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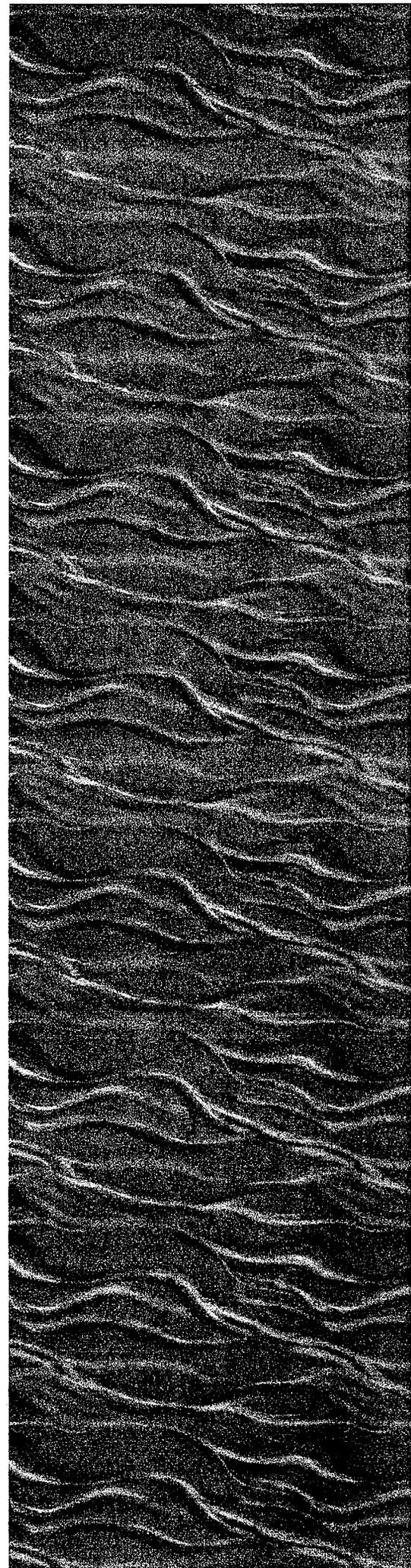


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COVER SHEET

Title for Proposal Action: Issuance of an Endangered Species Act Section 10(a)(1)(B) permit allowing for the incidental take of the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) at Pinery Glen in Douglas County.

Unit of Fish and Wildlife USFWS Proposing Action: Permits Branch, Refuges and Wildlife Permits, Regional Office, U.S. Fish and Wildlife USFWS, 134 Union Boulevard, 3rd Floor, Lakewood, Colorado 80228.

Legal Mandate for Proposed Action: Endangered Species Act of 1973, as amended, Section 10(a)(1)(B), as implemented by 50 CFR §17.32 for threatened species.

Document Author: Blair Leisure and Allison Cowie, Wright Water Engineers, Inc., 2490 West 26th Avenue, Suite 100A, Denver, Colorado 80211.

Document Processor: Kathleen Linder, Ecological Services, Colorado Field Office, U.S. Fish and Wildlife USFWS, 755 Parfet Street, Suite 361, Lakewood, Colorado 80215.

1.0 INTRODUCTION

This Environmental Assessment and Habitat Conservation Plan (EA/HCP) has been prepared with Form 3-200 Permit Application for issuance of a threatened species under section 10(a)(1)(B) of the Endangered Species Act (Act) as amended for the Preble's meadow jumping mouse, *Zapus hudsonius preblei* (Preble's mouse) at the residential subdivision known as Pinery Glen in Douglas County, Colorado (Pinery Glen) more particularly described in section 1.1 below and depicted on Figures 1 through 7. This EA/HCP provides the required National Environmental Policy Act (NEPA) document for a federal action (section 10[a][1][B] permit issuance) and the components of a Habitat Conservation Plan (HCP), as mandated by section 10 of the Act.

Continental Homes owns and manages the majority of Pinery Glen (approximately 160 acres) and, of this 160 acres, has dedicated approximately 100 acres southwest of Pinery Glen to Douglas County upon platting. This dedicated area will be left as open space in perpetuity as described in a 2001 agreement with Douglas County (Appendix A).

The proposed permit is submitted pursuant to the agreement (Agreement) reached between Continental Homes and the U.S. Department of the Interior and the U.S. Fish and Wildlife Service (USFWS) dated July 13, 2001 (Appendix B). The proposed permit and this EA/HCP cover development and construction of the Pinery Glen Subdivision that may have potential impact on habitat for the Preble's mouse. The Agreement commits the USFWS to approval of the proposed permit if the mitigation plan contained in this HCP satisfies the conditions and mitigation ratios of the Agreement as detailed in section 7.0 below and otherwise meets the approval of the USFWS pursuant to its direction under the Act.

1.1 Location of Requested Permitted Activity

Pinery Glen is located in portions of Sections 15 and 22 of Township 7 South, Range 66 West, southwest of the Town of Parker, Douglas County, State of Colorado (Figures 1 and 2). Pinery

Glen comprises approximately 60 acres including a residential subdivision and its associated facilities (roads, utilities, etc.) as designed by Kirkham Michael.

Pinery Glen has 541 residential single-family lots and associated roads, utilities, and detention ponds for stormwater management. The northern part of the subdivision was completed first, and the remaining 2.86 acres, which are located mainly in the southern part, will be completed upon approval of this EA/HCP.

A portion of the property lies within areas described by the USFWS as being potential Preble's mouse habitat within either 300 feet of the 100-year floodplain of Cherry Creek or within 300 feet from a line designated in the field by the USFWS. 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 (Figure 2).

On March 30, 2000 the U.S. Army Corps of Engineers (USACE) ordered a "stop work" on the project due to the presence of a temporary road crossing along Cherry Creek at this location that had not been permitted under a Section 404 permit. Continental Homes removed the temporary bridge crossing and revegetated the area to the approval of the USACE and the United States Environmental Protection Agency (USEPA). USFWS representatives Kathleen Linder and Peter Plage discovered at this time that the Pinery Glen project had potentially impacted some upland and riparian Preble's mouse habitat, although some of the work was completed before mouse habitat was determined to be 300 feet from the 100-year floodplain. Wright Water Engineers, Inc. (WWE), with USFWS approval, calculated total impacts from aerial photographs including construction completed on the Pinery Glen property since the summer of 1999 and further work that will impact areas within 300 feet of the 100-year floodplain line (Figure 3).

Upon review of biological information submitted by Continental Homes (the Applicant) and other sources, the United States Department of the Interior and the USFWS have determined that the proposed development of Pinery Glen may have resulted in, and may further result in, incidental take of the Preble's mouse.

1.2 Description of Requested Permitted Activity

The requested permitted activity includes any and all activities on the Property associated with construction and development of the Pinery Glen Subdivision and associated roads, trails, and detention ponds. Specifically, the requested permitted activity covers all disturbances of areas at Pinery Glen since the early summer of 1999, as the USFWS and Continental Homes agreed upon after reviewing an aerial photograph dated from late spring 1999, including disturbances that occur prior to the date of issuance of the Proposed Permit, as detailed in the Agreement.

As discussed in section 6.3.3 below, the project has disturbed 18.79 acres of Preble's mouse habitat in upland and riparian areas since the Listing Date and will disturb an additional 2.86 acres of riparian and upland habitat to complete this proposed project.

Pursuant to the Agreement, the USFWS shall consider the proposed mitigation under the HCP contained herein as offsetting both past and future disturbances at Pinery Glen. Pinery Glen will be a residential subdivision with associated facilities such as roads, utilities, parking, etc.

Development and construction of Pinery Glen impacts approximately 21.65 acres of upland and riparian habitat, which is currently designated as Preble's mouse habitat.

1.3 Permittees

The Proposed Permit specifically includes as permittees and authorizes an incidental take by Continental Homes. This permit will cover the proposed activities at Pinery Glen and all officers, members, employees, agents, contractors, and licensees. Activities by any of the above-listed persons or entities related to Pinery Glen will not violate the prohibitions under 50 CFR §13.25 against permit transfers.

Continental Homes accepts and agrees to the responsibility for adhering to the requirements and conditions of the Proposed Permit and of this EA/HCP and for implementing and managing the mitigation plan contained herein, except as expressly provided in section 7.4.6 below.

1.4 Continental Homes' Qualifications

Continental Homes is not disqualified under any of the factors listed under 50 CFR §13.21. Disqualifications would include the applicant being assessed any convictions, criminal provisions, or civil penalties for this particular activity, which demonstrate an obvious lack of responsibility as determined by the USFWS director. (See Appendix C—General Permit Procedures.)

1.5 Term

The duration of the Proposed Permit is 10 years from the date of issuance. This 10-year timeframe will allow Continental Homes to take Preble's mouse, either directly or through disturbance of actual or potential Preble's mouse habitat, within the geographical boundaries identified in the Proposed Permit over that period. After expiration of the Proposed Permit, any "take" within the said geographic boundaries not specifically covered by this application will require authorization by the USFWS, either through a subsequent permit application under section 10(a)(1)(B) of the Act for incidental take or through other procedures adopted by the USFWS under section 4(d) of the Act. However, the terms and conditions contained in the HCP shall not expire and shall be subject to the enforcement authority of section 11(b) of the Act.

1.6 Other Conditions

The Proposed Permit and the HCP contained herein shall be subject to the conditions listed under 50 CFR §13.21(e). In addition, the Proposed Permit and this HCP shall be subject to the terms of the Agreement.

1.7 Acreage Estimates

All acreage and square footage figures contained herein represent estimates made at the site in collaboration with the USFWS, Continental Homes, WWE, and the surveyor for Pinery Glen. WWE obtained an aerial photograph from USFWS representative Roger Gephart at a meeting at

Pinery Glen in the field on October 3, 2000. This photograph was shot in early summer 1999 at a scale of approximately 1-inch equal 280 feet. Roger and Kathleen Linder joined with Continental Homes' representatives, Dave Boten and Chris Boyd, and WWE representative Blair Leisure in the field on October 3, 2000 to flag a line that they agreed upon as being the line from which impacts to potential habitat would be calculated up to 300 feet. The group decided that, in the northern portion of the property, this line would be the western edge of the bike trail, which runs north/south to where it crosses Cherry Creek. At this point, the fence line that is aligned to the northeast of the bridge, then turns within 300 feet to the southeast, and continues along to where two detention ponds have been excavated would become the line (Photograph 1). At this point, the group calculated impacts from the 100-year floodplain line.

Continental Homes surveyed the flagged line and placed it with the 100-year floodplain on a lot map. WWE then reduced the map in size and created an overlay with the aerial that would include all impacts to date as well as future impacts. These impacted areas have been mapped on Figure 3. Impacted areas will not include areas on the aerial photograph that were clearly disturbed before the spring of 1999. At that time, the setback requirement, according to USFWS regulations, was limited to 300 feet from the edge of riparian habitat along the creek. Therefore, the USFWS determined that the majority of the impact on the aerial photograph was outside of what would have been considered potential Preble's mouse habitat during the early summer of 1999.

2.0 ENVIRONMENTAL ASSESSMENT

2.1 Purpose and Need for Action

The purpose of the proposed action is to provide affordable housing for the community of Douglas County, Colorado, a county experiencing tremendous growth. Located in the Denver metropolitan area, Douglas County is the fastest growing county in the state. In the past decade, the population of Douglas County increased by 172.4 percent (Colorado Demography Section 2001). Housing is in short supply, and the cost of housing is increasing dramatically. Affordable housing is especially scarce in Douglas County.

