798 acres to the current Project Area of 2,765 acres, based on the results of pre-construction studies.

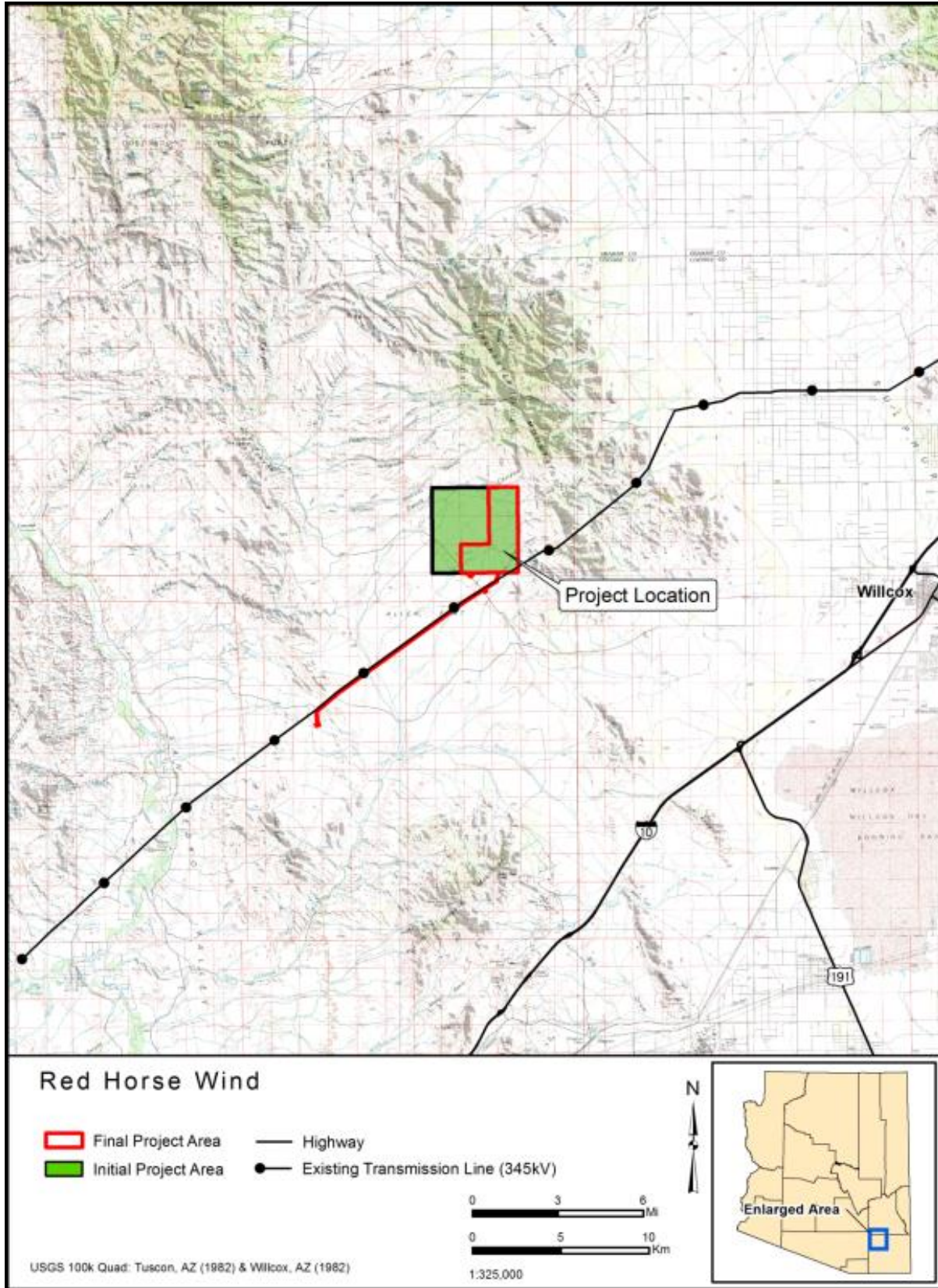


Figure 1. Project Location

Pre-construction eagle use surveys were conducted from December 2012 through November 2013 and documented golden eagles within point-count areas for a total of 65 eagle minutes (number of minutes of eagle flight activity within the three-dimensional cylindrical sample plots). Raptor nest surveys conducted within 10 miles of the Project Area in 2012 and 2013 documented eight golden eagle nesting territories, five of which were occupied; although these were outside of the Project Area (see Section 2.2.6 of Appendix A). In the final Project design, the number of turbines was reduced by 19, and the turbines were placed away from eagle nests and RHW2-anticipated high use areas based on one year of data. This change also decreased the amount of ground disturbance and infrastructure needed.

Post-construction mortality monitoring (PCMM) was initiated in 2015 to evaluate mortality levels from the operation of the Project. The first year of PCMM occurred for 1 year following construction from July 2015 – July 2016 (SWCA 2016). Two additional years of PCMM were implemented consecutively beginning on August 28, 2017 and were completed on August 31, 2019.

The Applicant began preparing an ECP in April 2014, submitted initial drafts to the Service in 2014 and 2015, and submitted a further refined draft to the Service in May 2016, prior to the finalization of the 2016 Eagle Rule Revisions (USFWS 2016a). On June 13, 2016, a golden eagle fatality was discovered at the Project during PCMM studies. To gain a better understanding of the risks to eagles at the Project, RHW2 initiated a second year of monitoring in August 2017. Subsequently, three more golden eagle fatalities were discovered, one each on September 6, 2017, May 28, 2018, and September 11, 2018. In 2017, RHW2 proactively mitigated for two eagle fatalities through power pole retrofitting, in accordance with the 2016 draft ECP. The Applicant submitted an application for an Eagle ITP to USFWS on May 23, 2018. The Applicant submitted revised draft ECPs in August and December 2019, to reflect the 2016 Eagle Rule Revisions and an updated eagle take estimate reflecting the eagle fatalities documented at the Project (Appendix A).

