



U.S. Fish and Wildlife Service

**Environmental Assessment
for the Issuance of an Incidental Eagle Take Permit to
KB Home Colorado's Westwood Development
Adams County, Colorado**

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1. Introduction

This Environmental Assessment (EA) is prepared to analyze the environmental consequences of the U.S. Fish and Wildlife Service (Service) issuing an incidental eagle take permit (IETP) for disturbance take of bald eagles (*Haliaeetus leucocephalus*) associated with the construction of the proposed KB Home Colorado's Westwood Development Project (Project) in Adams County, Colorado pursuant to the National Environmental Policy Act (NEPA) (42 U.S. Code [U.S.C.] Sections [§§] 4321–4347). Issuance of a permit 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. §§ 668–668e and 50 Code of Federal Regulations [C.F.R.] § 22.80) constitutes a discretionary Federal action that is subject to NEPA. This EA assists the Service in ensuring compliance with the 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 of whether to issue an IETP.

The Eagle Act authorizes the Service to issue an IETP only when the take is compatible with the preservation of eagle species, defined (Service 2016a) as “consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations throughout the geographic range of each species.” The Eagle Act authorizes incidental take of eagles when take is associated with, but not the purpose of, an activity (50 C.F.R. § 22.80).

KB Home Colorado, Inc (Applicant) is requesting Eagle Act take coverage for construction activities associated with the Project. The Project will be constructed in a currently undeveloped area surrounded mainly by agricultural fields and pastures. The closest developments are a half-mile north and a half-mile east. There is a bald eagle pair nesting about 145 feet north of the Project boundary. The Applicant has requested an IETP for bald eagles under the Eagle Act to cover Project construction work in 2023–2028 that will occur in proximity to the bald eagle nest. The Applicant submitted an amended permit application to the Service via emails received by the USFWS Region 6, Migratory Bird Permit Office on August 23, 2022, requesting a short-term 5-year IETP for the Project. In support of their application, the Applicant has committed to implementing avoidance and minimization measures designed to limit disturbance to nesting bald eagles during the Project's construction activities.

The Applicant is requesting an IETP for the disturbance take of up to 1.33 bald eagles annually, over 5-years, related to the construction of the Project. This EA evaluates whether issuance of an IETP will have a significant impact on the existing human environment. “Significance” under NEPA is defined at 40 C.F.R. § 1508.27 (of the expired NEPA regulations) and requires consideration of both short- and long-term effects. Significance also requires consideration of both context and intensity.

The EA evaluated potential impacts that could result from the issuance of a short term 5-year IETP. The EA was developed to assist the Service in evaluating effects on the human environment and in assessing the significance of the impacts that could result from the alternatives. “Significance” under NEPA requires the consideration of context and intensity (40 C.F.R. § 1508.27).

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 (Service 2016a). The 2016 Programmatic Environmental Impact Statement (PEIS) is incorporated herein by reference, and this EA tiers from the 2016 PEIS (40 C.F.R. § 1508.28). Project-specific information not considered in the PEIS (Service 2016a) will be considered in this EA as described below.

1.1 Purpose and Need

The Service's purpose in considering the proposed action is to fulfill our authority under the Eagle Act and its implementing regulations. Applicants whose otherwise lawful activities may result in take of eagles, can apply for an IETP so that their project may proceed without potential violations of the Eagle Act. Under the Eagle Act regulations, the Service may issue an IETP for eagle take that is associated with, but not the purpose of, an activity (50 C.F.R. § 22.80). Such permits can be issued by the Service when the take that is authorized is compatible with the Eagle Act preservation standard; is necessary to protect an interest in a particular locality; is associated with, but not the purpose of, the activity; and cannot be practicably avoided. *Id.*; see also 81 Federal Register [F.R.] 91494 (Service 2016a). The preservation standard under the Eagle Act means to be consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations of bald and golden eagles throughout the geographic range of each species (50 C.F.R. § 22.6).

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

1.2 Authorities

Service authorities are codified under multiple statutes that address management and conservation of natural resources from many perspectives, including, but not limited to, the effects of land, water, and energy development on fish, wildlife, plants, and their habitats. This analysis is based on the Eagle Act (16 U.S.C. §§ 668–668e) and its regulations (50 C.F.R., Part 22). The PEIS (Service 2016a) 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 Project is a 72.2-acre single-family residential development to be constructed in a rapidly developing area of Adams County, within city limits of Thornton, Colorado. The Project is roughly bounded by Holly Street on the west, Signal Ditch and private property on the north, Monaco Street on the east, and private property on the south. Highway 7/East 160th Avenue is approximately 0.5 mile north and E-470 is approximately 0.5 mile southwest of the project area (Figure 1).

KB Homes Colorado's Westwood Development Project

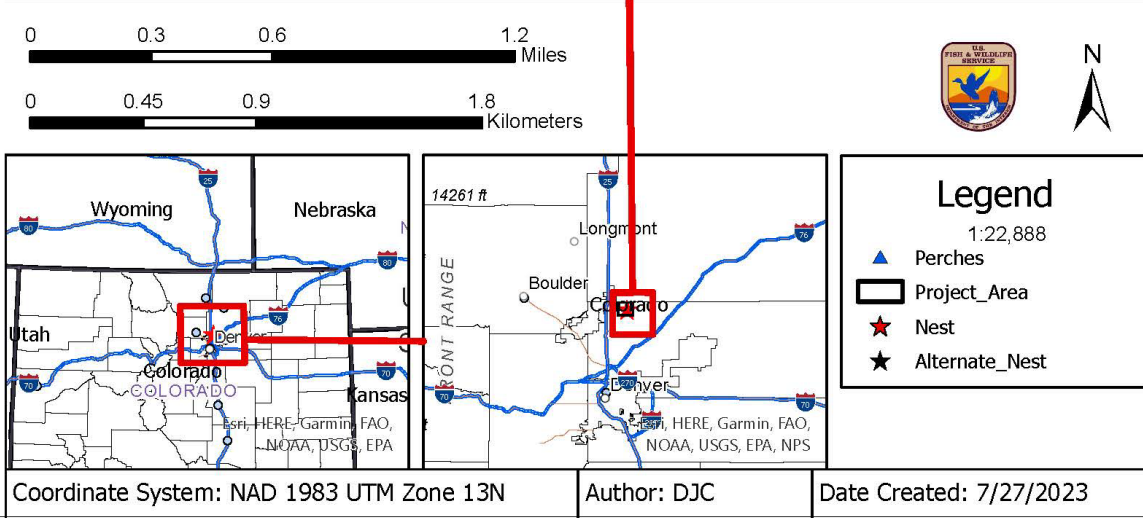
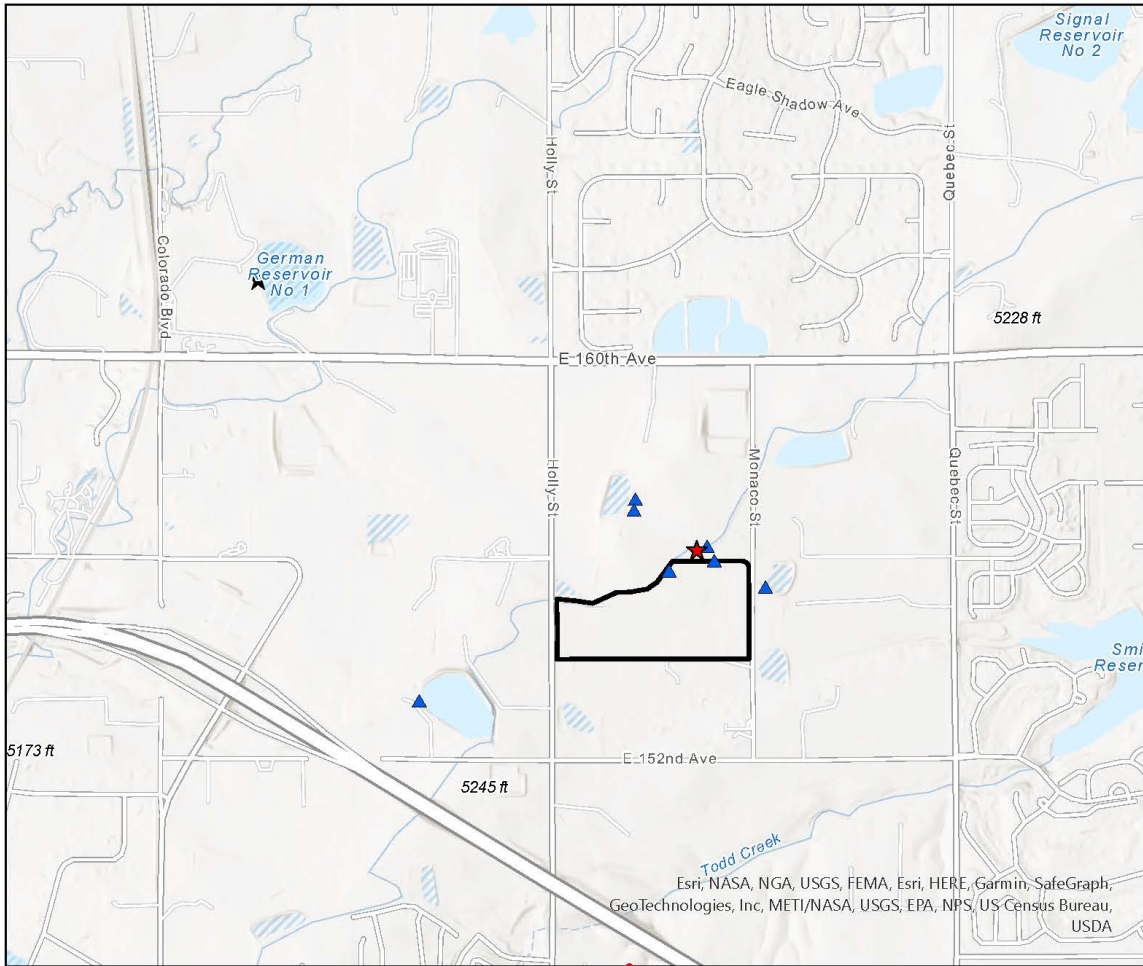