The proposed action would provide 541 total residential units in Douglas County. The units will be priced from approximately \$180,000 to \$200,000, significantly less than the average cost of housing in the Denver metropolitan area and within Douglas County, specifically.

3.0 AFFECTED ENVIRONMENT

3.1 Vegetation

Riparian areas along Cherry Creek in Douglas County are generally composed of plains cottonwood (*Populus deltoides*), peach-leaved willow (*Salix amygdaloides*), coyote willow (*Salix exigua*), chokecherry (*Padus virginiana*), wild plum (*Prunus americana*), hawthorn (*Crataegus* spp), miscellaneous native and introduced grasses and weedy forbs such as leafy spurge (*Euphorbia* spp.). The understory is typically dominated by rushes (*Juncus* spp.) and sedges (*Carex* spp.) in wetter sites and upland grasses in drier sites. The upper terraces are dominated by smooth brome (*Bromus inermis*), a nonnative pasture grass often planted on degraded rangeland. Leafy spurge is dominant on intermediate terraces above the creek along with cheat grass (*Bromus tectorum*) and Russian knapweed (*Acroptilan repens*) (Photograph 2).

3.2 Wildlife

In Douglas County, wildlife found along Cherry Creek includes common riparian species such as the black-capped chickadee (*Poecile atricapillus*), song sparrow (*Melospiza melodia*), and Bullock's oriole (*Icterus bullockii*). Common upland species found in the vicinity of Cherry Creek include the Swainson's hawk (*Buteo swainsonii*), ring-necked pheasant (*Phasianus colchicus*), northern flicker (*Colaptes auratus*), American robin (*Turdus migratorius*) and lesser meadowlark (*Sturnella neglecta*).

Mammals likely to be found in the project area include deer mouse (*Peromyscus maniculatus*), meadow vole (*Microtus pennsylvanicus*), fox squirrel (*Sciurus niger*), opossum (*Didelphis virginiana*), muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), and coyote (*Canis latrans*). Other less common mammals that may be found in the area include Ord's kangaroo rat (*Dipodomys ordii*) and badger (*Taxidea taxus*).

Wildlife (or signs of wildlife) actually observed at the site includes: belted kingfisher (*Ceryle alcyon*), black-billed magpie (*Pica pica*), yellow warbler (*Dendroica petechia*), western meadowlark, red-winged blackbird (*Agelaius phoeniceus*), mouse (*Peromyscus* spp.), vole (*Microtus* spp.) and coyote.

A live-trapping survey conducted between July 26 and 31, 1999 (Shepherd Miller/Schafer & Associates 1999) resulted in the trapping of the following species: deer mouse, western harvest mouse (*Reithrodontomys megalotis*), northern grasshopper mouse (*Onychomys leucogaster*), hispid pocket mouse (*Chaetodipus hispidus*), and Ord's kangaroo rat. No Preble's mouse was trapped at this time.

3.3 Threatened or Endangered Species

To the best of the Applicant's knowledge, no threatened or endangered species other than Preble's meadow jumping mouse use the property as habitat.

According to Dave Weber of the Colorado Division of Wildlife (CDOW), the Preble's meadow jumping mouse and the bald eagle (*Haliaeetus leucocephalus*) may occur at the proposed project site (Appendix D). Bald eagles may use the site during the winter as a feeding area. However, the lack of prairie dogs, the eagle's primary winter prey in the Denver area, limits use of the area by bald eagles. Additionally, the relatively small size of the creek limits the area's ability to provide a large quantity of fish and waterfowl (other winter prey commonly consumed by bald eagles).

The absence of a prairie dog colony also precludes use of the area by several species found to be dependent upon (or to coexist with) prairie dogs. Burrowing owls, black-footed ferrets, and ferruginous hawks are associated with prairie dog towns and, therefore, are unlikely to utilize the habitat found at the project area.

According to the Colorado Natural Heritage Program (CNHP), a Preble's mouse was trapped in 1999 over one-mile upstream from this project area (Appendix D). The CNHP identified no other threatened, endangered, or imperiled plant or animal species in the project area.

3.4 Wetlands

The riparian zone surrounding Cherry Creek supports several areas that satisfy the wetland criteria established in the 1987 U.S. Corps of Engineers' *Wetland Delineation Manual* (Environmental Laboratory 1987). Wetland habitat types found on the property include forested wetlands, scrub/shrub wetlands, and emergent wetlands. The parcel's forested wetlands are characterized by plains cottonwood and peach-leaved willow with an understory dominated by sedges and rushes. Scrub/shrub wetlands are dominated by coyote willow and also support an understory dominated by sedges and rushes (Photographs 3 and 4). Emergent wetlands support primarily sedges and rushes.

Areas that fall at or below "the plane of ordinary high water" are also subject to jurisdiction under section 404 of the Clean Water Act of 1972. Neither wetlands nor other areas below the ordinary high waterline will be disturbed by construction at the site.

3.5 Geology/Soils

According to the 1979 United States Geological Survey publication "Geologic Map of the Greater Denver Area, Front Range Urban Corridor, Colorado," surficial geology at the site includes Post-Piney Creek and Piney Creek Alluvium and the Broadway Alluvium. The Post-Piney Creek and Piney Creek Alluvium are found primarily along the Cherry Creek channel and along Bayou Gulch in the southern portion of the site. These modern alluvial terrace and floodplain deposits include gravel, sand, silt, and clay. The Broadway Alluvium forms the older stream terraces east of Cherry Creek and also consists of gravel, sand, silt, and clay. Bedrock underlying the site is inferred to be the Dawson and Arapahoe Formations, which include arkosic sandstone, siltstone, claystone and conglomerate.

Based on review of the United States Department of Agriculture's publication *Soil Survey of Castle Rock Area, Colorado*, the soil types identified at the site include alluvial and upland series. The soils along Cherry Creek and Bayou Gulch include sandy wet alluvial land, loamy alluvial land, and sandy alluvial land. These units consist of sands, loamy sands, and gravels and typically occur on slopes between 1 and 5 percent.

Soils identified to the east of Cherry Creek include members of the Samson, Bresser, and Englewood series. The Samson loam is a well-drained soil formed in alluvium derived from weathered, arkosic, sedimentary rock such as the Dawson Formation. The unit is identified in the northern half of the site. This unit typically occurs on slopes between 1 and 4 percent and can be up to 60 inches thick. The Bresser sandy loam (1- to 3-percent slopes) and Bresser-Truckton sandy loams (5- to 25-percent slopes), which are mapped generally in the eastern half of the site, are well-drained soils that formed in sandy material deposited by wind and water. These units can also be up to 60 inches thick and are identified as being susceptible to soil blowing and gully erosion where cultivated. The Englewood clay loam, which is mapped in the northwest portion of the site, is a well-drained soil that formed in alluvium weathered from sedimentary bedrock. Typically occurring on slopes between 1 and 4 percent, the Englewood is found in upland swales and may be up to 60 inches thick.

3.6 Land Use

The site has historically been undeveloped horse and cattle pasture. Additional undeveloped pasture adjoins the site to the north and west, across Cherry Creek. Douglas County Open Space adjoins the site to the south, across and including portions of Bayou Gulch. Highway 83 is located east of the site; a residential subdivision is located further east of the highway.

3.7 Cultural Resources

WWE has conducted a search of historical records at the Colorado Historical Society's State Historical Preservation Office (SHPO) to determine if there are registered historical sites of

cultural significance on the subject property. The research included reviewing SHPO's electronic databases and available mapping. According to SHPO's records, there are two registered sites of historical or cultural significance on the subject property. The Colorado Archaeology Survey has identified SHPO site ID 5DA265, which is located at the southeast corner of the site, adjacent to Highway 83. There is no development or mitigation planned at or near this archaeological study site. The archaeological site has been mapped and mitigation will not occur within a 100-foot buffer around the mapped site (Figures 4 through 6).

The Colorado Historical Building Inventory Record lists SHPO site ID 5DA1413, which is located in the east-central portion of the site. Site 5DA1413 consists of the Fonder School building, which is currently a part of the Pinery Water & Wastewater District's structure. There is no development or mitigation planned at or in the immediate vicinity of the historic building.

3.8 Air Quality

Air quality at the Pinery Glen area is influenced by the air quality of the City of Parker and the surrounding Douglas County. Wind direction in the area is commonly from the north; however, changing pressure systems affect wind direction and speed. The Pinery Glen receives windblown urban pollution that varies, given weather-dependent inversions. Urban pollution includes chronic carbon monoxide, ozone, and particulate matter pollutants. The source of pollution is from motor vehicles, industry, wood burning, and agricultural processes (WWE, 1998).

3.9 Water Resources and Water Quality

The historic source of water in the proposed project area is groundwater that is seasonally and sporadically influenced by surface water runoff. The Pinery Water and Wastewater District are responsible for water and wastewater treatment. They pump the water from the wells, perform minimal treatment, and then distribute the water to approximately 2,500 homes. Ultimately, the water is delivered to the appropriate facilities for treatment. According to the District,

approximately 80 percent of the water originates in the shallow, alluvial aquifer and the remaining comes from the Arapahoe. The Cherry Creek Basin Authority performs regular sampling along Cherry Creek.

Water rights are allocated based on the amount of water beneficially needed for a particular user. Water loss through pond evaporation constitutes a use. Therefore, the creation of a water body or a wetland constitutes use of water due to evaporative loss or evapotranspiration. Water rights must typically be allotted to that user in order to allow for that use.

4.0 ALTERNATIVES

This section describes the alternatives that were considered during the planning process. The alternatives include: (1) proposed action, (2) selection of an alternate site, (3) modification of the site design, and (4) no action.

4.1 Alternative 1—Proposed Action

The proposed action consists of obtaining a permit under section 10(a)(1)(B) of the Endangered Species Act of 1972 to authorize the incidental take of the Preble's meadow jumping mouse. Impacts to Preble's mouse would result from construction of portions of approximately 60 of the 541 single-family residences and associated driveways, roads, utilities, and detention pond facilities. The development extends over 160 acres of land on the 260-acre parcel. The areas left undisturbed are found in the vicinity of Cherry Creek. The only disturbance located near Cherry Creek is an existing bike path that parallels the creek. The proposed action is depicted and more fully described in Figure 3.

As discussed with the USFWS, the majority of the disturbance at the parcel has already taken place. Disturbance from construction completed prior to the summer of 1999 (the date of the aerial photograph used to determine impacts) is not being included as impacted acreage, because much of this work had been completed before the Preble's mouse setback of 300 feet from the 100-year floodplain was recommended as a guideline for habitat. Areas impacted since the summer of 1999 (and prior to permitting) total 18.79 acres and will be mitigated on a 3:1 ratio (mitigation to impact). Although a majority of the impacted areas do not extend into the riparian zone immediately surrounding Cherry Creek, the majority of impact does occur within 300 feet of Cherry Creek's 100-year floodplain, which is currently designated as habitat for the Preble's mouse. Likewise, 2.86 acres of future development are found within this area and will be mitigated at a 1.5:1 ratio (mitigation to impact). Mitigation measures are fully described in the HCP (section 7).

The proposed alternative avoids direct impacts to the vegetated riparian zone immediately surrounding Cherry Creek and restricts development to the highest elevations on the parcel. This alternative allows development on the property while minimizing and offsetting, to the greatest extent practicable, potential impacts to the Preble's mouse. As described in section 7.3 below (mitigation plan), extensive on-site conservation measures will facilitate the future management and recovery of the species. Furthermore, the USFWS has been closely involved with development of the mitigation plan and has agreed to consider the proposed action if the mitigation measures are carried out.

