



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Colorado Field Office
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

IN REPLY REFER TO:

ES/CO: ES/LK-6-CO-03-F-032
Permit Number: TE-073390-0
Mail Stop 65412

DEC 12 2003

Memorandum

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

From: Chief of Endangered Species Branch, Ecological Services,
Region 6 Office, Lakewood, Colorado *Rohr*

Subject: Intra-Service section 7 consultation and Biological Opinion on Issuance of an
Incidental Take Permit to Struthers Ranch Development, LLC for the Struthers
Ranch Property, El Paso County, Colorado (TE-073390).

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 Struthers Ranch Development, LLC (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 and use of a residential and commercial development on the Struthers Ranch Property. 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 the Struthers Ranch Property" (EA/HCP) of June, 2003. 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 October, 2000 and has since had various communications, site visits and meetings with the Applicant and associated representatives. The draft subject EA/HCP and permit application was submitted to the Service in June, 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 and use a residential and commercial development on the Struthers Ranch Property in the vicinity of Black

Forest Creek, southeast of the Town of Monument, El Paso County, Colorado. The incidental take would be in the form of potential disturbance to, and loss of, habitat used by Preble's. The principal actions likely to result in possible incidental take include construction and maintenance of commercial and residential buildings and associated infrastructure, including erosion control and a box culvert crossing of Black Forest Creek. Construction activities could permanently impact 15.24 acres and temporarily impact 1.13 acres of known occupied 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 are enhancement, restoration and creation of habitat on site to a specified level of success through native grass seeding and native shrub planting on site, non-native weed control and creation of a detention pond and wetland area. Additionally, grazing on the Struthers Ranch Property will be removed to encourage existing native grass recovery.

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, p. 77) 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." 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 meadow jumping mouse 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 meadow jumping mouse 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 effect 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). Critical habitat was not designated in the final rule for Black Forest Creek in El Paso County, therefore, none will be affected by this project.

Environmental Baseline

In El Paso County, the Preble's meadow jumping mouse has been captured or has suitable habitat along portions of Monument Creek, Kettle Creek and Pine Creek, and their major tributaries. Additionally, Preble's have been found on West Monument Creek within the Air Force Academy grounds located southwest of the project site. Based on the availability of potentially suitable habitat and lack of trapping information, Preble's is assumed to occupy appropriate habitat within El Paso County. The Preble's mouse has been documented to exist on Black Forest Creek within the project location area.

Effects of Action

The proposed construction and use activities may directly impact a combined total of 16.37 acres of known occupied Preble's habitat through temporary and permanent take, with 15.24 acres of permanent take. The area to be impacted represents a very small portion of the 48.93 acres of 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 15.24 acres and temporary disturbance of 1.13 acres of Preble's habitat, which could contribute to the cumulative disturbance of these vegetation types in El Paso County from development and other land use projects. The vegetation impacted would be riparian and/or 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 loss of upland 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 destroy or adversely modify critical habitat.

Although the proposed action may adversely affect the Preble's and its habitat along Black Forest Creek, the proposed conservation measures of restoration, enhancement, and preservation 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 15.24 acres of riparian and/or upland habitat and the temporary loss of 1.13 acres of riparian and/or upland habitat within the subject property and any harm or harassment of individuals during associated project construction and use. In this biological opinion, 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.
2. 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 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.
4. The Service will include, as a Permit condition, that the Permittee conduct annual monitoring of all revegetation efforts and other mitigation efforts as described in the EA/HCP. Monitoring reports shall be forwarded to the Service after each growing season and prior to December 1 of each calendar year.
5. The Service will include, as a Permit condition, that the Permittee will have a signed and finalized Deed of Sale, a signed and finalized Deed Restriction, and a signed and finalized placement of bond for the subject property, to the Service's Colorado Field Office within ninety (90) days of Notice of (Permit) Issuance in the Federal Register or else the ITP will become temporarily inactive until such time as these abovementioned documents are finalized and submitted to the Colorado Field Office. No construction or disturbance of any kind, permanent or temporary, will be allowed on the subject property until these documents are received and approved by the Service.
6. 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 1.13 acres of suitable and potential habitat and/or permanent loss of 15.24 acres of suitable or potential 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 construction and use of the Struthers Ranch Property. 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, 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: Struthers Ranch Development, LLC (Kevin Paul)
USACOE: Pueblo Regulatory Office (Van Truan)
FWS: GJ Field Office (Laurie Bjornestad)
FWS: Regional Office (Bob McCue)
FWS: Colorado Field Office (Kathleen Linder)
FWS: Colorado Field Office (Barbara Spagnuolo)

REFERENCES CITED

- Armstrong, D.M., M.E. Bakeman, A. Deans, C.A. Meaney, and T.R. Ryon. 1997. Report on habitat findings of the Preble's meadow jumping mouse. Boulder (CO); report to the U.S. Fish and Wildlife Service and Colorado Division of Wildlife. 91 pp.
- Compton, S.A., and R.D. Hugie. 1993. Status report on *Zapus hudsonius preblei*, a candidate endangered subspecies. Logan (UT): Pioneer Environmental Consulting Services Inc.; under contract with the U.S. Fish and Wildlife Service. 32 pp.
- Compton, S.A., and R.D. Hugie. 1994. Addendum to the status report on *Zapus hudsonius preblei*, a candidate subspecies. Logan (UT): Pioneer Environmental Services, Inc.; under contract with the U.S. Fish and Wildlife Service. 8 pp.
- Corn, J.G., C.A. Pague, A.R. Ellingson, M. Sherman, T. Zwięjacz, G. Kittel, and C. Fleming. 1995. Final report on the geographic extent of the Preble's meadow jumping mouse population on the United States Air Force Academy. Ft. Collins (CO): Colorado Natural Heritage Program; under contract with the United States Air Force Academy. 40 pp.
- Krutzsch, P.H. 1954. North American jumping mice (genus *Zapus*). University of Kansas Publications, Museum of Natural History 7:349-472.
- Shenk, T. 1998. Conservation assessment and preliminary conservation strategy for Preble's meadow jumping mouse (*Zapus hudsonius preblei*). Fort Collins (CO): Colorado Division of Wildlife. 38 pp.
- Shenk, T. 2000. Temporal and spacial variation in the demography and movement patterns of Preble's meadow jumping mouse (*Zapus hudsonius preblei*). Fort Collins (CO): Colorado Division of Wildlife. 41 pp.
- Shenk, T.M. and M.M. Sivert. 1999a. Temporal and Spatial Variation in the Demography of Preble's meadow jumping mouse (*Zapus hudsonius preblei*). Fort Collins (CO): Colorado Division of Wildlife January-March 1999 Quarterly Report. 16 pp.
- Shenk, T.M. and M.M. Sivert. 1999b. Movement patterns of Preble's meadow jumping mouse (*Zapus hudsonius preblei*) as they vary across time and space. Fort Collins (CO): Colorado Division of Wildlife January-March 1999 Quarterly Report. 35 pp.
- USFWS (United States Fish and Wildlife Service) 1998. Final rule to list the Preble's meadow jumping mouse as a threatened species. Federal Register 63, no. 92. 13 pp.