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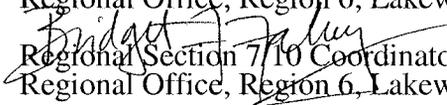
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Permit Number: TE-083409-0

AUG 03 2004

Memorandum

To: Assistant Regional Director - Ecological Services
Regional Office, Region 6, Lakewood, Colorado

From: 
Regional Section 710 Coordinator, Ecological Services,
Regional Office, Region 6, Lakewood, Colorado

Subject: Intra-Service section 7 consultation and Biological Opinion on Issuance of an Incidental Take Permit to the Larimer County Parks and Open Lands Department for Eagle's Nest Open Space, Larimer County, Colorado (TE-083409-0).

This document constitutes the Biological Opinion (BO) prepared pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act), on the effects of issuing an Incidental Take Permit (ITP) to the Larimer County Parks and Open Lands Department (Applicant) for the federally-threatened Preble's meadow jumping mouse, *Zapus hudsonius preblei* (Preble's), pursuant to section 10(a)(1)(B) of the Act. The proposed action involves the construction of a soft or natural-surfaced hiking and equestrian trail, horse tie-up area and access area to the Cache la Poudre River, replacement of an existing bridge, as well as the on-going management of Eagle's Nest Open Space, Larimer County, Colorado. The incidental take would be in the form of potential disturbance to, and loss of, habitat used by Preble's.

This BO is based on the project proposal as described in the Applicant's "Final Environmental Assessment/Habitat Conservation Plan for Issuance of an Endangered Species Section 10(a)(1)(B) Permit for the Incidental Take of the Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*) for Eagle's Nest Open Space" (EA/HCP) of May 5, 2004. The Service has determined that the proposed project may adversely affect Preble's.

CONFERENCE/CONSULTATION HISTORY

On May 13, 1998, Preble's was listed as threatened under the Act. Full protection for Preble's became effective on June 12, 1998. The Service began discussions with the Applicant regarding the proposed action in April 2003 and has since had various communications, site visits, and meetings with the Applicant. The final draft subject EA/HCP and permit application was submitted to the Service on December 2, 2003.

BIOLOGICAL OPINION

This BO is based on information regarding cumulative effects, conditions forming the environmental baseline, the status of the Preble's, and the importance of the project area to the survival and recovery of the species. The data used in this BO constitutes the best scientific and commercial information currently available.

Description of the Proposed Action

The proposed action involves issuance of an ITP for activities necessary to construct a soft or natural-surfaced hiking and equestrian trail, horse tie-up area and access area to the Cache la Poudre River, replace an existing bridge, and the on-going management of Eagle's Nest Open Space, near the Town of Livermore, Larimer County, Colorado. The incidental take would be in the form of potential disturbance to, and loss of, habitat used by Preble's. Construction activities could permanently impact 2.78 acres and temporarily impact 0.65 acres of potential Preble's habitat.

As part of this project, the Applicant will carry out conservation measures described in the Mitigation Plan section of their EA/HCP (incorporated herein by reference), to reduce and offset impacts to Preble's. The proposed mitigation measures of the HCP include enhancement of riparian areas, revegetation of temporary disturbance areas with native vegetation, elimination of cattle grazing, preservation of mitigated lands through deed restrictions, and fencing to deter human use and disturbance to the protected lands. Additionally, all construction within Preble's habitat will occur during Preble's hibernation period between October 30 and May 1 to minimize and avoid impacts to Preble's; all construction activities outside Preble's habitat will be limited to daylight hours to minimize disturbance to Preble's during its active foraging time.

Status of the Preble's meadow jumping mouse

Preble's is a small rodent in the family Zapodidae and is 1 of 12 recognized subspecies of the species *Z. hudsonius*, the meadow jumping mouse. Preble's is native only to the Rocky Mountains-Great Plains interface of eastern Colorado and southeastern Wyoming. This shy, largely nocturnal mouse lives in moist lowlands with dense vegetation. It is 8 to 9 inches long (its tail accounts for 60 percent of its length) with hind feet adapted for jumping. Preble's hibernates underground from September to May.

Records for Preble's define a range including Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Elbert, Jefferson, Larimer, and Weld counties in Colorado; and Albany, Laramie, Platte, Goshen, and Converse counties in Wyoming (Kruttsch 1954, Compton and Hugie 1993). Armstrong et al. (1997) described typical Preble's meadow jumping mouse habitat as "well-developed plains riparian vegetation with relatively undisturbed grassland and a water source in close proximity." Also noted was a preference for "dense herbaceous vegetation consisting of a variety of grasses, forbs and thick shrubs." Based on analysis of habitat use in Larimer County, Shenk and Eussen (1998) also noted a lack of preference "toward any single plant species but instead favors sites that are structurally diverse and provide adequate cover and food throughout its life cycle." Shenk (2000) conducted radio tracking at three sites and documented greater use of upland habitats than previously assumed.