4.2 Alternative 2—Alternate Site Location

This alternative assumes that the Applicant could equitably divest the property and develop a residential subdivision in a location where the Preble's mouse would not be impacted. The area at Pinery Glen designated as potential Preble's mouse habitat would be restored to pre-construction natural conditions.

4.3 Alternative 3—Alternate Site Design

This alternative refers to the original design for construction at the property. Originally, the development was designed to extend closer to the riparian area, which would have resulted in a greater impact to the Preble's mouse. Approximately 10 additional acres of land disturbance would be associated with Alternative 3. This alternative was not chosen, because it would cause avoidable impacts to riparian habitat and potential Preble's mouse habitat.

4.4 Alternative 4—No Action

This alternative consists of abandoning the project. Neither completion of the residential community nor carrying out of conservation measures would take place. No action would imply that the Pinery Glen project would be abandoned and the area designated as potential Preble's mouse habitat would remain in its current condition and not return to its pre-construction natural condition.

5.0 IMPACT ANALYSIS

The following sections quantify the potential ecological impacts of the alternatives described in section 4.1 above. The purpose of this assessment is to identify whether any of the alternatives would have a significant impact on the Preble's mouse. The assessment also addresses other potential environmental impacts caused by the alternatives.

5.1 Alternative 1—Proposed Action

5.1.1 On-Site Impacts

Although completion of the proposed action will destroy some on-site vegetation and reduce wildlife habitat (including the potential destruction and degradation of Preble's mouse habitat), implementation of the HCP will successfully compensate for all impacts. Additionally, implementation of the HCP will provide the opportunity to improve upon and expand existing Preble's mouse habitat. Consequently, the riparian zone and surrounding areas will be enhanced and restored to a condition that will benefit both the Preble's mouse and other riparian-dependent wildlife.

5.1.1.1 Vegetation

The proposed action will cause the removal or alteration of vegetation on 21.65 acres (Figures 3 and 4). Most impacted areas are found on the upper terraces and are dominated by the nonnative grass smooth brome. Less extensive development will occur on the lower terraces, which are dominated by leafy spurge, cheat grass, and Russian knapweed (*Acroptilon repens*). These areas will be converted to asphalt, buildings, and landscaped vegetation such as grass, shrubs, and trees. The proposed development will not impact riparian vegetation in the lower terrace immediate adjacent to Cherry Creek.

5.1.1.2 Wildlife

Construction associated with the project will displace wildlife that depends upon the potentially impacted areas. Displacement is expected to cause a temporary increase in competition for breeding, cover, nesting, and foraging habitat in the adjacent undisturbed habitat. However, as described in the attached HCP (section 7), mitigation will consist of the restoration and enhancement of 60.66 acres plus an additional 5 voluntary acres to cover losses and a mandatory 10 acres for Douglas County, totaling 75.66 acres. Although 21.65 acres will be lost as habitat the impacts will be fully mitigated through enhancement and restoration. Of the 21.65 acres of impact, 18.79 acres have been disturbed to date and 2.86 acres are proposed to complete the project.

Landscaped portions of the proposed project will provide habitat for wildlife species capable of existing with urban development and human activity. Habitat generalists that successfully use landscaped areas include: the deer mouse, the house mouse (*Mus musculus*), American robin, and black-billed magpie. Riparian species that successfully inhabit areas developed for residential use include: the fox squirrel, striped skunk (*Mephitis mephitis*), opossum, and raccoon.

The proposed alternative may cause the decline of species that depend on specific habitats. Grassland specialists, such as the horned lark (*Eremophila alpestris*) and the western meadowlark, may be completely displaced by the proposed development. However, the riparian area bordering Cherry Creek (approximately 100 acres) will remain undeveloped and will continue to provide habitat for wildlife currently using this area. Furthermore, as described in the HCP (section 7), these areas will be enhanced and, in the future, are expected to provide a higher quality of riparian habitat.

5.1.1.3 Threatened or Endangered Species

5.1.1.3.1 Assessment of Take of the Preble's Mouse

Most of the land on which the development is being constructed is a formerly grazed upland parcel dominated by nonnative herbaceous species. Smaller sections of the parcel are immediately adjacent to or within the floodplain of Cherry Creek. The USFWS has determined that habitat for the Preble's mouse includes riparian communities and surrounding areas up to 300 feet from the 100-year floodplain. Additionally, mouse protection areas and potential mouse protection areas have been identified along Cherry Creek just south of the project area (Figure 2). Therefore, the project area may support suitable foraging, nesting, cover, and/or hibernating habitat for the Preble's mouse.

Development of 21.65 acres of potential mouse habitat could cause both direct and indirect impacts to the Preble's mouse. Direct impacts to the Preble's mouse could occur through the development of land supporting shrub growth or dense vegetation. Development activities will cause indirect impacts to the Preble's mouse by decreasing the size of contiguous habitat. Other indirect impacts could occur from: increased activity within close proximity to Preble's mouse habitat, introduction or increase of predator species (skunks and domestic cats), and increase of species that may compete with the Preble's mouse (deer mice and other small rodents).

5.1.1.3.2 Assessment of Take of Other Listed Species

As described in section 3.3, the property has been evaluated for the presence of federally listed threatened or endangered species and appears to lack habitat to support protected species other than the Preble's mouse. Therefore, while the proposed project will impact the Preble's mouse, it will not impact other listed species.

5.1.1.4 Wetlands

As described in section 3.4, wetlands and other protected waters of the U.S. are found on the property. However, they are located on the lower terrace immediately adjacent to Cherry Creek and will not be impacted by this project. Additionally, runoff into Cherry Creek and its wetlands will be treated according to U.S. Environmental Protection Agency (EPA) standards and local regulations and will not contribute to nonpoint source pollution or sedimentation.

5.1.1.5 Geology and Soils

No significant impacts to existing geology are anticipated from the proposed project. Proposed development will result in surface soil alteration related to grading and foundation excavation, etc.

5.1.1.6 Land Use

Current and past land use trends in the vicinity of the project area include animal pasture, open space, and residential development. Land use at the site is proposed to include residential development.

5.1.1.7 Cultural Resources

Registered historic sites located on or in the vicinity of the project area are discussed in section 3.7. No impacts to sites of historic value are anticipated.

5.1.1.8 Air Quality

Generally, carbon monoxide concentrations and particulate matter levels are less in suburban areas compared to central business districts, such as the City of Denver. The Colorado Department of Public Health and Environment (CDPHE) Air Quality Division recently began monitoring in Parker, Colorado during the year 2000. The National Ambient Air Quality Standards (NAAQS) for PM_{2.5} are reported as an annual arithmetic mean.

Table 1 below reflects the available data received for the third quarter of 2000 on the rooftop of the Parker Public Library at 10851 South Crossroads and the NAAQS. To date, there is only one NAAQS monitoring station in Parker, Colorado. This monitoring station was chosen by its proximity to Pinery Glen.

TABLE 1
Third-quarter 2000 Data

Air Quality Parameter	Maximum Concentrations $\mu\text{g}/\text{m}^3$	NAAQS Annual Arithmetic Mean/24-Hour Average $(\mu\text{g}/\text{m}^3)$
Particulate Matter (PM _{2.5})	10.1	15/65
Particulate Matter (PM _{2.5})	8.1	15/65
Particulate Matter (PM _{2.5})	7.3	15/65
Particulate Matter (PM _{2.5})	7.2	15/65

Data Source: EPA's Aerometric Information System (AIRS) received from CDPHE in February 2001.

The proposed Pinery Glen subdivision is near other residential communities. Traffic along Parker Road to the east creates the most direct impact to air quality, besides urban airborne pollution. Vehicles' emissions and noise may increase slightly, due to an increase in the number of vehicles in the area. The local increase may have minor effects on regional air quality. A temporary increase of dust emissions and noise is expected during construction.

5.1.1.9 Water Resources and Water Quality

Based on a review of available information, the groundwater in this area is suitable for residential use upon appropriate treatment by the District. Discussions with the Pinery Water and Wastewater District indicate this water is of good quality. Below is a table showing some of the available water quality data received from the Pinery Water and Wastewater District in February 2001.

TABLE 2
Well Monitoring Data 1994-1999
Average Concentrations mg/L

Location	Ammonia (as N)	Nitrate (as N)	Total Dissolved Phosphorus	Soluble Reactive Phosphorus	Chloride	Sulfate (as SO ₄)	Total Phosphorus	Total Suspended Solids	Total Coliform
MW-1	0.09	1.06	0.21	0.21	13.73	22.50	0.22	--	0.03
MW-2	0.16	0.03	0.29	0.22	135.77	155.35	0.30	--	0.31

MW = monitoring well.

Source: Data provided by the Pinery Water and Wastewater District. Monitoring data near Pinery Glen's site.

TABLE 3
Surface Water Monitoring Data 1994-1999
Average Concentrations mg/L

Location	Ammonia (as N)	Nitrate (as N)	Total Dissolved Phosphorus	Soluble Reactive Phosphorus	Chloride	Sulfate (as SO ₄)	Total Phosphorus	Total Suspended Solids	Total Coliform
CC-1	0.09	0.19	0.18	0.17	9.57	16.22	0.23	37.00	255.23
CC-2	0.09	0.17	0.18	0.18	12.28	22.29	0.26	61.44	1,678.14

CC = surface water monitoring locations.

Source: Data provided by the Pinery Water and Wastewater District. Monitoring data are near Continental Homes' site.

Runoff will be treated via detention and grass lined channels prior to release. A series of detention ponds and natural vegetation act as a filter before water leaves the site. The "wet pond" will allow suspended solids and particulates to settle. Channels leading into the pond and natural wetland channels tend to improve the water quality.

5.1.2 Off-site Impacts

The proposed action, in conjunction with the proposed HCP, will cause little or no significant off-site impacts.

5.1.2.1 Vegetation

The proposed development may cause minor disturbance to off-site vegetation due to increased human recreation and visitation of off-site areas. Impact may include trampled and damaged vegetation and damage due to activities such as hiking, bicycling and other recreational sports. Appropriate signage in sensitive areas will help to minimize these impacts.

5.1.2.2 Wildlife

The proposed development will result in reduction of habitat available to local wildlife species. However, mitigation measures included in the HCP will compensate for the habitat reduction and will increase the quality of habitat available to wildlife species in the long term.

Other possible impacts to off-site wildlife include: increase in generalist species, introduction and/or increase in predator species, and reduction in the overall habitat available. Wildlife currently utilizing the areas proposed for development will be forced to disperse to adjacent areas where increased competition for nesting, cover, foraging, and breeding could occur.

Urban development often causes an increase in generalist species, those that use a wide range of habitats. Because generalists may outcompete specialists, increases in habitat generalists (fox squirrel, raccoon, opossum) often occur at the expense of species with narrower habitat requirements. Additionally, the introduction and/or increase of predators such as house cats, crows, jays, and skunks can have a damaging effect on native wildlife communities, particularly nesting songbirds. Consequently, wildlife located off-site from the property could be subject to minor impacts from the proposed development.

5.1.2.3 Threatened or Endangered Species

Impacts to endangered species located away from the project site include a reduction in overall foraging and hibernation habitat for the Preble's mouse. However, the conservation measures described in the HCP (section 7) will compensate for potential on-site impacts and are expected

to increase the quality of habitat available to the Preble's mouse. Therefore, no long-term impacts to off-site Preble's mouse populations are expected.

The proposed development will not impact other threatened or endangered species located off the project site.