Figure 1. Map showing the KB Home Colorado's Westwood Development Project boundary, nest location, alternate nest location, and frequently used perches.

The bald eagle pair is nesting in a plains cottonwood (*Populus deltoides*) tree on the south edge of Signal Ditch within about 145 feet of the closest parcel footprint. The eagle nest is located on private property that is used for agriculture purposes. The adult eagles have occasionally been observed in the Project area. Portions of the project are located within 660 feet of the occupied bald eagle nest. Specifically, 41 parcels and 3 local roads are located within 660 feet of the nest, as well as 9 parcels and 1 local road located within 330 feet of the active nest site (Figure 2). The project construction activities within 660 feet of the occupied nest that may disturb or cause take of bald eagles include, but are not limited to, heavy equipment and light-duty traffic, excavation, building foundations, and vertical construction of single-family residences with associated parking and infrastructure including concrete and asphalt, garages, domestic water distribution, sanitary sewer, storm sewer, landscaping, other miscellaneous construction and field activities, foot traffic, and environmental and safety monitoring.

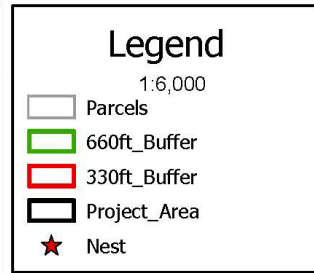
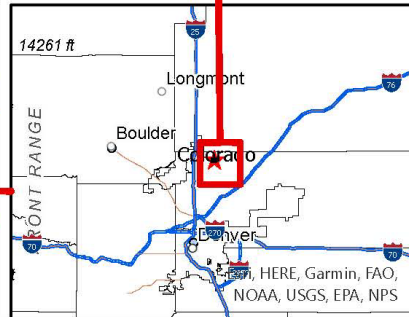
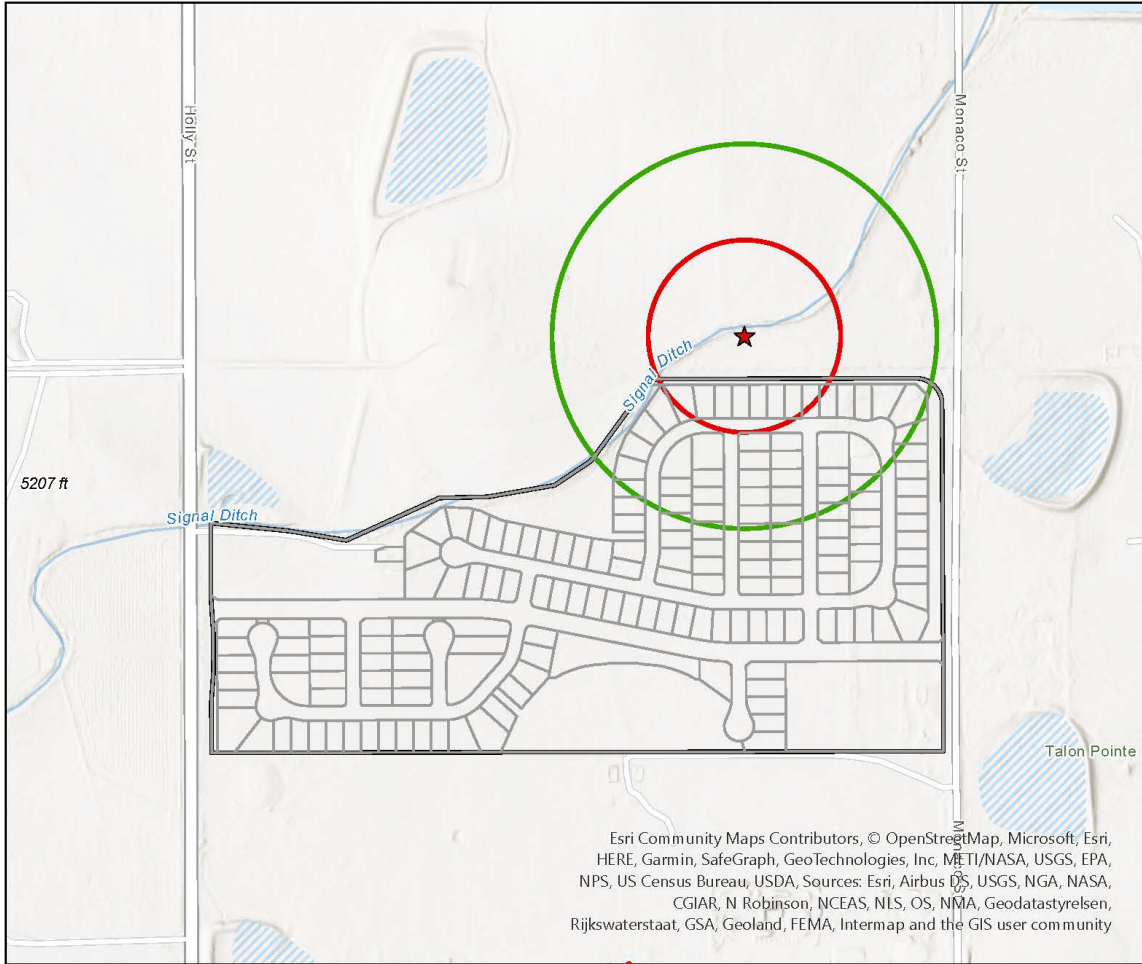
Site preparation and construction activities for this development began in 2021. After initial coordination with the Service and Colorado Parks and Wildlife (CPW), project activities were limited to occurring outside of a 660-foot nest buffer during the active nesting season. The Applicant, through its contractor ERO Resources Corporation (ERO), has maintained close coordination with the Service to implement avoidance and minimization actions throughout the 2021, 2022, and 2023 nesting seasons. Minimization included implementing a 660-foot buffer around the nest during the breeding season and having periodic monitoring of the eagles to evaluate potential adverse behavioral reactions to construction outside the buffer. The adult eagles displayed very little reaction to construction and two young eagles successfully fledged the nest in both 2021 and 2022, and currently two bald eagle hatchlings are occupying the nest as May 31, 2023, while construction is ongoing outside of the 660-foot nest buffer. It is anticipated that activities within 660 feet of the bald eagle nest could begin as soon as Spring 2023 and will conclude before expiration of the short-term IETP in 2028. As stated above, the construction activities within 0.5 mile but outside of the 660-foot nest buffer began in 2021. Currently, the Applicant is in the process of preparing the site and beginning construction outside of 660 feet of the nest.

The Colorado Front Range is experiencing rapid residential growth and has a strong need for housing for new and existing residents. The purpose of the Project is to build residential units to meet the housing needs of residents. Interests that would be protected under the IETP would primarily include the Applicant as well as the site plan approval agencies including the city of Thornton. Approval of an IETP would allow the Applicant to continue construction activities in a manner that reduces and mitigates impacts on the existing nest. An IETP, allowing for possible disturbance to the established nesting bald eagle pair, is necessary to allow for construction of the roads, homes, and housing infrastructure located within 660 feet of the nest.

Project construction will occur during the remainder of the 2023 bald eagle nesting season and could interfere with normal breeding, feeding, or sheltering behaviors to a degree that could cause a decrease in nest productivity or the loss of all productivity due to nest abandonment. If this were to occur, the result would be disturbance take of the eagle pair, which is prohibited by the Eagle Act without legal authorization from the Service.

The Applicant submitted an IETP application to the Service on August 23, 2022, requesting a short-term 5-year IETP for the Project's operational activities.