1.4 Scoping, Consultation, and Coordination

This EA incorporates by reference the scoping performed for the PEIS (Chapter 6, page 175). The Draft EA was initially available for 60 days and it was posted on the Region 2 Migratory Bird Program Permits NEPA Reviews webpage. Due to quarantines related to the COVID-19 pandemic, the public comment period was extended an additional 30 days on March 30, and another 30 days on June 8. We received two “No Issue” comments and three Tribal Consultation requests (see Section 1.5). The Applicant worked closely with the Service to develop the ECP in support of its application to avoid, minimize, and mitigate adverse effects on eagles (Appendix A).

1.5 Tribal Coordination

As required by the Advisory Council on Historic Preservation Regulations’ Protection of Historic Properties (36 C.F.R. Part 800) for implementing Section 106 of the National Historic Preservation Act, the Service conducted consultation with tribes in 2013 and 2014 regarding national eagle management

and permitting actions, including revising eagle rule regulations. The results of this consultation are summarized in the PEIS (Section 6.22) and are incorporated by reference.

On March 18, 2020, the Service sent a letter to all Interior Regions 6, 7 (NM), and 8 Tribes informing them of our review of the permit application and requesting any views, comments, or concerns regarding the proposed permit authorizing incidental take of eagles at the Project. This letter was accompanied by a handout providing additional information on the Project, history, mitigation, and eagle take permit rules (Appendix B). In addition, the Service presented on the draft version of the EA, by request, to the Yavapai-Apache Nation of Camp Verde on August 13, 2020. Pueblo of San Felipe requested consultation once the COVID-19 pandemic emergency has passed. The Service made multiple attempts to schedule consultation with the San Carlos Apache Tribe through November. Conversations with the Service Native American Liaison indicated no concerns, only information gathering.

Chapter 2: Proposed Action and Alternatives

2.1 Proposed Action

We propose to issue a 17-year Eagle ITP to take up to 13 golden eagles in the first 2-year review period (110 golden eagles over the permit term) with associated conditions, as allowed by regulation. The 17-year permit term was requested by RHW2 and corresponds to the expected remaining life of the Project. RHW2 will implement all measures required by other agencies and jurisdictions to conduct the activity at this site, and the conservation commitments described in the Applicant's ECP (Appendix A). The Project is subject to monitoring and reporting reviews conducted by the Service throughout the Eagle ITP term. The first review period will be at 2 years post-permit issuance, and the following reviews will occur every 5 years thereafter. As described in more detail in the Applicant's ECP (Appendix A), RHW2 would implement Conservation Measures (Section 3); Adaptive Management (Section 6); and Compliance Monitoring (Section 5) commitments.

2.2 Alternative 1: No Action

Under the No-Action Alternative, the Service would take no further action on RHW2's permit application. In reality, the Service must take action on the permit application, determining whether to deny or issue the Eagle ITP. We consider this alternative because Service policy requires 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 Eagle ITP. Under the No-Action Alternative, the Project would likely continue to operate without an Eagle ITP being issued. Thus, for purposes of analyzing the No-Action Alternative, we assume that the Applicant will implement all measures required by other agencies and jurisdictions to conduct the activity at this site, but the conservation measures proposed in the Eagle ITP application package would not be required. The Applicant may choose to implement some, none, or all of those conservation

measures. Under this alternative, we assume that the Applicant will take some reasonable steps to avoid taking eagles, but the Applicant will not be protected from enforcement for violating the Eagle Act should take of an eagle occur.

2.3 Alternative 2: 5-Year Permit

Under this alternative, the Service would issue a 5-year Eagle ITP authorizing the incidental take of eagles associated with the Project, pursuant to 50 C.F.R. § 22.26(f). The Eagle ITP would be for the incidental take of up to 33 golden eagles during the 5-year permit term. This alternative incorporates the same annual rate of eagle fatalities predicted for the Project as was used in the Proposed Action, but applies these rates to a 5-year permit duration instead of 17. The 5-year Eagle ITP would incorporate as permit conditions the adaptive management, mitigation, monitoring, and avoidance and minimization measures, as appropriate, described for the Proposed Action; however, these commitments would be limited to 5 years.

2.4 Other Alternatives Considered but Not Evaluated in this Environmental Assessment

The Service considered one other alternative based on communication with RHW2, but concluded that this alternative did not meet the purpose and need underlying the action because it was not consistent with the Eagle Act and its regulations or was impracticable for the Applicant to carry out. Therefore, the Service did not assess the potential environmental impacts of this alternative. Below is a summary of the alternative considered but eliminated from further review.

2.4.1 Alternative: Deny Permit

Under this alternative, the Service would deny the permit application because the Applicant is not eligible for an Eagle ITP pursuant to 50 C.F.R. § 13.21, or the application fails to meet all regulatory permit issuance criteria and required determinations listed in 50 C.F.R. § 22.26.

Our permit issuance regulations at 50 C.F.R. § 13.21(b) set forth a variety of circumstances that disqualify an applicant from obtaining an Eagle ITP. None of the disqualifying factors or circumstances denoted in 50 C.F.R. § 13.21 apply to RHW2. We next considered whether the Applicant meets all issuance criteria for the type of permit being issued. For Eagle ITPs, those issuance criteria are found in 50 C.F.R. § 22.26(f). RHW2's application meets all the regulatory issuance criteria and required determinations (50 C.F.R. § 22.26) for Eagle ITPs (Appendix A).

Upon review we have determined that the applicant is not disqualified for an Eagle ITP under 50 C.F.R. § 13.21 and meets all the issuance criteria of 50 C.F.R. § 22.26. Accordingly, denial of the Eagle ITP is not a reasonable option. Therefore, the alternative of denying the Eagle ITP was eliminated from further consideration.

Chapter 3: Affected Environment

This section describes the current status of the environmental resources and values that are affected by the Proposed Action and the Alternatives. Specifically, this chapter describes golden and bald eagles (*Haliaeetus leucocephalus*), migratory birds, threatened and endangered species, cultural and socio-economic interests, and climate change.

3.1 Golden Eagle

Breeding and non-breeding, resident golden eagles have been recorded throughout southeastern Arizona, with core breeding areas occurring throughout mountainous areas of the region (Corman and Wise-Gervais 2005). Because golden eagles breed and winter as far south as northern Mexico (Kochert et al. 2002), the region is used by breeding, migrant, and wintering individuals, with migrants likely using north-south-trending mountains and ridgelines during migration, while wintering individuals use the extensive grasslands and rolling hills abutting the mountains.