5.1.2.4 Wetlands

Proposed on-site erosion and water quality controls will minimize the amount of sediment and other nonpoint source pollution introduced into downstream areas. Stormwater runoff will flow into five detention ponds located throughout the subdivision. These detention ponds will be vegetated with established wetlands where feasible and with drier vegetation as necessary. The amount of water leaving the site will increase in base flow, but best management practices (BMPs) will be adhered to for water quality purposes. The amount of water leaving the site will have little impact on existing wetland resources because no existing wetlands are located in the project area except along Cherry Creek. These riparian wetlands should only be enhanced through addition of greater base flows off the property. Therefore, no off-site impacts to wetlands or other waters of the U.S. are expected to occur.

5.1.2.5 Geology and Soils

No off-site impacts to geologic or soil resources are expected to occur as a result of the project.

5.1.2.6 Land Use

No significant alterations to existing or proposed off-site land uses are expected to occur as a result of the project.

5.1.2.7 Cultural Resources

No off-site impacts to identified cultural resources are expected to occur as a result of the project.

5.1.2.8 Air Quality

Vehicles' emissions and noise may increase slightly due to an increase in the number of vehicles in the area. The local increase may have minor effects on regional air quality.

5.1.2.9 Water Resources and Water Quality

This activity is not anticipated to contribute to significant degradation of surface and groundwater resources; however, there will be increased well pumping and decreased infiltration. The wells are already in use, and the water is currently distributed to neighboring subdivisions. Proposed water quality control devices are discussed in the on-site impacts section. These control devices are expected to maintain existing off-site water quality conditions.

5.1.3 Cumulative Impacts Analysis

5.1.3.1 Vegetation

The proposed development will cause the disturbance of 21.65 acres of vegetation. Most of the area disturbed consists of formerly grazed pastures on the higher terraces above Cherry Creek. The majority of this area will be converted to buildings, roads, driveways, and landscaped areas. Consequently, a net loss of vegetated areas (primarily pasture land) will result from the proposed project.

In contrast, native vegetation communities will be created through a series of mitigation measures. As described in the HCP, areas currently dominated by nonnative vegetation will be restored or enhanced, resulting in a net increase in native plant communities in the vicinity.

5.1.3.2 Wildlife

Development in Douglas County is occurring at a persistent and rapid pace. Considered with impacts from other developments in Douglas County, the proposed action will contribute to a cumulative reduction in habitat for some wildlife species. Opportunistic species better able to

survive in urban conditions are expected to increase throughout the Douglas County area while exacerbating the displacement of species intolerant to development.

5.1.3.3 Threatened or Endangered Species

The rapid rate of development in Douglas County may result in the preparation of several section 10(a)(1)(B) incidental take permits for the Preble's mouse. Considered along with other proposed and recent developments, the proposed action may contribute to a loss of Preble's mouse habitat in the region. However, any loss will be mitigated through habitat conservation measures outlined in the HCP. Additionally, the improvement of habitat in the project area is expected to increase the quality of habitat available to the Preble's mouse. Therefore, no significant long-term impacts to the region's Preble's mouse are expected.

5.1.3.4 Wetlands

Because the project will not impact wetlands on the site or off the site, no cumulative impacts to the region's wetlands are anticipated.

5.1.3.5 Geology and Soils

No significant cumulative impacts to existing geology and soils are anticipated as a result of the proposed action. The proposed development will result in surface soil alteration related to grading, foundation excavation and other activities required for completion of the subdivision.

5.1.3.6 Land Use

Current and past land use trends in the vicinity of the project area include animal pasture, open space, and residential development. Cumulative impacts at the site will comply with current land use patterns in the surrounding area.

5.1.3.7 Cultural Resources

The proposed action will have no cumulative impact on registered historic, cultural or prehistoric sites, as discussed in section 3.7.

5.1.3.8 Air Quality

The proposed action will contribute to limited degradation of air quality in the Parker area, due to a slight increase in vehicle exhaust emissions and temporary construction. These impacts will come from airborne dust and particulates related to the construction work and increases in traffic. Continued development of the area could result in a significant cumulative impact on air quality.

5.1.3.9 Water Resources and Water Quality

The Pinery Glen development will utilize BMPs during construction to control erosion and sediment formation during and after construction and immediate revegetation of exposed slopes to protect the water quality. Alternative 1 action, completing the project as scheduled, offers several benefits to the site including wetlands and vegetated areas around the ponds. Detention ponds and vegetative filtration provide the opportunity for improving stormwater quality. Detention ponds are designed to detain runoff sufficiently to allow excessive sediment to settle. Vegetative filtration is also designed to reduce sediment-laden runoff. Alternative 1 uses permanent erosion control measures to provide long-term water quality protection as designed by Kirkham Michael.

5.2 Alternative 2—Alternate Site Location

Constructing the development at a different location would result in a range of impacts to vegetation, wildlife, potential threatened and endangered species, and wetlands at the new location. While vegetation at the proposed site consists primarily of formerly grazed pastureland dominated by smooth brome, development at an alternate site could impact a more pristine, native plant community. As in the proposed location, development at an alternate location will

cause a displacement of wildlife directly using the area and will favor the introduction or increase of generalist species that commonly outcompete specialists. Selecting an alternate upland site will impact upland species associated with that habitat.

Potential impacts to threatened or endangered species at an alternate location would vary according to the habitats present at the new location. The new alternate location would be selected so as not to impact the Preble's mouse or its associated habitat. However, a different location in the Douglas County area could support a prairie dog colony (non-listed), which might support several species including the state listed burrowing owl and federally listed bald eagle.

Impacts to wetlands could also be increased if the project were located in a different site. While development at the proposed location avoids all impacts to wetlands, development in a new location could impact wetlands if they are present.

An alternative site location may result in equivalent or more environmental impacts than the proposed action. The air quality may be affected by vehicle exhaust emissions and temporary construction; however, the extent of impact is not certain. The water quality may be affected; however, the extent of impact is not certain and would depend on location.

Lastly, selecting an alternate location for the proposed subdivision will involve abandoning the existing subdivision at Pinery Glen, which is largely constructed to date. Existing development at Pinery Glen within the area designated as Preble's mouse habitat would have to be removed and restored to pre-construction natural conditions. The project would never be completed and would likely be largely abandoned. Abandoning the site without proper water quality and erosion control facilities such as the proposed five detention ponds would not benefit the existing or surrounding areas. Abandoning the project would leave the majority of the subdivision roads, lots and associated utilities in place and derelict. Lastly, mitigation as described for Alternative 1 would not be completed at the site, thereby losing an opportunity for enhancement of Preble's mouse habitat along Cherry Creek.

5.3 Alternative 3—Alternate Site Design

The original design for the development would cause more environmental impacts than the proposed alternative. Originally, the development was designed to extend closer to the riparian area. This design would result in the disturbance of a larger vegetated area and would impact native plant communities. Similarly, because the development would approach the riparian area, impacts to wildlife would be greater. Wildlife that could be impacted by this alternative includes the following riparian-dependent species: yellow warbler, belted kingfisher, red-winged blackbird, song sparrow, great blue heron (*Ardea herodias*), northern oriole (*Icterus galbula*) and eastern cottontail (*Sylvilagus floridanus*). Additionally, the development would cause impacts to wildlife resulting from an urbanization of the area. As discussed above, urbanization changes the species composition from a native fauna to a fauna dominated by generalists.

This alternative would also cause greater impacts to the Preble's mouse. The encroachment of development into the riparian area would directly impact Preble's mouse habitat. The Preble's mouse is most common in lush vegetation along watercourses or in tall grass habitats near water (Fitzgerald, et al. 1994). Additionally, Preble's mouse prefers to nest in protected areas such as at the base of shrubs. Therefore, impacting the riparian zone will impact cover, nesting, and food resources for the Preble's mouse.

Impacts to other threatened or endangered species resulting from this alternative would be similar to those of the proposed alternative. Because the project area does not have habitat that supports protected species other than the Preble's mouse, neither the preferred alternative nor Alternative 3 will impact other listed species.

Alternative 3 could cause greater impacts to wetlands. Because wetlands are found within the riparian corridor, extending the development closer to Cherry Creek could impact additional wetlands.

An alternative site design may result in more environmental impacts than the proposed action. The air quality may be affected by vehicle exhaust emissions and temporary construction; however, the extent of impact would likely have minor effects on regional air quality. Water quality would be affected if the detention and "wet" ponds were eliminated. Alternative I takes advantage of all the ponds' benefits, including water quality control and aesthetics.

5.4 Alternative 4—No Action

For purposes of this discussion, the no action alternative assumes that no further development would occur at the site (including removal of development that has already occurred within the designated Preble's mouse habitat area).

The no action alternative would cause no additional impacts to vegetation, wildlife, or Preble's mouse habitat. Development of the property to date, previously grazed pastureland and riparian areas would be preserved in their current conditions. The area designated as Preble's mouse habitat that has been developed would remain in its current impacted condition. No action would be taken to remove existing structures. Only exposed soil would be reseeded and mulched to decrease soil erosion and partially restore upland areas as feasible. The proposed project would not be completed, and sections would be largely abandoned due to inability to route stormwater to detention ponds or treat stormwater before it enters Cherry Creek. Abandoning the site without proper water quality and erosion controls would not benefit the existing or surrounding areas.

In addition to no action in restoring the Preble's mouse habitat impacted by construction to its pre-construction conditions, this alternative does not include implementation of the additional habitat conservation measures, which will be required under mitigation for Alternative 1. Consequently, areas dominated by nonnative grasses or the invasive weed leafy spurge would remain as relatively low value habitats lacking in diversity. Currently, these areas do not provide a high quality habitat for either the Preble's mouse or other riparian-dependent wildlife species.

Upland, intermediate and lower terraces adjacent to Cherry Creek would not be intensively planted with riparian and upland species as described in the mitigation plan to offset impacts.

Like the preferred alternative, the no action alternative does not cause impacts to other threatened or endangered species and does not encroach upon wetlands or other waters of the U.S.

6.0 ALTERNATIVES ANALYSIS

Alternative 2, constructing the project at a different location, was rejected for its lack of environmental benefits and its probability of placing undo economic burden on the landowner. The majority of the Pinery Glen Subdivision has been completed to date, and abandonment of the project and construction of a subdivision in a new upland location in Douglas County would create a large economic burden on Continental Homes due to construction being largely completed on the site. Continental Homes would return areas at Pinery Glen determined to be Preble's mouse habitat back to pre-construction natural conditions. The loss of the subdivision completed to date along with restoration of designated Preble's mouse habitat areas would be extremely costly. In addition, The Pinery Glen site has been impacted by historic cattle grazing and is dominated by the nonnative grass smooth brome and herbaceous leafy spurge. A new site is likely to support a higher quantity of native plant species and may provide an even higher quality of wildlife habitat. Lastly, the Pinery Glen site would not be enhanced for Preble's mouse habitat along Cherry Creek, as with the Alternative 1. The economic hardship created by requiring the landowner to purchase a different parcel would not be outweighed by the limited and uncertain environmental benefits.

Alternative 3 was rejected because it would result in avoidable impacts to riparian habitat and potentially the Preble's mouse. Additionally, it would impact wetlands and other riparian-dependent species.