KB Homes Colorado's Westwood Development Project



Coordinate System: NAD 1983 UTM Zone 13N

Author: DJC

Date Created: 7/27/2023

Figure 2. Map showing the KB Home Colorado's Westwood Development Project boundary, parcel layout, nest location, 660-foot nest buffer, and 330-foot nest buffer.

1.4 Scoping, consultation, and coordination

This EA incorporates, by reference, the scoping performed for the PEIS (Chapter 6, page 175). The Applicant worked closely with the Service to develop avoidance, minimization, mitigation, and monitoring measures that have been incorporated into the Project planning to mitigate adverse effects on the bald eagles. The Applicant has communicated regularly with the Service regarding the Project plans and biological surveys beginning in 2021 and intend to continue to coordinate with the Service throughout the permit process to avoid and minimize impacts to migratory birds including eagles.

1.4.1 Tribal Coordination

The Service currently manages bald eagles at the Eagle Management Unit (EMU) level, which is defined as the four administrative flyways with some modifications. This Project occurs in the Central Flyway. At the time the draft EA was made available for the 30-day public comment period, we contacted nineteen native sovereign nation tribal leaders potentially affected by this Project through emailed formal letters to offer the opportunity for formal consultation concerning this potential federal action. The letters informed the tribal leaders and other potentially affected Tribes of the receipt of the IETP application and preparation of this EA by the Service.

2. Proposed Action and Alternatives

2.1 Proposed Action

We propose to issue a short-term 5-year IETP to the Applicant, authorizing them to disturb up to 1.33 bald eagles annually (for a total authorized take of up to seven bald eagles over the life of the 5-year permit) including the loss of productivity (i.e., eggs or young) due to potential abandonment of the nest during construction activities related to the Project, including required permit conditions, as allowed by regulation. The permit would also specify that the disturbance take authorization only applies to the bald eagle nest. The permit would also require nest monitoring and reporting from 2023 through the 2028 bald eagle nesting seasons; hence, the permit would not expire until after the 2028 breeding season. This would be a 50 C.F.R. § 22.80 Eagle Act permit (C.F.R. 2022) for disturbance take only. The permit would also require the Applicant to implement the applicant-committed conservation measures (as the Applicant described in their permit application) as described below that are designed to minimize possible bald eagle disturbance take associated with the Project.

1. Should an IETP be issued, the most disruptive construction activities (site grading and large equipment work) within the 660-foot nest buffer area will occur outside the eagle sensitive time (January 1 through July 31) or while a biological monitor is on-site.
2. A qualified biologist will monitor the eagle nest site periodically throughout the breeding season, from January 1 through July 31, while work is occurring within the 660-foot nest buffer area, as described below:
 - Biological monitors will have stop work authority when eagles exhibit adverse reactions to disturbance.
 - Monitoring will occur from a vantage point that does not cause additional disturbance to the nesting eagles.

- Monitoring will occur in order to document the specific construction activities that are occurring within 660 feet of the nest tree and to observe behavioral reactions of eagles to the construction activities.
 - Monitoring will occur during all major phases of the project construction and occur for a minimum of three days each week for four hours per day during the early and sensitive phases of the nesting cycle.
 - Monitoring may be able to be reduced to one day each week (for four hours) beginning five weeks post-hatch until fledging.
 - Monitoring will occur at a time of day when eagles are most likely to be in the area (dawn/early morning).
 - Additional monitoring will occur during construction activities that are particularly noisy (e.g., roofing).
 - Monitoring will increase during project construction at a schedule recommended by the Service to evaluate the eagles' responses to project activities.
 - If the eagle pair show signs of stress, the Service and CPW will be contacted immediately.
3. The monitoring biologist will give monthly monitoring updates to the Service Ecological Services Office in Lakewood, Colorado; the Service Region 6 Migratory Bird Permitting Office in Lakewood, Colorado; CPW; and the city of Thornton.
 4. A final report summarizing the monitoring results and the fate of the breeding efforts will be sent to the Service Ecological Services Office in Lakewood, Colorado; the Service Region 6 Migratory Bird Permitting Office in Lakewood, Colorado; CPW; and the city of Thornton within one month of the conclusion of monitoring.
 5. Monitoring post-construction will continue at a schedule recommended by the Service.
 6. No night work will occur during incubation and brooding.
 7. No work will occur during extreme weather events (extreme cold, significant snow, and extreme wind) or during sensitive times (incubation and the first portion of brooding as determined by a qualified biologist).
 8. No road access will be allowed to occur from the north or northeast edge of the project site. All access will be from the south.
 9. In order to minimize disturbance from heavy machinery, trucks hauling building materials within the nest buffers will be reduced and secondary movement of these materials to specific building sites within the nest buffers will be minimized to the maximum extent practicable.
 10. Solid-waste receptacles/waste management best practices will be used during construction to avoid attracting eagles. See the Service Nationwide Standard Conservation Measures.
 11. The Applicant will educate and inform construction personnel about the nesting eagles.
 12. All on-site employees will be required to participate in an eagle awareness training session as prepared by a wildlife biologist.
 13. Contractors will be instructed to reduce foot traffic disturbance within nest buffers as much as possible. This will be included in the worker orientation eagle training.
 14. All on-site employees will be required to read, sign, and date documentation stating they understand and agree to adhere to the eagle awareness training.

2.2 Alternative 1: No Action

Under the no action alternative, we would take no further action on the IETP application. In

reality, the Service must take action on the IETP application, determining whether to deny or issue the permit. We consider this alternative because regulations require evaluation of a no action alternative, and it provides a clear comparison of any potential effects to the human environment from the proposed action.

The no action alternative in this context analyzes predictable outcomes of the Service not issuing an IETP. Under the no action alternative, the Project would likely continue to be constructed without an IETP 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 while constructing the Project, but the conservation measures proposed in the IETP application package (that have not already been implemented by the Applicant) would not be required.

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

2.3 Other Alternatives Considered but Not Evaluated in this Environmental Assessment

The Service considered other conservation measures based on communication with the Applicant and public input but concluded that these measures did not meet the purpose and need of the underlying action. They were either not consistent with the Eagle Act and its permitting regulations, were impracticable for the Applicant to carry out, or both. Therefore, the Service did not further assess the potential environmental impacts of these alternatives. Below is a summary of the alternatives considered but eliminated from further review.

2.3.1 *Alternative 2: Deny Permit*

Under this alternative, the Service would deny the permit application, and not issue an IETP because the Applicant falls under one of the disqualifying factors and circumstances denoted in 50 C.F.R. § 13.21; the application fails to meet all regulatory permit issuance criteria and required determinations listed in 50 C.F.R. § 22.80; or because the Service determines that the risk to eagles is so low that a take permit is unnecessary for the Project.

Our permit issuance regulations at 50 C.F.R. § 13.21(b) & (c) set forth a variety of circumstances that disqualify an Applicant from obtaining a permit (e.g., a conviction, or entry of a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act (MBTA), or the Eagle Act disqualifies any such person from receiving or exercising the privileges of a permit). The Applicant does not meet any of the disqualifying factors or circumstances denoted in 50 C.F.R. § 13.21. We next considered whether the Applicant meets all issuance criteria for the type of permit being issued. For Incidental Eagle Take Permits, those issuance criteria are found in 50 C.F.R. § 22.80(f) in the 2009 regulations (74 F.R. 46878; Service 2009). The Project application meets all the regulatory issuance criteria and required determinations (50 C.F.R. § 22.80) for the permit.

When an applicant for a permit is not disqualified under 50 C.F.R. § 13.21 and meets all the issuance criteria of 50 C.F.R. § 22.80, denial of the permit is not a reasonable option. Therefore,

this alternative, denial of the permit, was eliminated from further consideration.

2.3.2 Alternative 3: Issue Permit Based on the Application, and in Addition, Move Lots Outside the 330-foot Nest Buffer

Under this alternative, our action would be the same as the Proposed Action, and in addition, the Applicant would move lots outside the 330-foot nest buffer. Our National Bald Eagle Management Guidelines (Service 2007) recommends, for construction projects like this Project, that a buffer of 660 feet be applied during the eagle sensitive time, January 1 through July 31 (Service, 2007 page 12; when there is similar activity closer than within 1 mile of the nest and if the activity is visible from the nest). Colorado Parks and Wildlife also has recommended buffer zones and seasonal restrictions for Colorado raptors including the bald eagle (CPW 2008). The CPW recommendation for bald eagle nests is that there be no surface occupancy within a ¼ mile of active nests and a seasonal restriction to human encroachment within ½ mile radius of active nests from October 15 through July 31 (CPW, 2008). At present, within the 660-foot buffer around the nest, there are agricultural activities, Signal Ditch and associated ditch road, and two homesteads. The Applicant reviewed the site plans to possibly move some lots outside the 330-foot nest buffer, but other development constraints, such as required setback from existing oil and gas facilities, open space setbacks from the Signal Ditch, and site topography dictating that drainage and detention areas had to be sited on the southside of the subdivision, restricted moving the lots. Therefore, this alternative was eliminated from further consideration.