Pre-construction eagle use surveys conducted from December 2012 to November 2013 documented golden eagles for a total of 65 eagle minutes. During the survey period, there was no indication that eagles concentrated within the initial Project Area during any season. Winter had the highest number of observations (10), with spring (5), summer (0), and fall (6) having fewer observations (Appendix A).

Aerial golden eagle nest inventory surveys were conducted within 10 miles of the Project Area in 2012 and 2013 to determine nest occupancy and activity. In 2013, 22 golden eagle nests were positively identified, representing eight golden eagle territories, of which five were active. All golden eagle nests (occupied, unoccupied, and potential nests) and territories were located outside of the Project Area. One occupied, and four unoccupied nests were identified within a 2-mile buffer of the Project Area. There was no suitable golden eagle nesting habitat identified within the Project Area, with the exception of structures supporting the transmission line that runs southwest to northeast within the southeastern corner of the Project Area; although no nests were identified in that area (see Appendix A, Figure 6). Nearby suitable nesting habitat is primarily located in the Winchester Mountains, approximately 2 to 6 miles north and east of the Project, and in canyons (e.g., Kelsey Canyon, Bass Canyon), approximately 9 miles northwest and west of the Project (Appendix A, Section 2.2.5).

During the first 2 years of Project operation (2016 and 2017), RHW2 provided funding to the Arizona Game and Fish Department (AGFD) to conduct golden eagle nest occupancy studies. Occupancy studies included aerial or ground-based nest revisits, which were conducted at all nests located within 5 miles of the Project. AGFD revisited 16 golden eagle and possible golden eagle nests within 5 miles of the Project during the 2016 eagle breeding season. Among the 16 nests, two active golden eagle nests were observed. Both nests were successful, fledging young on approximately May 29 and June 6, 2016 (Appendix A, Section 4.1). AGFD is collecting additional occupancy and productivity data on golden eagle nests in this area in 2020, and is expected to perform periodic monitoring in future years as part of their golden eagle management program.

Incidental observations of potential eagle prey were noted during field surveys, though focused surveys for eagle prey were not conducted. Potential raptor prey such as rabbits (cottontails [*Sylvilagus* spp.] and jackrabbits [*Lepus* spp.]) were observed frequently outside of the initial Project Area to the south and southeast, most frequently in areas with larger stands of mesquite (*Prosopis* spp.) and other woody plants/cover (SWCA 2013a). However, during avian field surveys within the Project Area, cottontails and jackrabbits were observed less than five times from early December 2012 to November 2013. The ecological reasons for the observed low abundance of rabbits within the Project Area has not been determined, but it appears it may be attributable to the lack of woody or shrub cover or drought conditions during these years. Several possible ground squirrel (*Spermophilus* spp.) groups (dirt mounds with scattered holes present) were located on the southern boundary of the initial Project Area, at the bases of mesquite trees that are adjacent to washes; however, no ground squirrels were observed (SWCA 2013b). Pronghorn (*Antilocapra americana*) were frequently observed within and near the initial Project Area, but because the Allen Flat population is small and fragmented (personal communication, AGFD, January 24, 2012) this species does not likely comprise a substantial portion of local eagle prey. Because cattle are grazed within and adjacent to the Project Area, cattle carcasses may provide food for eagles, especially during winter. Carcasses and offal piles left by hunters may also provide some food for eagles.

Some data suggest that golden eagle collisions with wind turbines are more likely when golden eagles are hunting (Hunt 2002, National Wind Coordinating Collaborative 2010). Because golden eagles often search for prey by soaring, this hunting strategy puts them at heights similar to wind turbines. Golden eagles also use low contour flying/contouring along hills, bluffs, and washes to ambush prey, and when caught in strong updrafts, individuals can suddenly and quickly rise into the rotor-swept area of turbines (Hunt 2002). Both of these hunting strategies have been observed and mapped at the Project (see Appendix A, Figure 5).

Spring and fall raptor migration studies conducted in the initial Project Area did not identify any concentration of raptors or eagles within the Project Area during spring or fall migration (Appendix A, Section 2.2.4.1). The Project Area does not contain the specific habitat features that are known to concentrate raptors during migration (e.g., north-south-trending ridgelines, slopes and headwalls; Barrios and Rodriguez 2004, Service 2013). However, a potential migration flyway may be located less than 2 miles to the north and east of the Project along the Winchester Mountains, as these mountains comprise north-south-trending ridgelines and some headwalls. Given that the prevailing winds in the Project are from the west throughout the year, the Winchester Mountains do provide orographic lift conditions, which can facilitate raptor migration. As related to both fall and spring raptor migration near the Project, raptor migration concentration areas have yet to be identified in southeastern Arizona (personal communication, Tice Supplee, Director of Bird Conservation, Audubon Arizona, June 11, 2013). Based on coarse and unpublished information on exploratory spring migration surveys in southeastern Arizona conducted by HawkWatch International in 1980, potential for raptor concentrations in spring does exist (personal communication, Kenneth Jacobson, Eagle Coordinator, AGFD, June 2014); however,

pre-construction surveys did not detect any spring or fall raptor migration concentrations within the Project Area.

Four golden eagle fatalities were discovered during the operation of RHW2; one on June 13, 2016, one on September 6, 2017, one on May 28, 2018, and one on September 11, 2018. Recent population modeling for golden eagles in the United States suggested that populations are stable to slightly declining (USFWS 2016b). They are susceptible to power line electrocution, poison intended for other species, occasional shootings, and habitat loss to agriculture and suburban land uses (USFWS 2016b). Golden eagles are extremely sensitive to human disturbance during the nesting period (AGFD 2002).

3.2 Bald Eagle

Although this document addresses both bald and golden eagles, the Project and surrounding vicinity do not contain suitable bald eagle nesting or foraging habitat, and none were observed during pre-construction surveys. Therefore, because bald eagle presence in the Project Area is minimal, the Applicant did not request bald eagle authorization under the proposed Eagle ITP.