Alternative 4, the no action alternative, was rejected because it would offer only limited environmental benefits of no further development of Preble's mouse habitat on the site without either remediating impacted areas, as with Alternative 2, or enhancing Preble's mouse habitat along Cherry Creek, as with Alternative 1. Therefore, the benefits (to the Preble's mouse) of the no action alternative over the preferred alternative are questionable. The costs of the no action alternative are more obvious. As described in section 2.0, Douglas County is currently experiencing extraordinary growth. It is the fastest growing county in Colorado and last year

was the third fastest in the nation (Douglas County Community Development 2001). From 1990 through 1999, the population of Douglas County increased by 172.4 percent (Colorado Demography Section 2001). Housing is in short supply, and affordable housing is especially scarce. The proposed project provides homes for \$180,000 to \$200,000, prices considerably less than the average cost of a home in the greater Denver area. The no action alternative would increase the community's burden of providing affordable housing. Furthermore, the no action alternative would jeopardize the landowner's economically viable use of the land.

Because it successfully balances environmental impacts with benefits to the community, Alternative 1 was chosen as the preferred alternative. Although 21.65 acres of Preble's mouse habitat will be disturbed, 46.9 acres will be enhanced, and 13.76 acres will be restored. This 65.66 acres of mitigation includes the 60.66 acres of required mitigation plus an additional 5 acres for a Preble's mouse habitat bank, as needed in the future. An additional 10 acres will be mitigated for a Douglas County Preble's mouse habitat bank for the county's mitigation use in the future (Appendix A). These 10 acres bring the total mitigation to be restored and enhanced to 75.66 acres (Figures 6 and 7).

Through the conservation measures described in section 7, currently degraded habitat will be improved. Additionally, the project will provide much needed affordable housing and permit the landowner's economically viable use of the land.

7.0 HABITAT CONSERVATION PLAN

7.1 Description of Plan Area

The plan area is generally flat and ranges from approximately 5,800 feet above sea level in the riparian area to 6,020 feet above sea level on the upper terrace (Figure 1). Cherry Creek flows northward along the southern and western border of the property and eventually drains to the South Platte River. In the lower third of the property, Bayou Gulch joins Cherry Creek. Although this gulch is normally dry, it supports intermittent flows (during high flow events) and drains areas east of the project site.

The majority of the site is characterized as a high terrace above Cherry Creek that formerly was used as pasture and currently supports the nonnative grass smooth brome and patches of leafy spurge. As described previously, most of the development occurs on this former pastureland. Just below this high terrace is a slightly lower area, the intermediate terrace (Photographs 5 and 6). This area supports several nonnative plant species that can become noxious invaders. The lower terrace, immediately adjacent to Cherry Creek, supports both native and nonnative species and is the area having the highest plant diversity on the site (Photograph 7).

Since the summer of 1999, 18.79 acres of potential Preble's mouse habitat were impacted. In the future, the development proposed to disturb 2.86 acres of potential Preble's mouse habitat. To mitigate potential impacts to the Preble's mouse, 13.76 acres will be restored and 46.90 acres will be enhanced. Mitigation totals 60.66 acres, with an additional 5 acres to be enhanced for Continental Homes' future use as needed. The additional 5 acres will bring total mitigation to 65.66 acres and may be needed if the detention ponds need dredging, or any other unforeseen necessary habitat is disturbed. This 5 acres will be a Preble's mouse habitat mitigation bank for Continental Homes into the future.

An additional 10 acres will be enhanced for Douglas County in the southeastern corner of the property for the county's use as a Preble's mouse habitat bank into the future (Figures 4 and 6 and Appendix A).

Therefore, enhancement and restoration to be completed by Continental Homes totals 75.66 acres, although the USFWS only requires 60.66 acres to fulfill the previous and future impacts to Preble's mouse habitat (Figures 4 and 6).

While all mitigation areas are located on the site, land was recently dedicated to Douglas County, who has agreed to allow mitigation on this land as it will remain as open space (Figure 4).

TABLE 4
Disturbance and Mitigation Areas at Pinery Glen

Area description	Previously Disturbed Area ¹ (Acres)	Proposed Disturbed Area ² (Acres)	Restored Area (Acres)	Enhanced Area (Acres)
Potential Preble's mouse habitat	18.79	2.86	13.76	46.90
Additional Continental Homes mitigation				5.0
Additional Douglas County mitigation				10.0
Total mitigation			13.76	61.9
Grand Total Mitigation				75.66

¹ Areas impacted since the summer of 1999.

² Areas proposed to be impacted in the future.

7.2 Determination of Proposed Activities

The actions most likely to cause an incidental take consist primarily of site preparation activities. Site preparation includes: removal or disturbance of existing vegetation, grading of areas to be developed (road, driveway, parking, and building locations), and installation of utilities (sewer, water, and gas lines).

7.3 Determination of Incidental Take

As shown in Figure 2, the proposed project is located just north of what was previously mapped for mouse protection areas and potential mouse protection areas along Cherry Creek. (The USFWS never officially approved of this mapping or put the mapping out for public comment.) Although no protection areas are found within the boundaries of the project site, the USFWS has determined that areas on the property within 300 feet of the 100-year floodplain or 300 feet of a line the USFWS predetermined constitute upland habitat that may support Preble's mouse habitat. While no riparian areas will be impacted by the proposed project, portions of the development extend into the buffer zone and could impact the Preble's mouse.

Construction activities will occur primarily during the day, when the Preble's mouse is less active and less likely to venture into the upland habitat. Therefore, construction is not expected to cause a direct take of the Preble's mouse by harassment, pursuit, hunting, shooting, wounding, killing, trapping, capture, or collection, although the mouse may be unintentionally harmed. Indirect impacts resulting from habitat modification or destruction are expected to occur. Any take is expected to be incidental to an otherwise lawful activity and would be covered by an incidental take permit. The permit would apply only to activities located on the 160-acre site and would be effective only for the duration.

7.4 Mitigation Plan

To the maximum extent practicable, the mitigation plan will minimize and mitigate any incidental take associated with the development. Therefore, the development will not reduce the likelihood of the survival and recovery of the Preble's mouse.

7.4.1 Requirements of the Agreement

Discussions between the landowner and the USFWS resulted in an agreement defining impact areas, mitigation ratios, and mitigation measures. The USFWS determined that areas impacted prior to the summer of 1999 (the date of the aerial photograph used to assess impacts) would not

be included in Preble's mouse impact areas. Much of this construction was completed before the Preble's mouse was listed as a threatened species. Areas within 300 feet of the 100-year floodplain or 300 feet of a line the USFWS predetermined that have been disturbed since the summer of 1999 are to be considered impacts to Preble's mouse habitat and are to be mitigated at a 3:1 ratio (mitigation to impact). Areas within 300 feet of the 100-year floodplain or 300 feet of a line the USFWS predetermined that will be impacted in the future will be mitigated at a 1.5:1 ratio (mitigation to impact).

7.4.2 Preble's Mouse Habitat Requirements

The Preble's mouse, a subspecies of the meadow jumping mouse, is native only to southeastern Wyoming and eastern Colorado. It is found at the interface between the Rocky Mountains and the Great Plains at elevations below 7,600 feet in Colorado. While the Preble's mouse may be found in wet meadows, it appears to prefer riparian corridors with diverse vegetation. According to Armstrong, et al. (1997), Preble's mouse habitat consists primarily of "well-developed plains riparian vegetation with relatively undisturbed grassland and a water source in close proximity." The species also appears to prefer habitats with diverse plant species and plant structure (Shenk 1998).

While the Preble's mouse's diet includes fungi and fruit, the mouse is thought to concentrate its foraging on insects in the early part of the growing season and seeds in the later summer and early fall (Fitzgerald, et al. 1994). The mouse must gorge itself in the late summer and early fall to prepare for hibernation. Successful hibernation requires the Preble's mouse to store large quantities of body fat. Mortality of hibernating Preble's mice is estimated to approach 70 percent (Fitzgerald, et al. 1994).

The Preble's mouse constructs its summer day nest in sheltered areas under logs or at the base of bushes or other protective features. The nest is built from grasses, leaves, and woody material. Breeding takes place throughout the aboveground period, generally from early June through mid-August (Fitzgerald, et al. 1994). The Preble's mouse hibernates for approximately seven months

in a burrow that it excavates, often under shrubs, located above the riparian area to avoid flooding in the spring (Whitaker, 1963).

7.4.3 Biologic Goals and Objectives

The biological goals and objectives of this HCP include: (1) adequately replacing Preble's mouse habitat impacted by the development (60.66 acres plus an additional 5 acres for backup plus 10 acres for Douglas County), (2) improving diversity and cover in existing and restored Preble's mouse habitat, and (3) assuring population viability by maintaining habitat contiguity. As described above (section 7.1) and summarized in Table 4, 21.65 acres have been or will be impacted by the development, while 13.76 acres of impacted habitat will be restored, and 46.9 acres of existing habitat will be enhanced, with an additional 5 acres enhanced for Continental Homes and 10 acres enhanced for Douglas County. Diversity and cover will be increased through weed control, fencing, and planting and seeding native species. Habitat contiguity will be preserved through prudent selection of mitigation and preservation areas. All areas to be preserved, enhanced, or restored represent contiguous tracts of land and will assure that a viable corridor through the parcel is maintained.

A comparison of the areas to be impacted and the areas to be restored or enhanced reveals that the mitigation activities are likely to produce a net benefit for the Preble's mouse. Because the development will disturb only upland areas that have less vegetation biomass and, therefore, less premium habitat than the riparian areas, implementation of the mitigation measures will result in an increase in the acreage and quantity of Preble's mouse habitat.

7.4.4 Mitigation Activities

Mitigation activities are designed specifically to address the biologic goals and objectives identified for this project. Mitigation will compensate for 18.79 acres of impact to Preble's mouse habitat that has occurred since the summer of 1999 and 2.86 acres of impact that is proposed to occur. Mitigation will take several forms including preservation, enhancement, and

restoration. During and following implementation of the mitigation measures, Preble's mouse habitat on the property will be protected from activities that threaten the mouse including: grazing, water diversions, stream channelizations, and sand and gravel mining.

In addition to the mitigation measures described below, the mitigation areas will be fenced with a split rail fence for their long-term protection.

7.4.4.1 Restoration (13.76 Acres)

Restoration of upper terrace areas that are impacted by construction will include: fertilizer application, native grass seeding, and native trees and shrubs planting. In areas where the topsoil has been removed, a fertilizer (such as Biosol) will be applied at the rate of approximately 1,200 pounds per acre. Following the application of fertilizer, restoration areas will be drill seeded with an approved upland seed mix (such as described in Table 5) and mulched (see Drawing 6).

Restored areas will also be planted with the following upland shrubs: sand cherry (*Prunus besseyi*), skunkbush sumac (*Rhus trilobata*), snowberry (*Symphoricarpos occidentalis*), mountain mahogany (*Cerocarpus montanus*), sand sagebrush (*Oligosporus filifolius*), and rabbitbrush (*Chrysothamnus nauseosus*). These shrubs will be planted in clumps of 3 to 5 more densely spaced near the creek (20 feet on center) and more widely spaced farther from the creek (up to 50 feet on center or more). Approximately 20 clumps of shrubs will be planted on each upland acre, totaling approximately 80 to 100 shrubs per acre. Shrubs will be containerized stock between 1 and 5 gallons in size. Soil amendments will be added when planting each shrub as necessary, and water will be provided during the first growing season. (See Figure 7—Planting Plan)

Upland trees to be planted throughout the restoration areas include the drought tolerant hackberry (*Celtis occidentalis*). Approximately 40 hackberry trees will be planted in groves of 5 throughout the 76.66-acre area on upland terraces. Soil amendments will be added when planting each tree, and water will be provided during the first growing season. Trees will be containerized stock at least 1- to 2-inch caliper in size. (See Figures 6 and 7—Planting Plan.)