3. Affected Environment

This section describes the current status of the environmental resources and values that are affected by the proposed action and no action alternative. The Applicant, through ERO, consulted closely with the Service and agreed to limit Project activities to occurring outside of a 660-foot nest buffer area during the eagle sensitive time (January 1 through July 31) or while a biological monitor is on-site (see section 2.1). The Applicant has implemented avoidance and minimization actions throughout the 2021, 2022, and 2023 nesting seasons. Minimization included implementing a 660-foot buffer around the nest during the breeding season and having periodic monitoring of the eagles to evaluate potential adverse behavioral reactions to construction outside the nest buffer. These coordination efforts are summarized below.

3.1 Bald Eagle

General information on the taxonomy, ecology, distribution, and population trends of bald eagles is given in Section 3.2.1 of the PEIS (Service 2016b, pages 44-60) and is incorporated herein by reference. The rest of this section focuses on bald eagle occurrences in the Central Flyway EMU in which the Project occurs, the local area population (within 86 mi [138 km] of the Project), and areas surrounding the Project. 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 in the LAP is estimated to be 65 bald eagles.

Multiple data sources indicate that bald eagles are increasing rapidly in this management unit and within the local area affected by this project: (1) the bald eagle population in the portion of the Central Flyway EMU affected by this permit experienced a 69% increase in the number of

occupied bald eagle nesting territories between the early 2000's and 2009 (Service 2016b); (2) Breeding Bird Survey (BBS) data for the Central U.S. BBS region, which includes this portion of the Central Flyway EMU, indicate bald eagles in this region have experienced a 21.2% (95% credible interval = 14.4-28.8%) annual growth rate from 2005-2015; and (3) over the same period bald eagles experienced a 16% (6.7-30.3%) annual growth rate in Colorado (Sauer et al. 2017). The Service (2020) estimated that the bald eagle population has increased by a factor of 4.4 since 2009 across EMUs, excluding the southwestern U.S. and Alaska. Based on these results, the Service (2020) concluded that the bald eagle population has continued to increase rapidly since our previous survey.

3.1.1 Nest History

The bald eagle nest was first discovered as active in 2020, and it is believed this pair relocated from a nest (alternate nest) adjacent to German Reservoir Number 1 approximately 1.25 miles northwest of the currently active nest (Figure 1). The alternate nest was last used in 2019. The bald eagle pair successfully fledged two offspring from the current nest in 2021 and 2022, and as of June 6, 2023, one eaglet has fledged and the other was still in the nest. During this timeframe, ERO conducted frequent disturbance monitoring during the nesting season while initial site preparations for the Project occurred, including tree removal, pipeline excavation, oil and gas well removal, asbestos removal and soil abatement, and site grading work.

2021 Bald Eagle Nesting Season

In 2021, courtship/nest construction, egg laying, and hatching began prior to the first monitoring event on March 24th, as observations of caring for the young and chicks were made during the first monitoring site visit. On June 1st, 2021, monitors made the first observation of branching behavior. Fledging of the first young was observed on June 21st. No young were observed at the nest and were assumed to be fully fledged during a subsequent site visit on June 30th.

2022 Bald Eagle Nesting Season

In 2022, egg incubation was first observed on February 8th and until March 18th, when eagle behaviors indicated at least one of the eggs had hatched. Two nestlings were observed in the nest on subsequent monitoring visits. On June 10th, monitors observed the first young fledge, and during a subsequent site visit on June 23rd, both young were observed flying high over the project area.

2023 Bald Eagle Nesting Season

In 2023, egg incubation was first observed on February 2nd and as of June 6, 2023, one eaglet has fledged and the other was still in the nest. The nest is currently being monitored by ERO.

3.1.2 Nest Monitoring

Throughout these monitoring efforts, no significant disturbance indicators due to construction activities were observed; however, a few minor behavioral reactions were observed as described below.

2021 Bald Eagle Nest Monitoring

During 2021 monitoring, construction-related activities caused a minor behavioral reaction in the eagles (intently staring) on three occasions (March 25th, March 26th, and April 5th) during early tree and fence removal work that was occurring immediately adjacent to the 660-foot nest buffer prior to leaf out. While the nesting pair was aware of these activities, the behavioral reactions did not escalate, and the eagles quickly resumed normal nesting behavior. Additionally, a construction stop work order was voluntarily administered by the site supervisor one time (June 21st) when the young eaglet that was in the process of fledging was observed on the ground near outbuildings closer to the project work activities occurring outside of the 660-foot nest buffer. The supervisor immediately contacted the biological monitors to initiate observation and work was stopped. Work resumed the following day when an adult and both the monitors observed fledglings to be calm and behaving normally in trees 230 feet northeast of the nest location.

2022 Bald Eagle Nest Monitoring

During 2022 monitoring site visits, one disturbance indicator (flushing) was observed on February 8th due to a human activity not related to the construction (tractor on the private parcel north of the Westwood project area) and one instance of staring intently due to construction activity (staking) was observed on February 16th, but normal nesting behaviors quickly resumed. One disturbance indicator (flushing) was observed on March 25th due to a hawk in the immediate nest vicinity, and one instance of staring intently due to construction activity (trucks within project area) was observed on March 29th, but normal nesting behaviors quickly resumed. On April 14th non-project related work associated with removal of debris and trailers on the property just north of the Project area (approximately 170 feet from the nest) caused the adult eagle in the nest to be aware of the activities and somewhat disturbed as indicated by staring intently for several minutes on two occasions, but the disturbance did not appear to result in substantial adverse behavioral reactions as normal breeding behaviors (brooding young, feeding) continued.

2023 Bald Eagle Nest Monitoring

So far, during 2023 the bald eagle pair has nested as of June 6, 2023, one eaglet has fledged and the other was still in the nest. During monitoring site visits, minor disturbance indicators have been observed. ERO Resources Corporation will continue to monitor the nest throughout the nesting season.

Datasheets for the monitoring observations of this nest conducted in 2021, 2022, and 2023 are included in the IETP application.

3.1.3 Important Use Areas

Foraging areas in the eagles' breeding territory (within 1.3 miles of the nest) includes general prairie habitat and agricultural lands adjacent to the Project area as well as scattered black-tailed prairie dog (*Cynomys ludovicianus*) colonies and fish/waterfowl at German Reservoir Number 1, German Reservoir Number 2, and Richards Reservoir. There are two black-tailed prairie dog colonies located in proximity to the bald eagle nest, with one approximately 0.98 miles to the northeast and the other approximately 0.6 miles south of the eagle nest.

Important use areas for this nesting pair include the alternate nest site, located approximately 1.25 miles northwest of the project area along German Reservoir Number 1, and Richards Reservoir, northwest of 152nd Avenue and Holly Street. Additionally, a cottonwood tree located approximately 230 feet southeast of the nest was a preferred perch in 2021. During observations made in 2021, the adult eagles were observed hunting around German Reservoir Number 1 on several occasions and when the first nestling fledged, it was observed flying off in that direction. Additionally, in December 2021, when the territorial pair returned to the area, they were observed carrying sticks and other nesting materials to the current nest. Later that day, both adults were in trees at Richards Reservoir for a couple of hours before flying back to the current nest.

Foraging areas (prairie habitat, prairie dog colonies, German Reservoir Number 1, and Richards Reservoir) also exist in the general project area. The most frequently used perch in 2021 and in 2022 is approximately 40 feet northeast of the project area (Figure 1). The observed perch (Figure 1) used at Richards Reservoir is approximately 0.75 mile southwest of the project area. German Reservoir Number 1, 1.25 miles northwest of the active nest, provides abundant food resources, including prairie dogs, fish, and waterfowl. No winter communal roost locations are known in the area, but bald eagle winter range is mapped 1.5 miles north and 3.25 miles east of the project area. Winter forage, summer forage, and winter concentration areas are also mapped 3.25 miles east of the project area along the South Platte River.

Overall, the bald eagle pair has demonstrated fidelity to the nest site, and it has been a productive nest. Further, the bald eagle pair settled in this suburban area of Thornton, CO, which already had existing development, housing, ranching activities, oil and gas development, roads, and E-470, all in proximity to their nest (Figure 1 and Figure 4). Despite the human development in proximity to the nest, this bald eagle pair has been productive (i.e., averaging two young fledged per year over two years), which suggests a level of acclimation and tolerance to human infrastructure and activities in a relatively new eagle territory.

3.2 Migratory Birds

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

3.3 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.

Six species listed as federally endangered or threatened under the Endangered Species Act (ESA) may occur in the Project area or have potential to be affected by the proposed action. These species include the Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute ladies'-

tresses (*Spiranthes diluvialis*), one Rocky Mountain species: gray wolf (*Canis lupus*), and four Platte River species: piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), and western prairie fringed orchid (*Platanthera praeclara*). Additionally, monarch butterfly (*Danaus plexippus*), a candidate species for listing under ESA, could potentially occur in the project area.