Breeding, resident bald eagles have not been recorded in southeastern Arizona (Corman and Wise-Gervais 2005), as the region is largely devoid of water bodies that support fish. Bald eagles can occur throughout Arizona in winter, and the species does winter in southeastern Arizona. Confirmed wintering individuals have been recorded in the Sulphur Springs Valley, which lies approximately 12 miles to the east of the Project Area (AGFD 2012).

Bald eagles primarily hunt from a perch or by soaring high over foraging areas, with fish composing more than 90 percent of their diet (Buehler 2000). Although bald eagles can occur anywhere in Arizona in winter, large, fish-bearing waters are not present near the Project Area. Bald eagle fatalities have increasingly occurred at wind facilities in recent years, even at projects for which bald eagle use was low (personal communication, Corrie Borgman, U.S. Fish and Wildlife Service, January 2018). Nonetheless, the threat to bald eagles at the Project from collision with wind turbines is likely minimal, given the lack of foraging and nesting habitat. General threats to bald eagles are described in detail in the PEIS (USFWS 2016a).

3.3 Migratory Birds

Birds protected by the MBTA occur year-round in the Project region, including migrating birds (spring and fall), summer resident breeding birds, and wintering birds. The Project is located in the Pacific Flyway, which is a major migration corridor for birds. The Project is also located within Bird Conservation Region (BCR) 34. BCRs are ecologically distinct regions with similar bird communities and habitats (NABCI 2000). The Service's Birds of Conservation Concern (BCC) 2008 report identifies species, subspecies, and populations of migratory nongame birds that could become candidates for listing under the Endangered Species Act without additional conservation actions (USFWS 2008). A total of 37 BCC species have been identified within BCR 34. A search of eBird indicated that up to 36 BCC species have

been sighted in Cochise County within the past 5 years (eBird 2017, accessed February 11, 2020; Table 1).

The PCMM conducted in 2016 estimated that 6.3 birds/MW/year had been killed at the Project (SWCA 2016). PCMM monitoring in 2017-2018 estimated that 5.31 small birds/MW/year and 0.92 large birds/MW/year were killed at the Project (Tetra Tech 2018). Horned lark (*Eremophila alpestris*) and white-throated swift (*Aeronautes saxatalis*) were the most common bird species recorded in the 2016 study, with 2 individuals of each species being found during surveys. More passerines and swifts were recorded than other bird species groups, and more were found in spring than during other seasons (SWCA 2016). Red-tailed hawk (*Buteo jamaicensis*) and horned lark were the most common bird species recorded in the 2017-2018 study with three individuals of each species being found. Overall, songbirds were the most commonly found species during the 2017-2018 surveys (Tetra Tech 2018). Results from both studies showed that avian species composition and seasonal distribution patterns were generally consistent with those observed at other facilities in the region (SWCA 2016, Tetra Tech 2018). Four BCC species were documented during PCMM surveys (Table 1).

Table 1. Birds of Conservation Concern in the Project Vicinity Based on eBird and PCMM Studies

Common name	Scientific name	Recorded in Cochise County (eBird)	Found during PCMM
Bald eagle	<i>Haliaeetus leucocephalus</i>	X	-
Common black-hawk	<i>Buteogallus anthracinus</i>	X	-
Peregrine falcon	<i>Falco peregrinus</i>	X	-
Mountain plover	<i>Charadrius montanus</i>	X	-
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	X	-
Flammulated owl	<i>Psiloscoops flammeolus</i>	X	-
Elf owl	<i>Micrathene whitneyi</i>	X	-
Blue-throated hummingbird	<i>Lampornis clemenciae</i>	X	-
Elegant trogon	<i>Trogon elegans</i>	X	-
Lewis's woodpecker	<i>Melanerpes lewis</i>	X	-
Arizona woodpecker	<i>Dryobates arizonae</i>	X	-
Northern beardless-tyrannulet	<i>Camptostoma imberbe</i>	X	-
Buff-breasted flycatcher	<i>Empidonax fulvifrons</i>	X	-
Rose-throated becard	<i>Pachyramphus aglaiae</i>	X	-
Bell's vireo	<i>Vireo bellii</i>	X	-
Gray vireo	<i>Vireo vicinior</i>	X	-
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>	X	-
Bendire's thrasher	<i>Toxostoma bendirei</i>	X	-
Sprague's pipit	<i>Anthus spragueii</i>	X	-

Common name	Scientific name	Recorded in Cochise County (eBird)	Found during PCMM
Phainopepla	<i>Phainopepla nitens</i>	X	-
Olive warbler	<i>Peucedramus taeniatus</i>	X	-
Lucy's warbler	<i>Leiothlypis luciae</i>	X	-
Yellow warbler	<i>Setophaga petechial</i>	X	X
Black-throated gray warbler	<i>Setophaga nigrescens</i>	X	X
Grace's warbler	<i>Setophaga graciae</i>	X	-
Red-faced warbler	<i>Cardellina rubrifrons</i>	X	-
Canyon towhee	<i>Melospiza fusca</i>	X	-
Rufous-winged sparrow	<i>Peucaea carpalis</i>	X	-
Botteri's sparrow	<i>Peucaea botterii</i>	X	X
Five-striped sparrow	<i>Amphispiza quinquestriata</i>	X	-
Black-chinned sparrow	<i>Spizella atrogularis</i>	X	-
Lark bunting	<i>Calamospiza melanocorys</i>	X	-
Grasshopper sparrow	<i>Ammodramus savannarum</i>	X	-
Grasshopper sparrow (ammolegus ssp.)	<i>Ammodramus savannarum ammolegus</i>	-	-
Baird's sparrow	<i>Centronyx bairdii</i>	X	-
Chestnut-collared longspur	<i>Calcarius ornatus</i>	X	X
Varied bunting	<i>Passerina versicolor</i>	X	-

3.4 Species Listed under the Endangered Species Act

On December 21, 2018, an Intra-Service Section 7 Biological Evaluation was completed to fulfill the requirements of the Endangered Species Act to ensure that the proposed issuance of an Eagle ITP would not likely jeopardize the existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

A number of species listed under the Endangered Species Act have the potential to occur within the Project Area. These include, the endangered jaguar (*Panthera onca*), the threatened Mexican spotted owl (*Strix occidentalis lucida*), yellow-billed cuckoo (*Coccyzus americanus*), northern Mexican gartersnake (*Thamnophis eques megalops*), Chiricahua leopard frog (*Rana chiricahuensis*), and the candidate Wright's marsh thistle (*Cirsium wrightii*). No critical habitat for these species intersects the Project Area. None of these species have been documented within the Project Area during pre- or post-construction surveys. As a result, the Service determined that the Project would have no effect on yellow-billed cuckoo, northern Mexican gartersnake, Chiricahua leopard frog, and Wright's marsh thistle

and would not likely adversely affect jaguar and Mexican spotted owl and no further consultation for listed species would be required (Appendix C).

