



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Colorado Field Office
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

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Memorandum

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

From: Field Supervisor, Ecological Services,
Colorado Field Office, Lakewood, Colorado 

Subject: Intra-Service Section 7 consultation and Biological Opinion on Issuance of an
Incidental Take Permit to Continental Homes for Development of the Pinery Glen
Residential Subdivision, Douglas County, Colorado (ES/GJ-6-CO-02-F-001).

This document constitutes the Biological Opinion prepared pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act), on the effects of issuing an incidental take permit to Continental Homes (the 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 construction and development of 541 residential single-family lots and associated roads, utilities, and detention ponds for stormwater management. The Property is located within portions of Sections 15 and 22 of Township 7 South, Range 66 West, southwest of the Town of Parker, Douglas County, State of Colorado. The Property comprises 160 total acres, including the residential development, infrastructure, detention basins, and various other areas designated as the location of mitigation activities pursuant to the EA/HCP. The incidental take would be in the form of potential disturbance to and loss of habitat used by Preble's.

This biological opinion 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*) at Pinery Glen in Douglas County, Colorado" (EA/HCP) of January 2002. The Service has determined that the proposed project may adversely affect the 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 received its first contact with the Applicant in March 2000 and has since had various communications and meetings with the Applicant and associated representatives. A Settlement Agreement, dated July 13, 2001, addressed the loss of approximately 18.79 acres of Preble's habitat and is incorporated here by reference (Appendix A of the final EA/HCP). The subject HCP/EA was submitted pursuant to this Settlement Agreement between Continental Homes and the Service. The Service received the subject permit application on August 20, 2001.

BIOLOGICAL OPINION

This biological opinion 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 biological opinion constitutes the best scientific and commercial information currently available.

DESCRIPTION OF THE PROPOSED ACTION

The proposed action involves issuance of an Incidental Take Permit for the development and construction of 541 residential single-family lots and associated roads, trails, and detention ponds on a 160-acre property in Douglas County, Colorado. The proposed action includes both past and future disturbances at the site. Development and construction of the project will impact approximately 21.65 acres of suitable Preble's habitat on the 160-acre property.

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 include site preparation of the residential lots, detention ponds, and associated infrastructure. Such site preparation activities consist of leveling the sites of the disturbances with a grader, including destruction of existing vegetation, grading and paving of an existing road surface, and installing utility facilities, including sewer, water, and gas lines.

The proposed project will disturb 21.65 acres of ground undisturbed as of the Listing Date of the Preble's and may result in incidental take. Of this area, 18.79 acres were disturbed after the Listing Date but prior to the Agreement. The Settlement Agreement, dated July 13, 2001, addressed the loss of the 18.79 acres of Preble's habitat and is part of the final solution reached between Continental Homes and the Service regarding this EA/HCP. The remaining 2.86 acres will be disturbed at the completion of the Pinery Glen residential subdivision project.

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 potential for impacts to Preble's at the site.

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 meadow jumping mouse 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 meadow jumping mouse 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 meadow jumping mouse 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).

ENVIRONMENTAL BASELINE

In Douglas County, the Preble's meadow jumping mouse has been captured or has suitable habitat along portions of the South Platte River, and its major tributaries including the East Plum Creek, West Plum Creek, and Cherry Creek drainages. Additionally, Preble's mice have been found in Roxborough State Park on Little Willow and Willow Creeks and on locations in the Pike National Forest in the western part of the county. Based on the availability of potentially suitable habitat and lack of trapping information, Preble's is assumed to occupy appropriate habitat within Douglas County. The Preble's mouse has been documented to exist along Cherry Creek in Douglas County both upstream and downstream of the location of Pinery Glen.

EFFECTS OF ACTION

The proposed construction will directly affect 21.65 acres of potential Preble's habitat within the Cherry Creek drainage. Of this area, 18.79 acres were disturbed after the Listing Date but prior to the Agreement. The remaining 2.86 acres will be disturbed at the completion of the Pinery Glen residential subdivision project. The riparian corridor at the project site is assumed to be inhabited by Preble's year-round. The area to be impacted represents a very small portion of the potential Preble's habitat present in the Cherry Creek drainage. The project will not significantly impact the ability of Preble's to travel upstream or downstream along the Cherry Creek corridor on the project site.

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 biological opinion. 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 action would result in the disturbance 21.65 acres of vegetation which would contribute to the cumulative disturbance of these vegetation types in Douglas County from development and other land use projects. The vegetation impacted would be primarily upland shrubs and grasses.

The proposed action may contribute to take of Preble's and/or their habitat in the region when added to 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 on the subject property.

CONCLUSIONS

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 biological opinion) will jeopardize the continued existence of the Preble's. Although the projects may adversely affect the Preble's and its habitat along Cherry Creek, the proposed action and conservation measures will avoid the likelihood of jeopardy to the species. No critical habitat has been designated for this species, therefore, none will be affected.

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 grant document, 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 loss of 18.79 acres of already impacted upland (Settlement Agreement, Appendix B of the final EA/HCP) and the future loss of 2.86 acres of upland field at the Pinery Glen site 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 or destruction or adverse modification of critical habitat.

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 snow fence or a similar visible barrier to prevent inadvertent impacts to habitat outside the construction footprint.
2. The designated contractor of the Applicant will monitor the extent of habitat impacted to ensure that it does not exceed the authorized area.
3. The designated contractor of the Applicant 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) permit, as evaluated in this Biological Opinion, 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) permit.
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 vegetated habitat outside the fenced work area.
4. The Service will include, as a permit condition, that the permittee must provide a report to the Service, which includes photographic documentation of site conditions prior to construction and at completion of each phase of construction as defined in the EA/HCP.
5. The Service will include, as a permit condition, that the permittee conduct annual monitoring of both 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.
7. 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 (loss of approximately 21.65 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 and development of the Pinery Glen residential subdivision. 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 biological opinion; (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 biological opinion; (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 Lee Carlson, Field Supervisor of the Service's Colorado Field Office at (303) 275-2370.

cc: FWS:GJ (L. Bjornestad)
FWS:Regional Office (B. McCue)
CDOW, Denver, CO (D. Weber)
Douglas County (B. Fox)
Official File
Reading File
Linder

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