On February 28, 2023, the Service initiated an intra-service Section 7 consultation for the issuance of an IETP for the Project (Attachment A). It was determined that the Project will have “no effect” on six federally listed species including Preble's meadow jumping mouse, Ute ladies'-tresses, one Rocky Mountain species: gray wolf, and four Platte River species: piping plover, whooping crane, pallid sturgeon, western prairie fringed orchid, and monarch butterfly which is a candidate species for listing under ESA.

Our decision regarding the IETP will not alter the physical footprint of the Project and will not alter its impacts to federally threatened and endangered species; therefore, no further evaluation of impacts to species listed under the ESA is warranted for the Service's decision of whether to issue an IETP.

3.4 Cultural and Socio-economics Interests

The National Historic Preservation Act (NHPA) is the principal federal law guiding federal actions with respect to the treatment of cultural, archaeological, and historic resources. Section 106 (54 U.S.C. § 306108) of the NHPA requires federal agencies, prior to taking action to implement an undertaking, to take into account the effects of their undertaking on historic properties, and to give the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Office (SHPO) a reasonable opportunity to comment regarding the undertaking. Historic properties are “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register...” of Historic Places [NRHP] (54 U.S.C. § 300308). The criteria used to evaluate the NRHP eligibility of properties affected by federal agency undertakings are contained in 36 C.F.R. § 60.4.

No new ground-disturbing activities will occur as part of or related to issuing an IETP. Eagles can be considered a feature or element of a Traditional Cultural Property pursuant to Service regulations (74 F.R. 46836-46874). Resources or issues of interest to the Tribes that could have a bearing on their traditional use and/or religious freedom include eagles (e.g., ceremonial use of eagle feathers). The Religious Freedom Restoration Act of 1993 ensures that interests in religious freedom are protected. In addition, some Tribes and tribal members may consider eagle nests sacred sites (or traditional cultural properties) or potential historic properties of religious and cultural importance, as provided for in the American Indian Religious Freedom Act. Section 1.4.1 describes our effort to coordinate with tribal governments to ensure tribes are given the opportunity to consult with us on matters related to potential issuance of an IETP for this Project.

3.5 Climate Change

Climate change was considered in the PEIS (Service 2016b; Section 3.9, page 144) and is incorporated herein by reference. The proposed action, of issuing a permit, will have no direct impact on climate change. The Project is currently being constructed. It will likely continue to be

constructed regardless of the decision whether or not to issue an IETP.

4. Environmental Consequences

This section summarizes the effects on the environment of implementing the proposed action and the no action alternative. The discussion of overall effects of the IETP program is provided in the PEIS (Service 2016a) and is incorporated by reference here. This section of the EA analyzes only the effects that may result from the issuance of an IETP for this specific Project.

4.1 Proposed Action

In determining the significance of effects of the Project on eagles, we screened the proposed action against the analysis provided in the PEIS (Service 2016a) and the Service’s 2016 report, “Bald and Golden Eagles: Population Demographics and Estimation of Sustainable Take in the United States” (Service 2016c). We also analyzed currently permitted take to ensure it does not exceed the Central Flyway EMU take limit and used our Cumulative Effects Analysis (Service 2013, Attachment B) to quantify cumulative local area population level effects.

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.”

4.2 Cumulative Effects

4.2.1 Eagle Take Permits Authorized by the Service at the Eagle Management Unit Level

The Project occurs within the Service’s Central Flyway EMU for bald eagles (Service 2016a). On February 13th, 2023, we searched our national permits database for all IETPs issued for bald eagles by the Service for the year 2023 within the Central Flyway EMU and found 23 records. Of the 23 issued IETPs, 11 are for disturbance take at bald eagle nests, 11 are for lethal take of bald eagles, and one is for the destruction of an inactive bald eagle nest.

The annual take limit for the Central Flyway EMU is 70 bald eagles per year (Service 2016a). The Service analyzed potential bald eagle take within the Central Flyway EMU by assessing the permitted annual take of the 23 issued IETPs for the year 2023 and used that result as an average potential permitted take for the years 2023 to 2028 (timeframe covered by the requested permit). For Incidental Eagle Take Permits authorizing lethal take of bald eagles, the Service estimates that the potential annual take is 23.28 bald eagles per year, annual loss of productivity is 14.63 bald eagles per year, and annual destruction of inactive nests is 1.33 nests per year in the Central Flyway EMU. The cumulative potential loss of bald eagles from the currently issued 23 IETPs in the Central Flyway EMU is 39.24 bald eagles per year. The annual take of bald eagles that would be authorized by this permit does not exceed the EMU take limit of 70 bald eagles per year; therefore, compensatory mitigation for bald eagles is not required.

4.2.2 Local Area Population Analysis for the Project

Take of eagles has the potential to affect the larger eagle population. Accordingly, the 2016

PEIS, incorporated herein by reference, analyzed the cumulative effects of permitting take of bald eagles in combination with ongoing unauthorized sources of human-caused eagle mortality and other present or foreseeable future actions affecting bald eagle populations. As part of the analysis, the Service determined sustainable limits for permitted take of bald eagles within each EMU. The bald eagle take that would be authorized by this permit does not exceed the EMU take limit for bald eagles, so it will not significantly impact the EMU bald eagle population. Additionally, to ensure that eagle populations at the local scale are not depleted by cumulative take in the local area, the Service analyzed in the 2016 PEIS the amount of take that can be authorized while still maintaining the LAP of eagles. In order to issue an IETP, cumulative authorized take should not exceed 5%, nor can cumulative unauthorized take exceed 10% of a LAP, unless the Service can demonstrate why allowing take to exceed that limit is still compatible with the preservation of eagles. The permit regulations require the Service to conduct an individual LAP analysis for each permit application as part of our application review.

We, therefore, considered cumulative effects to the LAP surrounding the nest to evaluate whether the take to be authorized under this permit, together with other sources of permitted take and unpermitted eagle mortality, may be incompatible with the persistence of the Project LAP. We incorporated data provided by the Applicant, our data on other eagle take authorized and permitted by the Service and other reliably documented unauthorized eagle mortalities (i.e., known eagle take at nearby wind farms, electrocution, and documented mortalities due to anthropogenic and natural causes) to estimate cumulative impacts to the LAP. The scale of our LAP analysis is an 86-mile radius around the bald eagle nest (Figure 3). We conducted our cumulative effects analysis as described in the Service's ECP Guidance (Service 2013; Attachment B). Five permitted projects overlap the LAP for bald eagles.

The Local Area Population of bald eagles for the Project is approximately 65 eagles and the annual 1% and 5% benchmarks for this local area population are 0.65 and 3.27 bald eagles, respectively. Five currently permitted project LAP areas overlap this Project's LAP for bald eagles. Taken together, this Project's take and the overlapping take of the other projects could result in a total annual take of 2.04 bald eagles (or 3.12% of the LAP). Analyses conducted by the Service showed that over most of the United States, bald eagle populations are growing at a rate of approximately 5% per year (Service 2016c). Additionally, a recently published report (Service 2020) estimated that the bald eagle population has increased by a factor of 4.4 since 2009 across EMUs, excluding the southwestern U.S. and Alaska. Based on these results, the Service (2020) concluded that the bald eagle population has continued to increase rapidly since our previous survey.

The take at the LAP level of 3.12% does not exceed the 5% benchmark for the LAP associated with the Project, and this level of bald eagle take from the local area is consistent with the management objective established in the PEIS and codified in regulation. The impacts to bald eagle populations at both the LAP and EMU scales are therefore not significant. It is reasonable to assume that bald eagle numbers in the project vicinity are increasing and the conservative take estimate at the Project would not contribute to declines in the overall bald eagle population in the Central Flyway 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 36 reported bald eagle mortalities within the LAP between 2001 and 2023, for an average of 1.57 per year. These mortalities are all considered to be unpermitted take and are largely due to anthropogenic causes (e.g., electrocution, shooting, poisoning, collision with wind turbines, etc.) and less due to natural causes or undetermined. On an annual basis, 1.57 unpermitted bald eagle takes equals about 2.39% of the total estimated bald eagle population in the LAP associated with the Project. This amount of unpermitted take is well below the 10% threshold level for unpermitted take within the LAP.