3.5 Cultural and Socio-economic Interests

Cultural and socio-economic interests are considered in the PEIS (USFWS 2016a) and are incorporated by reference here. The PEIS examined the cultural importance of eagles to American Indian tribes and the American people, and impacts on businesses and industries likely to develop in areas where eagles occur and recreational and aesthetic values of the public (USFWS 2016a). Since the Project is already operational, no additional ground disturbance or other impacts will occur. Thus, no cultural and socio-economic interests outside of those addressed in the PEIS are expected to occur with the issuance of the Eagle ITP associated with the Project.

As noted in Section 3.7 of the PEIS (USFWS 2016a) eagle take can have spiritual or emotional impacts to Tribes. Although the PEIS notes that the issuance of any Eagle ITP seeks to reduce eagle take through Applicant-committed avoidance, minimization, or mitigation, individual tribal consultation is required for all Projects that seek an Eagle ITP.

3.6 Climate Change

Climate change was considered in the PEIS (USFWS 2016a; PEIS Section 3.9, page 144) and is incorporated by reference here. Additionally, Arizona has a renewable portfolio standard of 15% renewable energy by 2025. The operation of this Project would contribute to enabling Arizona to meet that goal.

Chapter 4: Environmental Consequences

This section summarizes the effects on the environment of implementing the Proposed Action or No Action alternative. The discussion of overall effects of the Eagle ITP program is provided in the PEIS (USFWS 2016a) and is incorporated by reference here. This section of this EA analyzes only the effects that were not analyzed in the PEIS and that may result from the issuance of an Eagle ITP for this specific project.

4.1 Golden Eagle

Potential direct and indirect effects of continued operation of the Project on golden eagles include the risk of collision, electrocution, and disturbance/displacement. The level of direct mortality in the Local Area Population (LAP) that is caused by the Project and other reasonably foreseeable projects in relation to annual allowable take for golden eagles are provided below under cumulative effects. As this document was developed after construction was completed, impacts from the construction of the Project are not relevant to this analysis.

In determining the significance of effects of the Project on eagles, we screened the Proposed Action against the analysis provided in the PEIS (USFWS 2016a) 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 (Appendix D in USFWS 2013) and Cumulative Effects Analysis (Appendix F in USFWS 2013) to quantify eagle fatality risk and cumulative local population level effects.

4.1.1 Proposed Action

Under the Proposed Action, we estimate that up to 13 golden eagles may be taken in the first 2-year period, or 110 golden eagles over the 17-year life of the Eagle ITP. However, the take that would be authorized by this Eagle ITP for the Project would be offset by the compensatory mitigation that would be provided by the Applicant, and would not significantly impact local area eagle populations. This prediction is based on an approach that incorporated the results of 2 years of post-construction monitoring into the predictive model. We believe this prediction reflects the likely take at the Project. The proposed conservation measures include adaptive management that could result in additional monitoring and operational adjustments (Table 2). Additionally, under the Proposed Action and previous commitments, a number of avoidance and minimization measures would be implemented. These include, but are not limited to, a Carcass Removal Program and a Worker Education Awareness Program (see Section 4.7 and Appendix A, Section 3.2). These avoidance and minimization measures are expected to minimize risk to eagles.

RHW2 has developed an adaptive management framework in cooperation with the Service that will be applied over the course of the 17-year permit term. The adaptive management framework establishes trigger levels over a specified number of years of monitoring effort which will result in implementation of a combination of enhanced monitoring and specific conservation measures (Table 2; see Appendix A, Section 6.0). Each subsequent trigger level will result in more extensive or focused conservation measures. RHW2 will use this framework to adaptively manage Project-related golden eagle fatalities and address the underlying uncertainty in collision risk to golden eagles posed by the Project. RHW2, in coordination with the Service, may adjust adaptive management triggers and implementation of corresponding conservation measures based on the results of permit reviews. More detail on triggers and conservation measures can be found in Appendix A, Section 6.0.

Table 2. Adaptive Management Trigger Levels

Trigger Levels	Standard Fatality Monitoring	Years of Enhanced Monitoring ¹	
		5	≥10
1	≥4 GOEA remains found in first 2 years	Not applicable	Not applicable
2	≥12 GOEA remains found in first 7 years	≥17 GOEA remains found in first 7 years	Not applicable
3	≥21 GOEA remains found in first 12 years	≥26 GOEA remains found in first 12 years	≥32 GOEA remains found in first 12 years

Trigger Levels	Standard Fatality Monitoring	Years of Enhanced Monitoring ¹	
		5	≥10
4	The minimum average g-value (probability that eagle remains will be detected by monitoring efforts) is not achieved in any review period during the permit tenure, as determined by the Service. OR Enhanced monitoring, if required through this adaptive management table, does not achieve a minimum average g-value during the required review period, as determined by the Service.		
1. Upon achievement of any trigger, enhanced monitoring will only be required for the subsequent review period, at which point Standard Monitoring can resume as initially prescribed, unless another trigger is achieved.			