Following the first two growing seasons, seeded areas will be assessed for the presence of noxious weeds. If aggressive nonnative invaders are established, the areas will be subject to weed management through mowing and plant-specific herbicide treatments as necessary.

TABLE 5
Upper Terrace Seed Mix

Common Name	Scientific Name	Seed/Pound	% Mix	PLS*Lbs/Acre
Prairie sandreed	<i>Calamovilfa longifolia</i>	273,000	20	3.7
Slender wheatgrass	<i>Elymus trachycaulus</i>	159,000	20	6.3
Thickspike wheatgrass	<i>Elymus lanceolatuys</i>	154,000	15	4.9
Sand dropseed	<i>Sporobolus cryptandrus</i>	5,200,000	15	0.1
Indian ricegrass	<i>Achnatherum hymenoides</i>	141,000	12	4.2
Green needlegrass	<i>Stipa viridula</i>	181,000	10	2.8
Prairie coneflower	<i>Ratibida columnaris</i>	1,200,000	2	0.1
Plains coreopsis	<i>Coreopsis tinctoria</i>	1,400,000	2	0.1
Purple coneflower	<i>Echinacea pallida</i>	117,000	2	1.0
Blanket flower	<i>Gaillardia aristata</i>	132,000	2	0.8
	Total		100	24

* PLS = pure live seed.

7.4.4.2 Enhancement (61.9 Acres)

Enhancement will consist of: leafy spurge control, native grass seeding, tree and shrub planting, and wetland creation.

7.4.4.2.1 Leafy Spurge Control

Leafy spurge control will consist primarily of the application of herbicides and biological controls.

Areas dominated by leafy spurge are shown in Drawing 5. These areas will be treated with either Campaign or Roundup in the spring of the first growing season. The specific herbicide used will follow the recommendations of the Douglas County weed inspector, Jonathon Rice, and the

Cottonwood Canyon State Park ranger. A strong herbicide is recommended for the first treatment. In the following late summer/early fall, the status of the leafy spurge will be assessed and, if it appears to be seeding, will be mowed. If it is exhibiting significant growth, the leafy spurge will be sprayed with the broadleaf herbicide Plateau. Plateau is the recommended herbicide for follow-up treatments because it is less strong but effective. Although the herbicides specified in the HCP may be used near the creek, they should be applied with a hand sprayer and directed away from the water. Shrubs and trees should not be sprayed, because the herbicides can damage or kill them. If necessary, the shrubs and trees should be covered during herbicide application. The timing of herbicide treatments and mowing will be aimed for the inactive mouse period but may slightly overlap with the active mouse period because of the need to manage weeds during the growing season.

During the spring of the second year, the leafy spurge will be sprayed again with Plateau. In the following fall, the areas will be either mowed and/or sprayed. By the third season, the leafy spurge should be under control. During this period, only limited hand or backpack spraying should be necessary.

Leafy spurge biological control consists of the use of insects to attack and control the density and dispersal of the weed. The insects are closely screened to confirm that they do not attack desirable plants, such as natives. Because a single insect species typically cannot exert enough damage to injure the leafy spurge, a complex of insects is released (Colorado Division of Plant Industry 2000). Common biological control agents for leafy spurge include: the spurge hawk moth (*Hyles euphorbiae*), the flea beetle (*Aphthona cyparissiae*), and the long horned beetle (*Oberea erythrocephala*). These insects, or comparable biological controls, will be released in the riparian area during June or July over several consecutive years. The well-vegetated riparian area along the lower terrace is being targeted because it supports many native species that could be harmed by the application of herbicides.

7.4.4.2.2 Native Grass Seeding During the Growing Season

Native grasses will be seeded on upland and intermediate terraces where leafy spurge is being managed. In areas where topsoil is lacking, such as parts of Bayou Gulch, Biosol will be added as a soil amendment prior to seeding. The intermediate terraces adjacent to Cherry Creek will be seeded with a native grass mix (Table 6) and mulched. Drier areas along the intermediate terrace of Cherry Creek and upper terraces will be drill seeded with the mix shown in Table 5 and mulched. During the first summer of mitigation, seeding will occur only in areas where herbicide treatments have not been carried out. During the second summer, areas that were successfully treated with herbicide will be seeded and mulched. Because native plants and seedlings can be killed by herbicides, leafy spurge must be controlled prior to planting or seeding an area.

TABLE 6
Intermediate Terrace Seed Mix

Common Name	Scientific Name	Seeds/Lb.	% Mix	PLS*Lbs/Acre
Switchgrass	<i>Panicum virgatum</i>	389,000	36	4.6
Big bluestem	<i>Andropogon gerardii</i>	130,000	15	5.8
Western wheatgrass	<i>Pascopyrum smithii</i>	110,000	15	6.8
Big bluegrass	<i>Poa ampla</i>	882,000	15	1.0
Yellow Indian grass	<i>Sorghastrum nutans</i>	132,800	8	3
Black-eyed Susan	<i>Rudbeckia hirta</i>	1,700,000	3	0.1
Dotted gayfeather	<i>Liatris punctata</i>	128,000	2	1.0
Lewis' flax	<i>Linum lewisii</i>	293,000	2	0.3
Golden banner	<i>Thermopsis montanus</i>	29,510	2	3.4
	Total		100	26 PLS Lbs/Ac

* PLS = pure live seed.

7.4.4.2.3 Tree and Shrub Plantings

Riparian trees will be planted along either side of Cherry Creek including: plains cottonwood, narrow-leaved cottonwood (*Populus angustifolia*), peach-leaved willow, box elder (*Negundo*

aceroides) and mountain maple (*Acer glabrum*). Riparian trees will be planted approximately every 60 feet along the creek. Trees will be containerized stock at least 1- to 2-inch caliper in size. (See Figure 7—Planting Plan.)

Riparian shrubs planted along either side of Cherry Creek will include coyote willow, bluestem willow (*Salix irrorata*), skunkbush, sumac, chokecherry, golden currant (*Ribes aureum*), American plum, hawthorn (*Crataegus occidentalis*), and snowberry. Riparian shrubs will be planted every 20 feet on either side of the creek in clumps of 3 to 5. Shrubs will be containerized stock between 1 and 5 gallons in size. (See Figures 6 and 7—Planting Plan.)

Species will be planted according to the various microhabitats found at the site. In areas along Cherry Creek where leafy spurge has not been heavily sprayed, trees and shrubs will be planted during the first growing season. Where leafy spurge has been heavily sprayed, the trees and shrubs will be planted during the second growing season. Postponing planting until leafy spurge control has progressed will help avoid damage to young plants by further spraying/mowing.

The intermediate and upper terraces will be enhanced by planting the same species of trees and shrubs at the same densities as the restoration areas: sand cherry, skunkbush sumac, snowberry, mountain mahogany, sand sagebrush, and rabbitbrush. Upland trees planted throughout the restoration areas will include hackberry. As on the lower terrace, specific locations of species plantings will be matched to the microhabitat. In general, species able to thrive in moister habitats will be planted in the lower lying areas of the intermediate terrace, while drier portions of the upper terrace will be planted with more drought tolerant species.

7.4.4.2.4 Wetland Creation

Five wetland detention ponds will be created at the site to conform to stormwater management guidelines. These ponds are expected to exhibit seasonal inundation and to function as emergent wetlands and open water habitat during times of high precipitation and runoff.

The detention ponds will be planted and seeded with a combination of wetland/upland plants (Figures 6 and 7). Herbaceous wetland species (Table 7) will be planted in the interior parts of the detention ponds where standing water is expected on a seasonal basis. Riparian shrubs that tolerate moist conditions will be planted in clumps of 3 to 5 around the perimeter of the detention ponds and below the outfall structures. The perimeter areas and areas below the outfall structures will also be seeded with the wetland/upland seed mix shown in Table 7 and on Figures 6 and 7.

TABLE 7
Wetland Plant Species List

Wetland Forbs and Gramanoids to be Planted				
Common Name	Scientific Name	Florescence (color)	% Mix	Quantity of Plants
Hardstem bulrush	<i>Scirpus lacustris</i>		20	2178
Small-fruited bulrush	<i>Scirpus microcarpus</i>		20	2178
Torrey rush	<i>Juncus torreyi</i>		20	2178
Colorado rush	<i>Juncus confusus</i>		10	1089
Swamp milkweed	<i>Asclepias incarnata</i>	Pink	10	1089
Blue vervain	<i>Verbena hastata</i>	Blue	10	1089
Marsh sunflower	<i>Helianthus nuttallii</i>	Yellow	10	1089
		Total Number of Plants/Acre		10,890
Wetland Seedling				
Common Name	Scientific Name	Seeds/Lb.	% Mix	PLS*Lbs/Ac
Streambank wheatgrass	<i>Elymus lanceolatus</i>	156,000	20	10
Fowl bluegrass	<i>Poa palustris</i>	3,156,000	20	0.5
American sloughgrass	<i>Beckmannia syzigachne</i>	1,500,000	20	1
Big bluestem	<i>Andropogon gerardi</i>	130,000	10	6
Switchgrass	<i>Panicum virgatum</i>	389,000	10	2
Nebraska sedge	<i>Carex nebrascensis</i>	534,100	10	1.5
Creeping spikerush	<i>Eleocharis palustris</i>	620,000	10	1.3
	Total		100	22.3

* PLS = pure live seed.

7.4.4.3 Timing of Mitigation

The treatment of leafy spurge on the lower and intermediate terraces will begin in the fall of 2001 and/or spring of 2002. Areas subject to leafy spurge control will be sprayed again in the spring and fall of 2002 and the spring of 2003. If leafy spurge has been largely controlled, the areas will then be seeded and planted later in the fall of 2002 and spring of 2003. If leafy spurge continues to persist, planting and seeding will be postponed until later in the summer of 2003.

Upper terraces that do not exhibit a leafy spurge invasion will be treated with herbicides and filled to eliminate existing weeds and will be seeded and planted in the fall of 2001 or spring of 2002. Detention basins will also be seeded and planted in 2001 or 2002.

Seeding and planting on the site should be completed by the fall of 2002 or spring of 2003.

7.4.5 Monitoring

As stated in section 7.4.3, biological goals and objectives of this HCP include: (1) to adequately replace Preble's mouse habitat impacted by development (21.65 acres), (2) to improve diversity and cover in existing and restored Preble's mouse habitat, and (3) to assure population viability by maintaining habitat contiguity. Monitoring criteria assessing the mitigation's success relate directly to the biological goals and include: (1) satisfaction of acreage requirements, (2) increase in diversity of plant species, (3) increase in vegetative cover, (4) decrease in cover of leafy spurge, and (5) maintenance of habitat connectivity.

To determine whether mitigation areas satisfy the acreage requirements specified in this HCP, areas will be measured to confirm that the required acreages have been restored or enhanced. To measure diversity and cover, vegetative sampling techniques will be employed throughout the mitigation area. Diversity will be assessed through both fixed plot assessments and measurements along transects. Vegetative cover will be assessed by sampling 1-square-meter fixed plots. The cover of leafy spurge will also be determined by sampling 1-square-meter fixed

plots. Completing the approved mitigation measures in the areas specified in Drawings 4 and 6 will satisfy maintenance of habitat connectivity. Improvement in these areas is expected to result in a large contiguous habitat favoring the foraging, nesting, cover, and movement of Preble's mouse.