KB Homes Colorado's Westwood Development Project

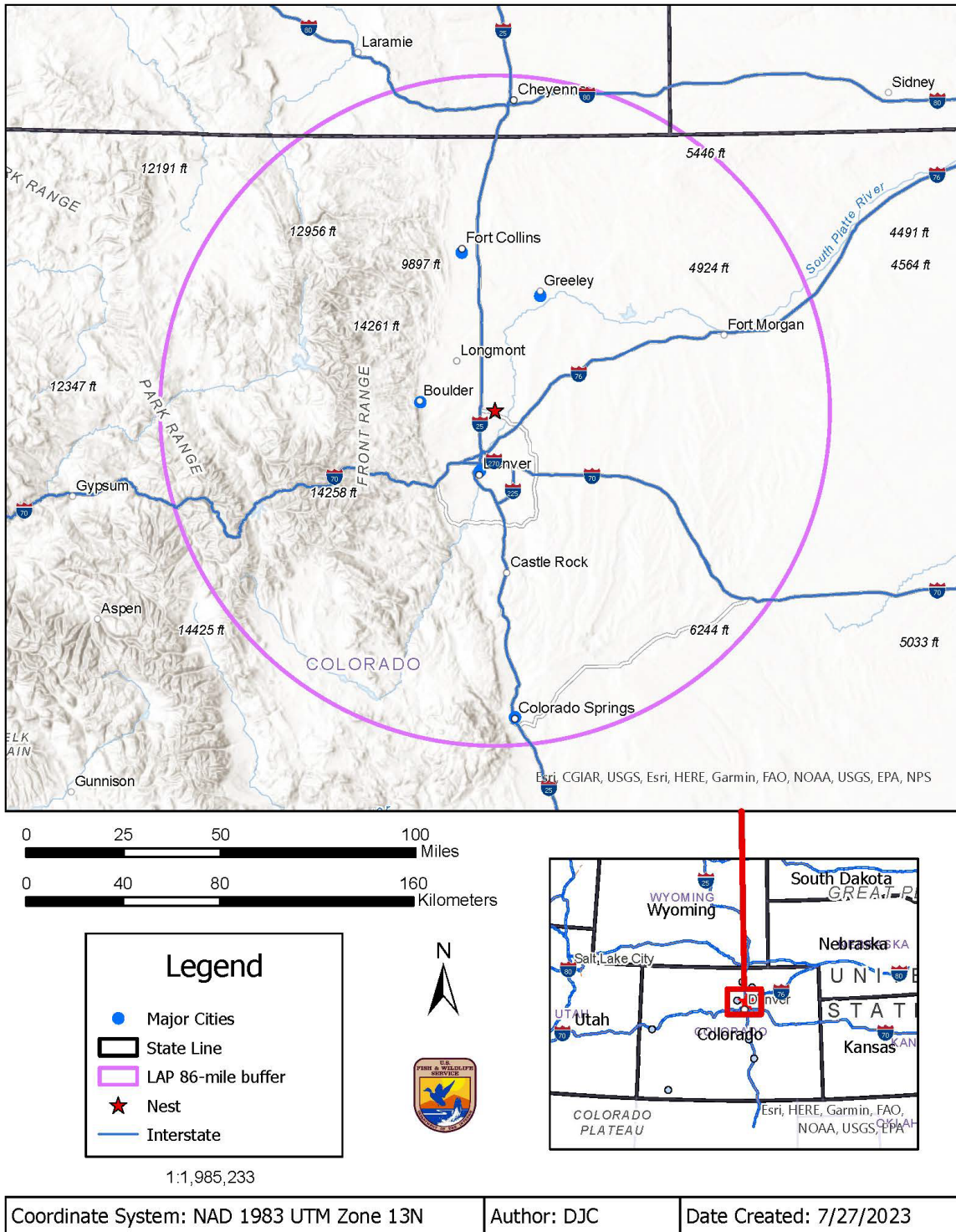


Figure 3. Map showing the nest location and Local Area Population (LAP) boundary.

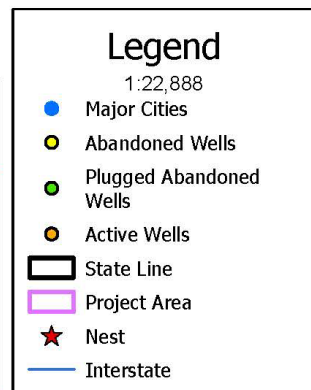
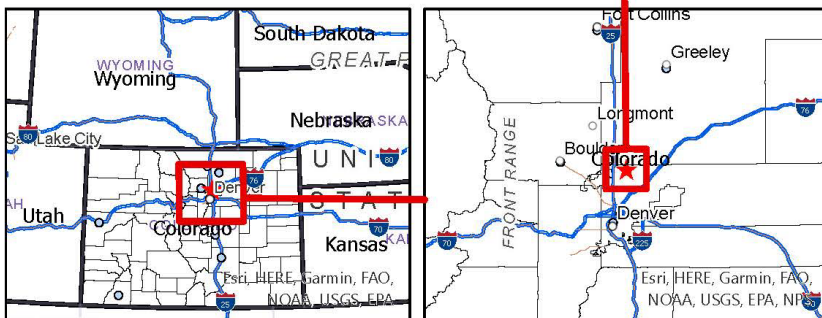
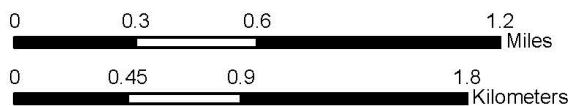
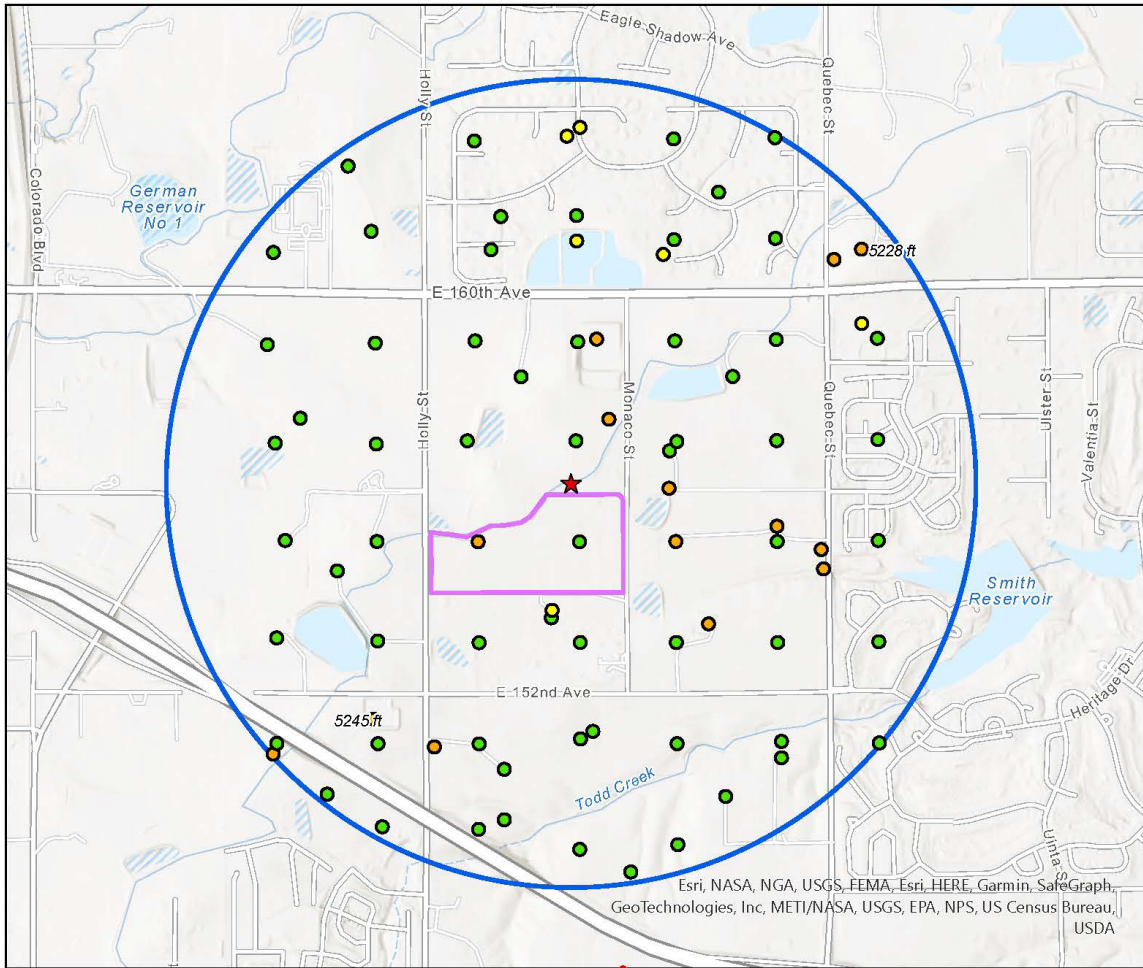
4.2.3 Cumulative Effects at Local Project Level

The above cumulative effects analyses are focused on bald eagle populations at the EMU and LAP geographic scales at which the Service manages bald eagle populations. The following cumulative effects analysis includes oil and gas related activities and infrastructure within a one-mile radius around the bald eagle nest. This supplemental analysis is consistent with recommendations from a past undertaking by the Service that shares similarities with the proposed action. Presently, there are existing housing developments, homesteads, roads and highways, and other related human infrastructure within one mile of the bald eagle nest as described in Section 1.4. Much of this urban development has occurred within the last 15 years and had occurred before and during the known construction and existence of the nest. There will likely be more of this type of development into the future.