Conservation measures will be selected at the discretion of RHW2 in coordination with the Service, will be based on best available science and practicability, and could include the following examples:

- Examine monitoring data to identify when and where take is occurring and perform updraft modeling to identify specific turbines with the highest collision risk under a suite of wind conditions.
- Test a conservation measure designed to reduce the number of eagles exposed to collision risk (i.e., test a deterrent). This measure could involve an automated video camera-based detection system coupled with an audible deterrent system such as those developed by DT Bird or BirdsVision to minimize the likelihood of future take. Modules would be installed at a subset of turbines using results of a desktop analysis of collision risk (e.g., spatial pattern of documented fatalities among turbines, updraft modelling) to prioritize those turbines of highest collision risk. Turbines with documented fatalities will be prioritized. Implementation of the conservation measure would incorporate a study designed to evaluate the effectiveness of the conservation measure.
- Test a conservation measure designed to reduce the source of collision risk (i.e., curtailment of turbines). This measure would involve an informed curtailment program wherein turbines would be feathered when eagles approach a turbine or group of turbines. The program would be implemented during specific seasons and times of day as informed from the results of previous studies. Triggering of curtailment could occur using either 1) biomonitors, or 2) an automated video camera-based detection system such as Identiflight. Implementation of the measure would incorporate a study designed to evaluate the effectiveness of the conservation measure.

Power pole electrocution has been shown to cause a significant number of eagle fatalities (APLIC 2006). Therefore, retrofitting high-risk electric poles is an effective way to minimize fatalities in eagle populations (USFWS 2013). Retrofits are also an effective and quantifiable compensatory mitigation measure that may be used to offset any fatalities that may occur as a result of operation of a project. As mitigation to offset the initial take prediction for the first 2 years, RHW2 will commit to 288 power pole retrofits, mitigating the loss of up to 13 eagles in the first 2 years of the Eagle ITP term. In September 2016, RHW2 provided funding to Tucson Electric Power Company (TEP) to complete the retrofitting of

26 poles as part of the mitigation commitments included in the original ECP. The Service agreed that these retrofits could be credited toward the number of retrofitted poles needed for the first 2 years of the permit term. Therefore, 262 additional pole retrofits will be completed according to the permit conditions. The number of power pole retrofits was identified using the Service's resource equivalency analysis model for calculating appropriate eagle compensatory mitigation values for power pole retrofits (USFWS 2013). More detail on this calculation is provided in the Draft Mitigation Program (Appendix C of Appendix A). Mitigation to offset take over the duration of the Eagle ITP will be determined based on estimated past take and predicted future take. Retrofitted power poles will be monitored and maintained for the effective life of the retrofits.

If an Eagle ITP is issued, eagle-focused compliance monitoring will be conducted using a study design consistent with the Eagle Conservation Plan Guidance (ECPG; Service 2013) and approved by the Service. Monitoring is a critical component of adaptive management. Together, these conservation measures ensure there will be no significant impacts to golden eagles.

4.1.2 Alternative 1 – No Action

Under the no action alternative, the Service would not issue an Eagle ITP, as described in Section 2.2. As with all alternatives, golden eagles are expected to be directly impacted through fatalities from collisions with turbines. Even though the Service would take no action on the permit application under the No-Action Alternative, the Project would likely continue to operate without authorization for the take of eagles. If take of eagles occur under the No-Action Alternative, the Applicant would be in violation of the Eagle Act. Because no 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 other alternatives. Under this alternative, direct impacts of the Project on the eagle population are anticipated to be up to 6.47 eagles per year over the remaining 17-year life of the Project. No adaptive management measures would be triggered if take exceeded that level. None of the impacts to golden eagles would be offset by compensatory mitigation.

This alternative does not meet the purpose and need for the action because, by regulation (50 C.F.R. § 13.21), when in receipt of a completed application, the Service must either issue or deny an Eagle ITP to the Applicant. 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.

4.1.3 Alternative 2 – 5-Year Permit

Under this alternative, the Service would issue a 5-year Eagle ITP for 33 golden eagles over the 5-year period as described in Section 2.3. The Eagle ITP would need to be renewed after 5 years for the Project to have take coverage for the entire 17-year life of the Project. The direct effect of this alternative on golden eagles is expected take of up to 33 golden eagles over the 5 years of the permit. The impacts of direct take on golden eagles are the same as the Proposed Action. In addition, all adaptive management,

mitigation, monitoring, and avoidance and minimization measures would be implemented for a duration of 5 years, as appropriate, for this alternative. Specific to adaptive management, only Trigger Level 1 would apply (Appendix A Section 6.0) to this alternative, with enhanced monitoring triggering for the remainder of the permit term. Together, these commitments ensure there will be no significant impacts to golden eagles. This alternative meets the purpose and need for the action, but provides the Applicant and the Service less long-term certainty.

4.2 Bald Eagle

Given the lack of foraging and nesting habitat in the Project Area for bald eagles, they are expected to have a low likelihood of occurrence. The Proposed Action as well as the other action alternative would be granting an Eagle ITP for golden eagles and would not affect bald eagles; however, implementation of avoidance and minimization measures outlined in the ECP may benefit bald eagles if they were to occur in the area (Appendix A). The No Action Alternative would not affect bald eagles. Therefore, none of the alternatives are expected to have a significant effect on bald eagles.

4.3 Migratory Birds

The Proposed Action and other action alternative would be granting an Eagle ITP for golden eagles and would not affect other migratory birds; however, implementation of avoidance and minimization measures outlined in the ECP may benefit other migratory birds to a certain extent (Appendix A). The No Action Alternative would not affect migratory birds. Therefore, none of the alternatives are expected to have a significant effect on migratory birds.

4.4 Species Listed under the Endangered Species Act

No species listed under the Endangered Species Act would be expected to be affected by issuance of the Eagle ITP and the associated conservation and compensatory mitigation measures.

4.5 Cultural and Socio-economic Interests

Eagles and their feathers are sacred in many Native American traditions. Selection of the Proposed Action is not expected to interfere substantially with cultural practices and ceremonies related to eagles, or to affect the ability of tribes to use eagle feathers consistent with Federal law. However, with a requirement for fatality monitoring that extends through the expected life of the project, it is likely that more eagle remains will be discovered compared to Alternative 2. Eagle remains that are found go to the Service's National Eagle Repository and, if in good condition, are distributed to permitted members of federally recognized tribes. The largest percentage of eagle remains may be found under the Proposed Action, increasing the number of eagles collected and available to Native Americans over time for their use for ceremonial purposes. If we select the No-Action Alternative, RHW2 will not be required to implement fatality monitoring. Although on-site staff may continue to report eagle fatalities found incidentally, without regular monitoring it is likely that a smaller percentage of eagle remains will be

found. This would reduce the number of eagles collected and available to Native Americans for their use for ceremonial purposes.