Approximately five 100-meter transects will be sampled throughout the mitigation area and are anticipated to be located in the following areas: lower terrace, intermediate terrace, upper terrace, upper terrace just north of Cherry Creek (in the southern portion of the site), and the terrace just south of Cherry Creek (in the southern portion of the site). Data collection along each 100-meter transect will consist of recording the plant species (or bare ground, litter, or water) present at each 1-meter interval.

Fixed plots will be randomly placed in each terrace community. Six plots will be randomly placed in each terrace, for a total of 18 fixed plots. At each plot, the relative percent cover of individual plant species will be estimated. Plots located in former leafy spurge dominated areas will be assessed specifically for the amount of leafy spurge regrowth. Furthermore, the number of native species present along each transect will be recorded as an indicator of stand diversity and richness.

The success criterion for diversity will be satisfied when the transects show at least three native plant species present. The success criterion for vegetative cover will be satisfied when the fixed plots reveal on average a total cover of at least 60 percent including litter from previous year growth. Of this 60 percent cover, at least one-half of the vegetation will be native species. The success criterion for a decrease in leafy spurge will be satisfied when the fixed plots show a regrowth of less than 20 percent. Shrubs and trees will be monitored in total numbers planted, and at least a 75 percent success rate of planted material will be achieved. These percentages were calculated based on previous field experience and consultations with several Front Range biologists involved in vegetation monitoring including Dr. Allen Crockett of Walsh

Environmental Scientists and Steve Dougherty of ERO Resources. These percentages are based on expected vegetation success, as determined from previous field observations and monitoring.

The satisfaction of acreage requirements and maintenance of habitat connectivity will be considered met when the mitigation has been completed in the areas identified on Figure 6 and detailed on the approved plant planting (Figure 7).

The mitigation will be monitored once annually during the summer. A monitoring report documenting the status of the success criteria will be submitted to the USFWS the following winter. The mitigation will be monitored for five years or until success is achieved. If success is not achieved by the end of the fifth year, the Applicant will be responsible for improving the site (including planting, seeding, and weed control) until it is brought into compliance. Throughout the mitigation period, the USFWS will have the right to visit and inspect the property to insure compliance of this HCP.

7.4.6 Future Monitoring and Maintenance

During the first five years, the Applicant will conduct or contract all mitigation management, maintenance, and monitoring. Although the land has been dedicated to Douglas County, the Applicant will manage and maintain the mitigation on the property until the five-year period expires and/or success has been achieved. Following the establishment period, the USFWS will expressly allow the Applicant to assign responsibility for long-term monitoring, management, and maintenance to Douglas County.

7.4.7 Funding

Successful conservation planning requires that sufficient funding be made available to implement the HCP. The Applicant is committed to providing the necessary funding to support the mitigation. The Applicant will place funds in a separate fund that is backed by a Letter of Credit (Appendix F) that sets aside necessary funding and limits its use to mitigation activities. The

Applicant is committed to covering any cost necessary to attain mitigation success as defined in section 7.4.5, even beyond what is held in a Letter of Credit if necessary.

7.4.8 Restricted Access

To assure the success of the mitigation, the Applicant will restrict access to the mitigation area by constructing a split rail fence and by erecting “No Trespassing—Wildlife Rehabilitation Area” signs at regular intervals. Fencing and signage will be installed in locations adjacent to the subdivision where mitigation areas are more easily accessible. Mitigation areas farther from the subdivision may not need fencing depending on their accessibility. These actions should restrict unauthorized human access while allowing for the movement of wildlife.

Additionally, to avoid disturbance beyond the development, the Applicant will erect silt fences and other barriers along the perimeter of construction areas. The Applicant will also inform all employees, contractors, licensees, and agents associated with the development of the reasons for the barriers and will instruct them not to cross the barriers. Regular monitoring of the fencing, barriers, and actual habitat being protected will allow for early detection of problems and immediate repair and redress.

7.4.9 Foreseeable Events

Foreseeable events are not likely to jeopardize the success of the mitigation plan. Foreseeable events include a 100-year to 500-year flood, wildlife browsing, fire and drought. Once established, the plantings specified in this mitigation plan should survive a 100-year to 500-year flood. If a large flood, fire, or unusual drought condition occurs within the five-year establishment period and destroys significant portions of the plants, the Applicant will replant as necessary to achieve mitigation success.

Browsing by deer, beaver, and other wildlife should not cause appreciable impacts once the plantings have established. If substantial damage from browsing occurs during the first 5-year

period leading to complete die-off of planted material, the Applicant will carry out remedial measures to assure that mitigation success is achieved. Remedial measures will include replacing dead trees and shrubs with live potted stock.

To the greatest extent possible, the Applicant will coordinate with adjacent landowners for assurance that future construction projects will not cause direct or indirect impacts to the mitigation area. Furthermore, upland and riparian areas upstream and downstream from the project site are subject to protection under the Endangered Species Act (Congress 1972). Consequently, the biological integrity of the mitigation area should be protected, as feasible.

7.4.10 Unforeseen Events

Reserves for future activities (established through the Letter of Credit described in section 7.4.7) should be sufficient to fund remedial measures in the event of any unforeseen circumstances. In the event of a catastrophic event that renders the mitigation plan unworkable, the USFWS and the Applicant may agree to implement an adaptive management plan to assure that appropriate mitigation measures are enacted. In negotiating an adaptive management plan, the USFWS shall not require the commitment of additional land or financial compensation beyond the level of mitigation otherwise provided in this HCP. If additional mitigation measures are subsequently deemed necessary to provide for conservation of Preble's mouse, the obligation for those measures will not rest with the Applicant unless the Applicant consents.

7.5 Amendment Procedure

A procedure will be established with which the Proposed Permit can be amended. However, the cumulative impacts of amendments must not jeopardize any endangered species or other species of concern. Amendments will be evaluated based on their effects on the habitat as a whole. Furthermore, the USFWS must be consulted on and concur with all proposed amendments. The types of proposed amendments and the applicable amendment procedures are described in the following sections.

7.5.1 Amendments to Development Plans

Upon written request from the Applicant, local land use regulatory agencies (authorized by law to have jurisdiction) may approve amendments to the development plan for the property as long as the amendments do not cause additional disturbance, degradation, destruction, or take of any Preble's mouse or other federally listed threatened or endangered species.

7.5.2 Minor Amendments to the HCP

Minor amendments are defined as routine administrative revisions or changes to the operation and management program that do not diminish the level or means of mitigation. Minor amendments include corrections in land ownership, minor revisions to surveys, property description, monitoring, or reporting protocols, and minor changes in the boundaries of the mitigation area. Minor amendments may not cause a net loss of mitigation area, alter the effectiveness of the HCP, or alter the terms of the Proposed Permit. Upon the written request of the Applicant, the USFWS is authorized to approve minor amendments to the HCP as long as the amendments do not conflict with the primary purpose of this HCP.

7.5.3 All Other Amendments

All other amendments will be considered amendments to the Proposed Permit and will be subject to procedural requirements dictated by federal law.

8.0 REFERENCES

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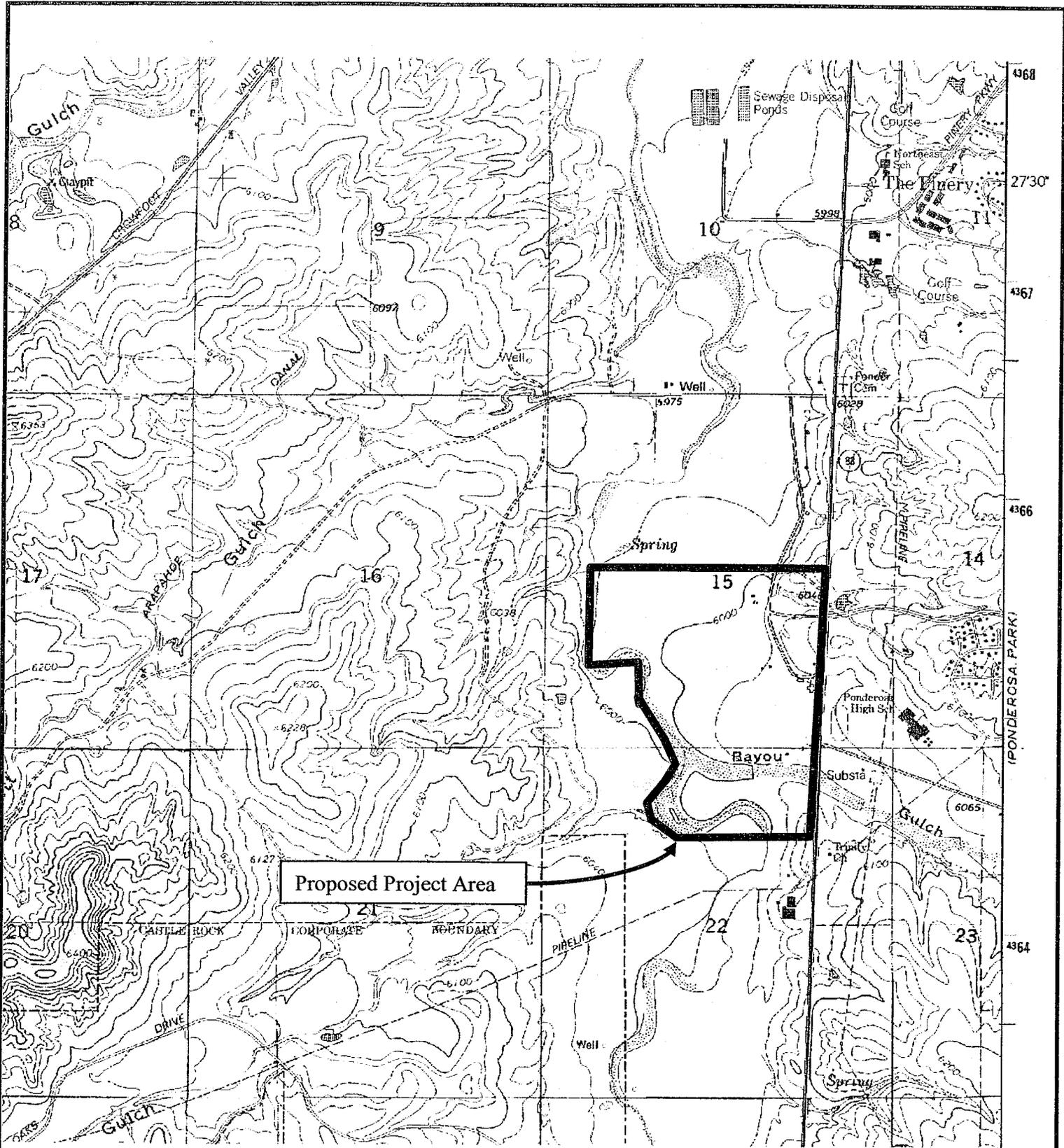
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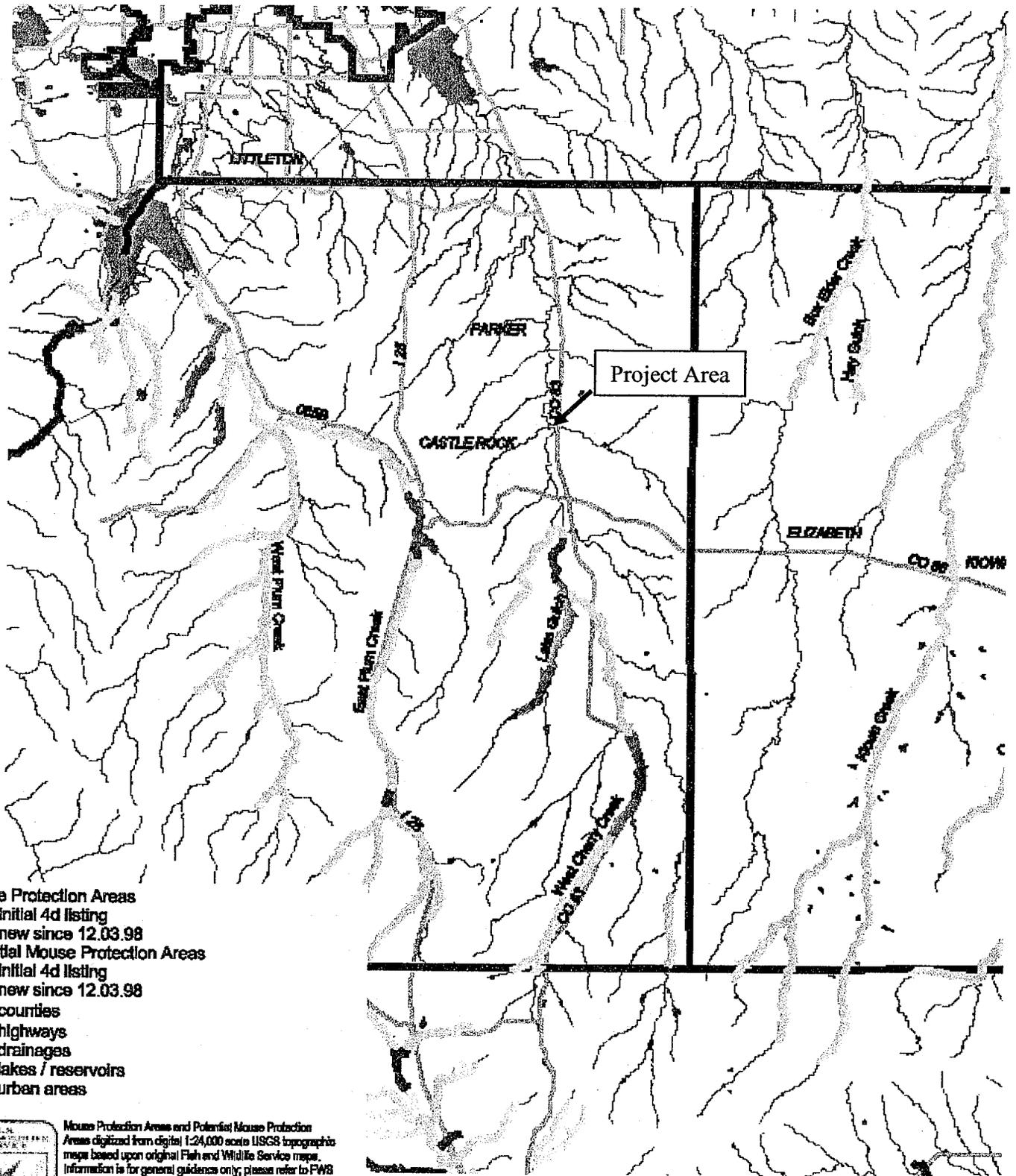
FIGURES