Oil and gas production that occurs within a one-mile radius of the nest includes 82 oil/gas production wells (Colorado Oil and Gas Conservation Commission website; accessed February 8, 2023). Of these 82 wells, 62 are currently abandoned and plugged, 6 are abandoned, and 14 are active (Figure 4). There is one abandoned and plugged well within 660 feet of the nest. Within a 1-mile radius of the nest oil and gas wells are likely to be developed and oil and gas wells will be abandoned and plugged when they are no longer productive in the future, but these plans are not known.

Over time, future housing development, oil and gas development, recreation use, and agriculture use could collectively cause the eagle pair to leave the local area to nest elsewhere, persist for several years at the current nest location and then decide to move elsewhere to nest, or remain in this area and continue to nest at the current location into the future. This pair of bald eagles constructed a nest, successfully fledged young, and is currently nesting near human development and activity and has shown tolerance to these activities. Based on our analyses we anticipate the bald eagle pair will continue to adapt to changes related to human development and related activities and will persist at this location (or at least within their existing territory) into the foreseeable future.

KB Homes Colorado's Westwood Development Project



Coordinate System: NAD 1983 UTM Zone 13N | Author: DJC | Date Created: 7/27/2023

Figure 4. Map showing the KB Home Colorado's Westwood Development Project boundary, nest location, abandoned well locations, plugged/abandoned well locations, and active well locations.

4.3 Alternative 1: No Action

Even though we would take no action on the IETP application under the no action alternative, the Project would likely continue to be built without authorization for take of bald eagles. The eagle take at the Project would be considered unpermitted, would be in violation of the Eagle Act, and would not be accounted for in the permitted take and cumulative effects analysis when considering the impacts related to future projects seeking an IETP. The Service would have no way to relate the eagle mortality occurring at this Project to other projects in the area, on a cumulative scale, when updating existing IETPs. Because the Applicant would not be bound by the terms and conditions of the IETP, the Service would not be able to make recommendations for adaptive management triggers and implementation of conservation measures that would benefit eagle populations on a cumulative scale.

Thus, for purposes of analyzing the no action alternative, the Service assumes that the Applicant would implement all measures required by other agencies and jurisdictions to conduct the activity at the Project, but the conservation measures proposed in the IETP application package would not be required. The Applicant may choose to implement some, none, or all those conservation measures. Under this alternative, the Service assumes that the Applicant would take some reasonable steps to avoid disturbing nesting bald eagles but would not be protected from enforcement for violating the Eagle Act should take of an eagle occur.

5. Mitigation and Monitoring

The proposed action incorporates measures to minimize and avoid bald eagle take to the maximum degree practicable, as required by regulation. To ensure that regional eagle populations are maintained consistent with the preservation standard, our regulations require that any take that cannot practicably be avoided and is above EMU take limits must be offset by compensatory mitigation. In this case, authorized take remains below the EMU take thresholds and no compensatory mitigation is needed to meet the Eagle Act preservation standard.

6. List of Preparers

- Dustin Casady, Wildlife Biologist, USFWS, Region 6, Migratory Bird Management Office
- National Eagle Support Team (NEST), NEPA analysis, USFWS

7. List of Abbreviations and Acronyms

BBS	Breeding Bird Survey
C.F.R.	Code of Federal Regulations
CPW	Colorado Parks and Wildlife
EA	Environmental Assessment
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
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
U.S.C.	U.S. Code

8. References

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Attachment A. Intra-Service Section 7 Biological Evaluation Form, Region 6, for KB Home Colorado's Westwood Development Project

Intra-Service Section 7 Biological Evaluation Form - Region 6

Originating Person: Dustin Casady

Date Submitted: 2/27/2023

Telephone Number: 307-757-3722

- I. **Service Program and Geographic Area or Station Name:** Migratory Bird Management Program, Lakewood, CO
- II. **Flexible Funding Program:** (e.g. Joint Venture, etc.) if applicable:
- III. **Location:** KB Homes Colorado's Westwood Development project (Project), a single-family home development, located in Adams County, within the city limits of Thornton, Colorado.
- IV. **Species/Critical Habitat:** Six species listed as federally endangered or threatened under the Endangered Species Act (ESA) may occur in the Project Area or have potential to be affected by the proposed action. These species include the Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute ladies'-tresses (*Spiranthes diluvialis*), one Rocky Mountain specie: gray wolf (*Canis lupus*), and four Platte River species: piping plover (*Charadrius melodus*), whooping crane (*Grus americana*), pallid sturgeon (*Scaphirhynchus albus*), and western prairie fringed orchid (*Platanthera praeclara*). Additionally, monarch butterfly (*Danaus plexippus*), a candidate species for listing under ESA, could potentially occur in the Project area.
- V. **Project Description:** The Project area will disturb approximately 72.2 acres of privately owned lands in a rapidly developing area of Thornton, CO. The Project is a single-family home development consisting of houses, a detention pond, waterlines, sewer infrastructure, roads and driveways, and landscaping. The Project will be constructed in a currently undeveloped area surrounded mainly by agricultural fields and pastures. The closest developments are a half-mile north and a half-mile east. The Project is roughly bounded by Holly Street on the west, Signal Ditch and private property on the north, Monaco Street on the east, and private property on the south (Figure 1). Highway 7/East 160th Avenue is approximately 0.5 mile north and E-470 is approximately 0.5 mile southwest of the project area.

The bald eagle pair is nesting in a plains cottonwood (*Populus deltoides*) tree on the south edge of Signal Ditch within about 145 feet of the closest parcel footprint. The eagle nest is located on private property that is used for agriculture purposes. The adult eagles have occasionally been observed in the Project area. Portions of the project are located within 660 feet of the occupied bald eagle nest. Specifically, 41 parcels and 3 local roads are located within 660 feet of the nest, as well as 9 parcels and 1 local road located within 330 feet of the active nest site. The project construction activities within 660 feet of the occupied nest that may disturb or cause take of bald eagles include, but are not limited to, heavy equipment and light-duty traffic, excavation, building foundations, and vertical construction of single-family residences with associated parking and infrastructure including concrete and asphalt, garages, domestic water distribution, sanitary sewer, storm sewer, landscaping, other miscellaneous construction and field activities, foot traffic, and environmental and safety monitoring.

The need for the federal action is necessitated by the Service Region 6, receiving an application from KB Homes Colorado, Inc for a 5-year incidental eagle take permit (IETP) for the disturbance take of bald eagles associated with the Project.

VI. **Determination of Effects:**

(A) Description of Effects:

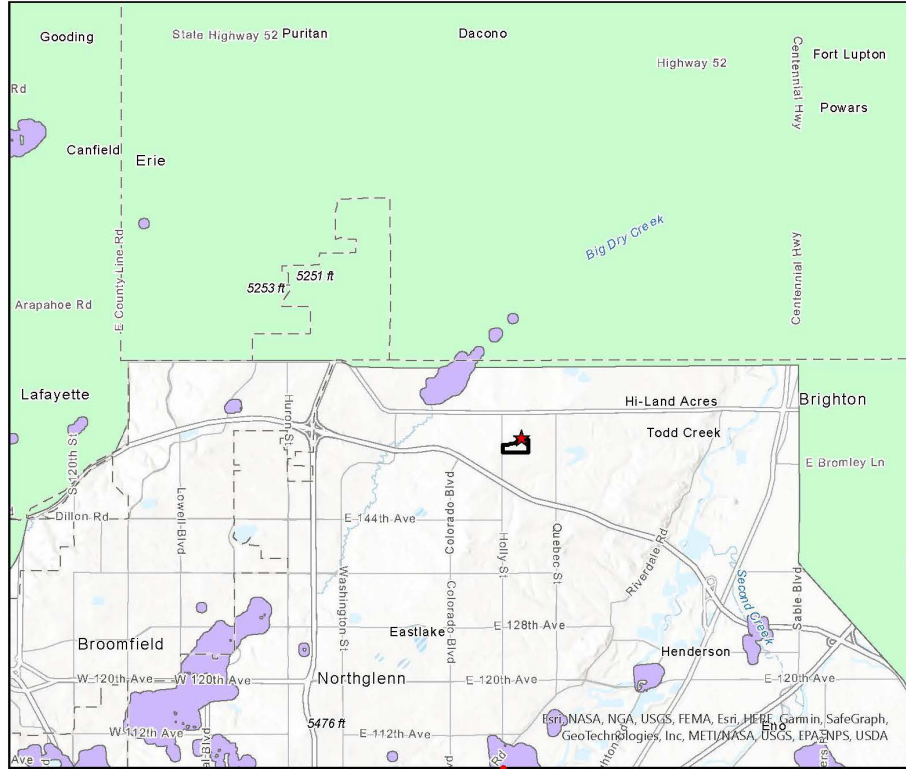
Ute ladies'-tresses

No critical habitat has been designated for Ute-ladies'-tresses throughout its range. The Project does not overlap the Area of Influence (AOI) defined for this species. The AOI identifies areas where proponents of project action should consider potential effects to the species and designated and proposed critical habitat. The AOI typically encompass areas larger than where the species is expected to occur because of consideration for direct and indirect effects to the species and habitat. The Project does not occur within the Ute ladies'-tresses range / AOI (Figure 1).