We do not anticipate that the take of eagles under the Proposed Action will interfere with cultural practices and ceremonies related to eagles, or affect the ability of Native Americans to utilize eagles, parts, or feathers in a manner consistent with federal law. Permitting the incidental take of eagles is not expected to interfere with other priority uses or permits during the permit term because the eagle preservation standard is expected to be achieved through the implementation of the ECP.

Under the Proposed Action, a greater number of power pole retrofits will be required to mitigate for the take of eagles. The No-Action Alternative would not require RHW2 to mitigate for predicted eagle mortality at their facility, which would result in a net loss to eagle populations.

4.6 Climate Change

Climate change was considered in the PEIS (USFWS 2016a; PEIS Section 3.9, page 144) and is incorporated by reference here. There are no climate change impacts that would be expected by issuance of the Eagle ITP.

4.7 Comparison of Effects of Alternatives

Table 3 compares the effects of the Proposed Action and alternatives.

Table 3. Comparison of Effects of the Proposed Action and Alternatives

Eagle Take Levels	Proposed Action – Issue 17-Year Permit 13 Eagles over 2 Years and 110 Eagles over 17 Years	Alternative 1 – No Action 110 Eagles over 17 years	Alternative 2 – 5-Year Permit 33 Eagles over 5 Years
Avoidance and Minimization	Limit vehicle movement to the Project boundary, pre-designated access, and public roads	Same as Proposed Action with exception of eagle-specific Worker Education Awareness Program which would not be implemented	Same as Proposed Action
	Implement site controls to reduce wildlife collisions		
	Implement a wildlife and livestock carcass removal program		
	Implement a Worker Education Awareness Program addressing eagle-specific educational needs		
	Employ existing fencing wherever possible. Use wildlife-compliant fencing wherever new fence is installed		
	Follow handling guidelines for toxic substances. Maintain Hazardous Materials Spill Kits on-site and train personnel in the use of these		
	Limit wildfire hazards from vehicles and human activities by implementing appropriate best management practices		
Fatality Monitoring	Monitoring over the 17-year permit term as described in the ECP (Appendix A, Section 5.0), plus additional monitoring as triggered under adaptive management (see Table 2)	None	Monitoring during the 5-year permit term as described in the ECP (Appendix A, Section 5.0), plus additional monitoring as triggered under adaptive management (see Table 2)

Eagle Take Levels	Proposed Action – Issue 17-Year Permit 13 Eagles over 2 Years and 110 Eagles over 17 Years	Alternative 1 – No Action 110 Eagles over 17 years	Alternative 2 – 5-Year Permit 33 Eagles over 5 Years
Compensatory Mitigation	262 additional pole retrofits (total of 288; 26 have already been completed), mitigating take of 13 eagles for first 2 years. Mitigation required over the life of the Eagle ITP to be determined based on estimated past take and predicted future take	26 power pole retrofits already completed	Same as Proposed Action
Unmitigated Eagle Take	None	110 golden eagles over 17 years	None
Adaptive Management	See Table 2. Adaptive Management Trigger Values	None	See Table 2. Adaptive Management Trigger Values
Data Collected by the Service	Annual monitoring report of fatalities; reporting of injured eagles; information on the effects of specific, applied, conservation measures; report on completion of pole retrofits	None. 3 years of PCMM have been completed	Same as Proposed Action
Company Liability for Eagle Take	None (if in compliance with permit conditions)	Company liable	None (if in compliance with permit conditions)

4.8 Cumulative Effects

Cumulative effects have been discussed in Chapter 4 of the PEIS (USFWS 2016a). For the discussion in this EA, cumulative effects will be assessed relative to the issuance of an Eagle ITP for the area corresponding to the LAP of golden eagles, rather than using EMUs or Bird Conservation Regions.

4.8.1 Golden Eagle

Take of eagles has the potential to affect the larger eagle population. Accordingly, the 2016 PEIS analyzed the cumulative effects of permitting take of golden eagles in combination with ongoing unauthorized sources of human-caused eagle mortality and other present or foreseeable future actions affecting golden eagle populations. As part of the analysis, the Service determined sustainable limits to permitted take within each EMU.

Using the Service's Bayesian Model (USFWS 2013), the predicted number of eagles killed at the Project annually will be 6.47 golden eagles (prediction at the 80th quantile). The take that would be authorized by this permit will be offset by the compensatory mitigation that will be provided by the Applicant, so will not significantly impact the EMU eagle population. The avoidance and minimization measures 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 the golden eagle 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 PEIS (USFWS 2016a) the amount of take that can be authorized while still maintaining local area populations (LAP) of eagles. In order to issue a permit, cumulative authorized take must not exceed 5 percent of a LAP unless the Service can demonstrate why allowing take to exceed that limit is still compatible with the preservation of eagles. The Eagle ITP regulations require the Service to conduct an individual LAP analysis for each permit application as part of our application review.

This analysis, therefore, considers cumulative effects to the LAP surrounding the Project to evaluate whether the take to be authorized under this Eagle ITP, together with other sources of permitted take and unpermitted eagle mortality, may be incompatible with the persistence of the Project LAP. Data provided by the Applicant, Service data on other eagle take authorized and permitted by the Service, and other reliably documented unauthorized eagle fatalities are all evaluated to estimate cumulative impacts to the LAP. The scale of our analysis is a 109-mile radius around the Project site. We conducted our cumulative effects analysis as described in the Service's ECPG (Appendix F in USFWS 2013).

4.8.1.1 Local Area Population Analysis

The Service's cumulative effects tool (CET) was used to complete the LAP analysis, which is described in detail below. This analysis incorporates both records of federal eagle take permits issued (i.e., authorized take) and unpermitted eagle mortality records that are available to the Service. Eagle

mortality records from state wildlife agencies within the LAP are entered in the federal database and included in the analysis.