Preble's has undergone a decline in range and populations within its remaining range have been lost. Habitat loss and fragmentation resulting from human land uses have adversely impacted Preble's populations. David Armstrong (University of Colorado, pers. com. 1998) concluded that the meadow jumping mouse, in this region as elsewhere, is a habitat specialist, and that the specific habitat on which it depends is declining.

Compton and Hugie (1993, 1994) cited human activities that have adversely impacted Preble's including: conversion of grasslands to farms; livestock grazing; water development and management practices; and, residential and commercial development. Shenk (1998) linked potential threats to ecological requirements of Preble's and suggested that factors which impacted vegetation composition and structure, riparian hydrology, habitat structure, distribution, geomorphology, and animal community composition must be addressed in any conservation strategy.

Residential and commercial development, accompanied by highway and bridge construction, and instream alterations to implement flood control, directly remove Preble's habitat, or reduces, alters, fragments, and isolates habitat to the point where Preble's can no longer persist. Corn et al. (1995) proposed that a 100 meter (328 foot) buffer of unaltered habitat be established to protect the floodplain of Monument Creek from a range of human activities that might adversely affect Preble's or its habitat. Roads, trails, or other linear development through Preble's habitat may act as barriers to movement. Shenk (1998) suggested that on a landscape scale, maintenance of acceptable dispersal corridors linking patches of Preble's habitat may be critical to its conservation.

Further information about the biology and status of the Preble's can be found in the "Conservation Assessment and Preliminary Conservation Strategy for Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)" (Shenk, 1998, available upon request).

Status of the Proposed Critical Habitat

Critical habitat was finalized for this species in the Federal Register on June 23, 2003 (Vol. 68 No. 120 FR 37276). The proposed action area overlaps critical habitat designated in the final rule at Map Unit SP4 at the North Fork of the Cache la Poudre River in Larimer County. The total amount of critical habitat within this unit is 8,206 acres (of which 264 acres is located within the subject property). Anticipated projects within this EA/HCP within this above-mentioned critical habitat unit would result in 2.78 acres of permanent impacts, which represents approximately three percent of the total available critical habitat. However, the Applicant has proposed enhancement and restoration of 7.0 acres of habitat already permanently protected as open space within the critical habitat at the subject property.

Primary constituent elements are physical and biological features essential to the conservation of the species and that may require special management considerations and protection. The primary constituent elements for Preble's are a pattern of dense riparian vegetation consisting of grasses, forbs, and shrubs, and open water; adjacent floodplains and vegetated uplands with limited human disturbance; areas that provide connectivity between and within populations, and; dynamic geomorphological and hydrological processes that create and maintain river and stream channels, floodplains, and floodplain benches, and promote patterns of vegetation favorable to Preble's.

Activities with the potential for altering the above primary constituent elements are those that result in development or alteration of the landscape within a unit, including land clearing activities associated with construction for urban and industrial development; some agricultural activities; activities resulting in changes in the hydrology of a unit; activities that detrimentally alter natural processes in a unit; activities that could lead to the introduction, expansion, or increased density of exotic plant or animal species detrimental to Preble's and its habitat.

Environmental Baseline

In Larimer County, Preble's has been captured or has suitable habitat along portions of Cache la Poudre River, North Fork of the Cache la Poudre River, Buckhorn Creek, Little Thompson River and their major tributaries. Based on the availability of potentially suitable habitat and lack of trapping information, Preble's is assumed to occupy appropriate habitat within Larimer County. The Preble's mouse has been documented to exist along the North Fork of the Cache la Poudre River in Larimer County, upstream of the location of Eagle's Nest Open Space and downstream of the subject property on the Cache la Poudre River.

Effects of Action

The proposed construction and use activities may directly impact a combined total of 3.43 acres of known occupied Preble's habitat through 0.65 acres of temporary take and 2.78 acres of permanent take. The area to be impacted represents a very small portion of the Preble's habitat present, and the effect of such take is expected to be minor or negligible as a result of the minimal amount of impacts from the covered activities. The project will not significantly impact the ability of Preble's to travel upstream or downstream along the riparian corridors within the subject property.

Cumulative Effects

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this BO. Future Federal actions in that area unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act if there are adverse effects or potential for take of a federally-listed species.

The proposed activity would result in the permanent disturbance of 2.78 acres and temporary disturbance of 0.65 acres of Preble's habitat, which could contribute to the cumulative disturbance of these vegetation types in Larimer County from development and other land use projects.

The vegetation impacted temporarily and permanently would include riparian and upland shrubs and grasses, as well as weedy vegetation.

The proposed activities may contribute to take of Preble's and/or their habitat in the region when added to other section 10(a)(1)(B) incidental take permits that may be issued by the Service for other projects. However, any Preble's take or habitat loss that may occur in the short term by the permanent loss of 2.78 acres and temporary loss of 0.65 acres of upland and riparian habitat should be offset by increasing the quality and quantity of both upland and riparian habitat through mitigation which could result in an increase in the number of Preble's within the subject property (as defined in the EA/HCP).

Conclusion

It is the Service's biological opinion that neither the direct nor indirect effects of the proposed project (which includes the implementation of conservation measures agreed to during informal consultation and outlined in this BO), nor the cumulative effects, will jeopardize the continued existence of the Preble's and will not adversely modify designated critical habitat.