Preble's meadow jumping mouse

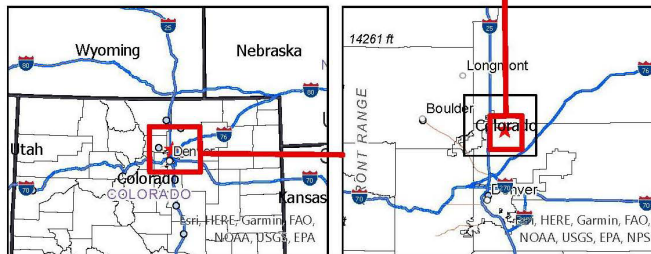
No critical habitat has been designated for Preble's meadow jumping mouse throughout its range. The Project does not overlap the Area of Influence (AOI) defined for this species. The AOI identifies areas where proponents of project action should consider potential effects to the species and designated and proposed critical habitat. The AOI typically encompass areas larger than where the species is expected to occur because of consideration for direct and indirect effects to the species and habitat. The Project does not occur within the Preble's meadow jumping mouse range / AOI (Figure1).

KB Homes Colorado's Westwood Development Project



0 1.75 3.5 7 Miles

0 2.75 5.5 11 Kilometers



Legend

1:136,424

- Project Area
- ★ Nest
- PMJM Area of Influence
- ULT Area of Influence

Coordinate System: NAD 1983 UTM Zone 13N

Author: DJC

Date Created: 7/27/2023

Figure 1. KB Homes Colorado's Westwood Development Project Preble's Meadow Jumping Mouse Current Range / Area of Influence (AOI) and Ute Ladies'-Tresses Current Range / Area of Influence

The Project area does not contain any T&E species or core and / or critical habitat. Therefore, the proposed action of issuing an IETP for the Project will have no effect on Ute ladies'-tresses and Preble's meadow jumping mouse.

Piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid

There will be no effect to the downstream Platte River species: piping plover, whooping crane, western prairie fringed orchid, and pallid sturgeon because the proposed action of issuing an IETP for the Project will not result in depletions to the Platte River system.

Gray Wolf

There will be no effect to the Rocky Mountain specie: gray wolf because the proposed action of issuing an eagle take permit for the Project will not result in disturbance to the Rocky Mountain ecosystem.

Monarch butterfly

There will be no effect to the Monarch butterfly because the proposed action of issuing an eagle take permit for the Project will not result in depletions to habitat known to be associated with this species.

(B) Determination: Determine the anticipated effects of the proposed project on species and critical habitats listed in item IV. Check all applicable boxes and list the species (or attach a list) associated with each determination.

	<u>Determination</u>
<p><i>No Effect:</i> This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species. No concurrence from ESFO required. Preble's meadow jumping mouse, eastern black rail, Ute ladies'-tresses, monarch butterfly, and four Platte river species: pallid sturgeon piping plover, whooping crane, western prairie fringed orchid</p>	<p>XX _____</p>
<p><i>May Affect but Not Likely to Adversely Affect:</i> This determination is appropriate when the proposed project is likely to cause insignificant, discountable, or wholly beneficial effects to individuals of listed species and/or designated critical habitat. Concurrence from ESFO required.</p>	<p>_____</p>
<p><i>May Affect and Likely to Adversely Affect:</i> This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species and/or designated critical habitat. Formal consultation with ESFO required.</p>	<p>_____</p>
<p><i>May Affect and Likely to Adversely Affect but the proposed action is for the purpose of endangered or threatened species recovery and falls under Region 6's Programmatic Consultation on Service-initiated Recovery Actions:</i> This determination is appropriate when adverse effects are likely but the project is designed to assist with recovery of listed species and/or designated critical habitat. Concurrence from the ESFO that the project is covered by the programmatic consultation is required.</p>	<p>_____</p>
<p><i>May affect but Not Likely to Jeopardize candidate or proposed species/critical habitat:</i> This determination is appropriate when the proposed project may affect, but is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. Concurrence from ESFO optional.</p>	<p>_____</p>
<p><i>Likely to Jeopardize candidate or proposed species/critical habitat:</i> This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. Conferencing with ESFO required.</p>	<p>_____</p>

Signature **ROBERT DOSTER** Digitally signed by ROBERT DOSTER Date: 2023.02.28 09:52:40 -07'00' Date _____
[Supervisor at originating station]

Reviewing Ecological Services Office Evaluation (check all that apply):

A. **Concurrence** _____ **Nonconcurrence** _____
Explanation for concurrence:

B. Formal consultation required _____
List species or critical habitat unit _____

C. Effects are addressed in the Programmatic Consultation on R6's Recovery Program – no further consultation needed _____

D. Conference required _____
List species or critical habitat unit _____

Name of Reviewing ES Office _____

Signature _____ Date _____

Attachment B. Cumulative Effect Analysis for KB Home Colorado's Westwood Development Project

logfile start
 US FWS Cumulative Effects Tool
 Summary Results (Bald Eagle)
 run 2022-08-01 14:30:21

Focal Project: KB_Homes	
Predicted eagle take (annual)	1.33

Local Area Population (LAP) Estimates by Local Area Density Unit (LADU):	
Focal Project_Density Unit	Estimated Number of Eagles
KB_Homes_Northern Rocky Mountains	1.25
KB_Homes_Rocky Mountains and Plains	64.2
KB_Homes LAP (total)	65.45
<hr/>	
1% LAP Benchmark	0.65
5% LAP Benchmark	3.27

'Permitted' & 'Other' Projects with Overlapping LAPs:					
Project ID	Estimated Annual Take	Percent Overlap With Focal Project	Overlapping Area (SqMi)	Overlapping Take	
SMH	3.78	2.76%	640.14	0.1	
Project 71943B	0.75	0.44%	101.79	0	
PER0024722	3.8	3.26%	757.05	0.12	
Project 44705D	6.6	3.43%	796.41	0.23	
Project 33532D	1.33	67.85%	15752.84	0.9	
All Projects (total)	16.26			1.35	

Results	Number of Eagles	Percent of LAP
5% LAP Benchmark	3.27	5%
Total Overlapping Take	1.35	2.06%
Focal Project Predicted Take	1.33	2.03%
Focal Project + Total Overlapping Take	2.68	4.09%

Unpermitted Take Summary		Discovery Period	
Bald Eagle	All Known	Reported Years	1950-2022
Electrocution		7 2002-2021	7
Shot		2 2003-2007	2
Collision with wind turbine		4 2006-2014	4
Unknown		3 2004-2021	3
Killed/injured by animal		1 2002-2002	1
Poisoned (lead)		3 2001-2015	3
Collision with wire		1 2021-2021	1
Collision/electrocution		1 2021-2021	1
Trauma		2 2015-2015	2
Poisoned (pesticide)		3 2002-2003	3
		27	27
			1.29
			1.96%

TOOL INPUT PARAMETERS	
Focal project layer	C:\CET_Tool\Tomas_Practice\KB_Homes.shp
Other layer(s):	C:\CET_Tool\Tomas_Practice\SMH_focal_pt.shp
Permitted take	C:\CET_Tool\MR-Export-Permitted-2022-CET-Data-2022-07-21\imrPermitted-2022-CETShapefile-2022-07-21.shp
Unpermitted take	C:\CET_Tool\MR-Export-Unpermitted-CET-Data-2022-07-21\imrUnpermittedTakeCETShapefile-2022-07-21.shp
Management Unit shapefile	C:\CET_Tool\Tomas_Practice\LADUs\LADUs\BAEA_LADUs_20170525.shp
Natal dispersal distance (miles)	86
Take benchmark % (lower)	1
Take benchmark % (upper)	5
Date range	1950-2022
Summary output file	C:\CET_Tool\Tomas_Practice\KB_homes.txt

OUTPUT FILES	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\foalProjectCopys.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\foalProjectFinal.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\foalProjectSearchPoly.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\managementLayerCopy.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\pointBuffer.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\otherProject0.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\otherProject1.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\otherProject2.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\otherProject3.shp	
C:\CET_Tool\Tomas_Practice\CEET_20220801_143021\otherProject4.shp	