4.8.1.2 Authorized Take

Based on our analysis using the Service's CET, the Project LAP was estimated to be approximately 176 golden eagles (USFWS Cumulative Effects Tool, run September 15, 2020). Using this estimate, the 5 percent annual take threshold for the Project's LAP is 8.79 golden eagles (i.e., 9 individual eagles). There are currently no permitted projects that overlap this LAP; therefore, the Project's estimated annual take alone of 6.47 golden eagles would be approximately 3.68 percent of the LAP, which is below the 5 percent threshold.

The Eagle ITP regulations require that compensatory mitigation is sited within the same EMU where the permitted take will occur. However, if cumulative authorized take exceeds 5 percent in the LAP, compensatory mitigation sited within the LAP may be required in order for the Service to determine that a project still meets the Eagle Act preservation standard. Even though the take that would be authorized by this permit does not exceed the 5 percent threshold, the initial take prediction for the first 2 years of the permit term will be offset by compensatory mitigation within the Project LAP.

4.8.1.3 Unauthorized Take

An important caveat that comes with the Service's unauthorized take analysis is that it only includes records of take that have been incidentally discovered and reported. Therefore, they represent the minimum number of unpermitted eagle fatalities, and there are likely more fatalities that were not discovered and/or reported. Also, some industries have self-reported incidental eagle fatalities at a higher rate than others, and some types of eagle fatalities (e.g., road kill) can lend themselves better to incidental discovery and reporting while fatalities in remote locations are not likely to be discovered. Thus, some causes of mortality, such as poisoning for example, may be under-represented in our database. However, this analysis uses the best information available to us regarding eagle fatalities within and around the LAP.

We examined the Service's eagle mortality database for known unpermitted take within a distance of two times the Project LAP to include records from all LAPs that overlap the Project. There were 28 reported golden eagle fatalities within 218 miles of the Project between 2001 and 2020. Of the total reported golden eagle fatalities in this time period, 3 (11 percent) were due to natural causes, 21 (75 percent) were due to anthropogenic causes, and the mortality of the remaining 4 (14 percent) individuals was undetermined. Of the anthropogenic causes of mortality, 8 (38 percent) were due to electrocution, 4 (19 percent) were due to collision with wind turbines, 4 (19 percent) were due to poisoning by pesticide and other sources, 4 (19 percent) were due to trauma, and 1 (5 percent) was due to vehicle collision. All of these fatalities are considered to be unpermitted take.

4.8.1.4 General Potential Impacts

We examined the general impacts within a distance of two times the Project LAP to include information from all LAPs that overlap the Project. In terms of general growth, Arizona was identified as the third fastest-growing state in the U.S. from July 2018 to July 2019 (USCB 2019); presumably this increase in population has increased overall development in the state as well. New Mexico appears to be growing at a much slower rate, identified as the 32nd fastest-growing state in the U.S. for the same dates (USCB 2019). Cochise County identifies a growing wine industry in the area (County of Cochise 2019). Long-term, the Project Area is planned for moderate residential development and open space recreation opportunities. As a result, some habitat loss and fragmentation over the next 17 years may occur due to development, though this will likely be balanced with open space areas. There is another wind energy project planned for development within the Project LAP (Hoen et al. 2019). Within 218 miles of the Project (i.e., a distance that would capture overlapping LAPs), there are currently an additional 3 operational wind energy facilities and 2 projects planned for development (Hoen et al. 2019). The potential impacts from other operational and planned facilities are unknown.

Drought associated with climate change could affect golden eagle populations in this region by reducing availability of prey. Precipitation in this part of the desert is not consistent and short-term drought periods are common.

4.8.1.5 Conclusion

Authorizing the take of golden eagles at this Project would lead to a cumulative permitted take less than 5 percent of the LAP. In our review of known golden eagle take within the LAP, we did not identify evidence to conclude local sources of eagle take are different from those discussed in the PEIS for the entire nation (USFWS 2016a, PEIS Section 4.1). Further, as described in this EA, should an Eagle ITP be issued, the take that would be authorized by this Eagle ITP would be offset by the compensatory mitigation that will be provided by the Applicant, so would not significantly impact the EMU eagle population. The avoidance and minimization measures that would be required under the Eagle ITP, along with the additional adaptive management measures, are designed to further ensure that the Eagle ITP is compatible with the preservation of the golden eagle at the regional EMU population scale.

Chapter 5: Mitigation and Monitoring

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 (USFWS 2016a), compensatory mitigation is necessary to offset any authorized take of golden eagles. The compensatory mitigation of power pole retrofits has been described above in Section 4.1.1.

Should an Eagle ITP be issued, eagle-focused compliance monitoring will be conducted using a study design consistent with the ECPG and 2016 Eagle Rule revisions, and approved by the Service. RHW2 will work with the Service to determine the level of uncertainty acceptable to the Service and RHW2 and perform appropriate analyses to determine sufficient levels of effort to inform permit compliance. The compliance monitoring and other requirements will be included in the ITP conditions. Additionally, a Worker Search Program has been developed and will be implemented for the lifetime of the Project.

The Applicant will monitor eagle fatalities during compliance monitoring using independent, third party monitors that report the monitoring results directly to the Service according to the methods described in the ECP (Appendix A). After the first 2 years (and thereafter, every 5 years), the Service will review the eagle fatality data and other pertinent information, as well as information provided by RHW2 and independent third-party monitors, assessing whether RHW2 is in compliance with the terms and conditions of the Eagle ITP and has implemented all applicable adaptive management measures specified in the Eagle ITP, and ensuring eagle take has not exceeded the amount authorized within that time frame. Fatality predictions, authorized take levels and compensatory mitigation will be updated, as needed, for future years of the Eagle ITP.

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 Eagle ITP, 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 Eagle ITP.

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**APPENDIX A. EAGLE CONSERVATION PLAN FOR THE RED
HORSE WIND 2 ENERGY FACILITY**

APPENDIX B. TRIBAL COORDINATION

**APPENDIX C. INTRA-SERVICE SECTION 7 BIOLOGICAL
EVALUATION**

APPENDIX D. COMPENSATORY MITIGATION ADDENDUM