Although the proposed action may adversely affect the Preble's and its habitat along North Fork of the Cache la Poudre River, the proposed conservation measures of enhancement, restoration, and permanent protection will result in an overall improvement to vegetation quality and diversity which will avoid the likelihood of jeopardy to the species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Service so that they become binding conditions of any grant or section 10(a) Permit issued to the Applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Service has the continuing duty to regulate the activity covered by this Incidental Take Statement. The Service must ensure that the Applicant is required to assume and implement the terms and conditions of the Incidental Take Statement through enforceable terms that are added to the section 10(a) Permit, or the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Service will require the Applicant to report the progress of the action or its impact on the species as specified in the Incidental Take Statement.

The Service anticipates incidental take of Preble's through direct killing will be difficult to detect due to their small size and secretive nature. However, the following level of take can be anticipated by the loss of food, cover, and other essential habitat elements. The Service anticipates that the proposed action will result in incidental take of an undetermined number of Preble's through a maximum total permanent loss of 2.78 acres of upland and riparian habitat and the temporary loss of 0.65 acres of riparian habitat within the subject property, and any harm or harassment of individuals during associated project construction, use, and maintenance. In this BO, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

Reasonable and Prudent Measures

The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of Preble's, and therefore should be added to the section 10(a) Permit requirements:

1. During construction, the area of proposed impact will be fenced with orange construction fence and silt fencing, or a similar visible barrier, to prevent inadvertent impacts to habitat outside the construction footprint.
2. The Applicant, or its designated contractor, will monitor the extent of habitat impacted to ensure that it does not exceed the authorized area.
3. The Applicant, or its designated contractor, will monitor all aspects of the proposed restoration, enhancement, and mitigation plan to ensure project completion and success.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Service must ensure that the Applicant complies with the following terms and conditions which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The section 10(a)(1)(B) ITP, as evaluated in this BO, will include Permit conditions that require that the mitigation measures provided in the Project Description section to avoid, minimize, and compensate for adverse impacts to the Preble's and its habitat be completed.
2. The Service will include, as a Permit condition, that any incidental take of Preble's must comply with all terms and conditions of said section 10(a)(1)(B) ITP.
3. The Service will include, as a Permit condition, that a copy of this Permit must be in the possession of the Permittee or designated agents while conducting activities covered under the Permit.
4. The Service will include, as a Permit condition, that the Permittee, or agents designated by the Permittee, shall ensure that activities in the subject property follow Best Management Practices, as described in the EA/HCP.
5. The Service will include, as a Permit condition, that workers onsite will be informed by the Applicant, representative agents, or designated contractors as to the reason for, and importance of, limiting impacts to habitat located outside the designated fenced work area.
6. The Service will include, as a Permit condition, that the Permittee conduct annual monitoring of all revegetation efforts and other mitigation efforts for five years or until success is achieved, as described in the EA/HCP. Monitoring reports shall be forwarded to the Service after each growing season and before December 31 each calendar year.
7. The Service will include, as a Permit condition, that the Permittee shall notify the Service of any transfer of ownership of any lands within the permitted HCP project area, before the transfer is finalized. The new landowner will be regarded by the Service as having the same rights with respect to the Permit as the original landowner, provided that the new landowner agrees to be bound by the terms and conditions of the original Permit, as explained by the original Permittee upon Permit transfer. Actions taken by the new landowner resulting in the incidental take of species covered by the Permit would be authorized if the new landowner agrees to the Permit and continues to implement the minimization and mitigation strategies of the HCP.
8. In the unlikely event that a Preble's mouse (dead, injured, or hibernating) is located during construction, the Colorado Field Office of the Service (303) 275-2370 or the Service's Law Enforcement Office (303) 274-3560 will be contacted immediately.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take (temporary loss of 0.65 acres of suitable Preble's habitat and permanent loss of 2.78 acres of suitable habitat) is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Service will include, as a Permit condition, that the Applicant shall

immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that may be used to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The Service has no additional conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the proposed action of section 10(a)(1)(B) Permit issuance to the Applicant for the construction of a soft or natural-surfaced hiking and equestrian trail, horse tie-up area and access area to the Cache la Poudre River, replacement of an existing bridge, as well as the on-going management of Eagle's Nest Open Space, Larimer County, Colorado. As required by 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this BO; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this BO; (4) a new species not covered by this opinion is listed or critical habitat designated that may be affected by this action. In instances where the amount or extent of incidental take is exceeded, and operations causing such take should cease pending reinitiation.

If you have any questions concerning this Biological Opinion, please contact the Field Supervisor of the Service's Colorado Field Office at (303) 275-2370.

cc: Larimer County Parks and Open Lands Department (Gary Buffington) ✓
FWS: GJ Field Office (Laurie Bjornestad) ✓
FWS: Regional Office (Bob McCue) ✓
FWS: Regional Office (Bridget Fahey) ✓
FWS: Colorado Field Office (Barbara Spagnuolo) ✓
Project file

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