Wright Water Engineers, Inc.
 2490 West 26th Avenue, Suite 100A
 Denver, CO 80211
 (303) 480-1700

Figure 1
Continental Homes Pinery Glen
Vicinity Map

Source: USGS Castle Rock North quad
 Date: 1994
 Job#: 001-039.000
 Scale: N.T.S.



- Mouse Protection Areas
 - Initial 4d listing
 - new since 12.03.98
- Potential Mouse Protection Areas
 - Initial 4d listing
 - new since 12.03.98
- counties
- highways
- drainages
- lakes / reservoirs
- urban areas



Mouse Protection Areas and Potential Mouse Protection Areas digitized from digital 1:24,000 scale USGS topographic maps based upon original Fish and Wildlife Service maps. Information is for general guidance only; please refer to FWS for legal descriptions and information.

Date are not appropriate for site level planning or evaluation.
map created 02.09.99



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Figure 2
Mouse Protection Areas
Castle Rock Area, Colorado

Source: U.S. Fish and Wildlife Service
Date: February 5, 2001
Job#: 001-039.000
Scale: N.T.S

APPENDIX A

Douglas County Agreement
With Continental Homes

APPENDIX B

**Agreement Between U.S. Fish and
Wildlife Service and Continental Homes**

U.S. FISH AND WILDLIFE SERVICE,)	Civil Penalty Proceeding
)	
Complainant,)	
)	Endangered Species Act
v.)	16 U.S.C. §§ 1531-1543
)	
CONTINENTAL HOMES)	
)	
Respondent .)	INV. File No. 2000601193
)	
_____)	DATE: July 13, 2001

SETTLEMENT AGREEMENT

The undersigned parties to this civil penalty proceeding hereby enter into the following settlement as a complete and binding resolution of this action.

This settlement agreement addresses alleged civil violations of the Endangered Species Act (ESA), 16 U.S.C. §1538, by the Respondent occurring in and around Cherry Creek and the Pinery SW, Phase II, subdivision in unincorporated Douglas County, Colorado. The United States Fish and Wildlife Service alleges that the Respondent violated the ESA, 16 U.S.C. §1538, by destroying approximately 18.79 acres of habitat of the Preble's Meadow Jumping Mouse (Mouse), a species listed as threatened by the ESA. The Service alleges that the destruction of Mouse habitat interfered with the breeding, feeding and sheltering of the species, resulting in an unlawful take of this protected species.

The Respondent denies harming the Mouse or its habitat, but for the purpose of resolving this matter does hereby knowingly and voluntarily:

(a) WAIVE its rights in this matter to a hearing to contest the Service's allegations via administrative or judicial appeals or actions;

(b) AGREE to pay a civil penalty of \$1,000 within 10 days of signing this Agreement. This payment is to be made payable to the ESA Reward Fund, which is administered by the U.S. Fish and Wildlife Service. This payment shall be made by Continental Homes to the Service via Service's Counsel, who is a signatory to this Agreement. This payment is not tax deductible;

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(c) AGREE to make a payment of \$4,000, within 10 days of signing this Agreement. This payment is to be made payable to the "Preble's Mitigation Fund," which is administered by the National Fish and Wildlife Foundation. This payment shall be made by Continental Homes to the Service via Service's Counsel, who is a signatory to this Agreement,

(d) AGREE that the 18.79 acres of habitat allegedly destroyed by the Respondent will be mitigated by placing 56.37 acres (3-to-1 mitigation ratio) of current and restored habitat along Cherry Creek under a Deed Restriction designed to protect in perpetuity the biological integrity of the land as Mouse habitat. The 56.37 acres of mitigation shall be prepared as part of the 75.66 acres of mitigation described and shown in the Pinery Glen Mitigation Plan attached hereto as Exhibit A. The Deed Restricted property will be held by the Douglas County Open Space Department, or another third party, agreed to by both the Service and the Respondent, and the Service will be a beneficiary of the Deed Restriction. The terms of the Deed Restriction shall be approved by the Service before it is recorded against the property.

(e) AGREE that any future disturbance of Mouse habitat related to the Pinery SW subdivision will occur in accordance with a Service-issued ESA Section 10 Incidental Take Permit requested by and issued to the Respondent.

THE UNITED STATES FISH AND WILDLIFE SERVICE hereby agrees that upon receipt of a signed copy of this agreement, payment of the civil penalty, and performance of the agreement, it will terminate this civil penalty proceeding against the Respondent, and will not bring any other enforcement proceeding or refer for criminal prosecution any case or charge arising out of this investigation (for conduct occurring up until the date of this agreement) against the Respondent or its agents. The Service also agrees to require of the Respondent no more than 1.5-to-1 mitigation in any ESA Section 10 permit requested by and issued to the Respondent for future disturbance of Mouse habitat related to the Pinery SW subdivision.

The parties agree that execution of this Settlement Agreement may be by facsimile and facsimile signatures are to be considered and treated the same as original signatures.

The effective date of this Settlement Agreement shall be the date upon which the last signature is affixed to the document.

ORIGINAL COPY - 1

Dave Boten

Dave Boten, Vice President,
Continental Homes for
RESPONDENT

8/20/01

Date

ORIGINAL COPY - 1



Thomas Graf
Counsel for the COMPLAINANT
U.S. Fish and Wildlife Service

Date

8/14/01

Office of the Solicitor
U.S. Department of Interior
755 Parfet Street, Suite 151
Lakewood, CO 80215

Ph. (303) 231-5353 Ext. 551
FAX. (303) 231-5363

cc: Ralph Morgenweck, Regional Director - Region 6 - FWS
Leroy Carlson, Colorado Field Supervisor - Region 6 - FWS
Roger Gephart, Senior Law Enforcement Agent - Colorado - Region 6 - FWS

ORIGINAL COPY - 1

**PINERY GLEN
MITIGATION PLAN
IN DOUGLAS COUNTY, COLORADO**

**PREBLE'S MEADOW JUMPING MOUSE
(*Zapus hudsonius preblei*)**

**Wright Water Engineers, Inc.
2490 West 26th Avenue, Ste. 100A
Denver, CO 80211**

JULY 2001

001-039.000

EXHIBIT A

PINERY GLEN MITIGATION PLAN

MITIGATION ACTIVITIES

Mitigation activities are designed specifically to address the biologic goals and objectives identified for this project. Mitigation will compensate for 18.79 acres of impact to Preble's mouse habitat that has occurred since the summer of 1999 and 2.86 acres of impact that is proposed to occur. Mitigation will take several forms including preservation, enhancement, and restoration. During and following implementation of the mitigation measures, Preble's mouse habitat on the property will be protected from activities that threaten the mouse including: grazing, water diversions, stream channelizations, and sand and gravel mining.

In addition to the mitigation measures described below, the mitigation areas will be fenced with a split rail fence for their long-term protection.

Restoration (13.76 acres)

Restoration of upper terrace areas that are impacted by construction will include: fertilizer application, native grass seeding, and native trees and shrubs planting. In areas where the topsoil has been removed, a fertilizer (such as Biosol) will be applied at the rate of approximately 1,200 pounds per acre. Following the application of fertilizer, restoration areas will be drill seeded with an approved upland seed mix (such as described in Table 5) and mulched (see Figure 6).

Restored areas will also be planted with the following upland shrubs: sand cherry (*Prunus besseyi*), skunkbush sumac (*Rhus trilobata*), snowberry (*Symphoricarpos occidentalis*), mountain mahogany (*Cerocarpus montanus*), sand sagebrush (*Oligosporus filifolius*), and rabbitbrush (*Chrysothamnus nauseosus*). These shrubs will be planted in clumps of 3 to 5 more densely spaced near the creek (20 feet on center) and more widely spaced farther from the creek (up to 50 feet on center or more). Approximately 20 clumps of shrubs will be planted on each upland acre,

totaling approximately 80 to 100 shrubs per acre. Shrubs will be containerized stock between 1 and 5 gallons in size. Soil amendments will be added when planting each shrub as necessary, and water will be provided during the first growing season. (See Figure 6.)

Upland trees to be planted throughout the restoration areas include the drought tolerant hackberry (*Celtis occidentalis*). Approximately 40 hackberry trees will be planted in groves of 5 throughout the 76.66-acre area on upland terraces. Soil amendments will be added when planting each tree, and water will be provided during the first growing season. Trees will be containerized stock at least 1- to 2-inch caliper in size. (See Figure 6.)

Following the first two growing seasons, seeded areas will be assessed for the presence of noxious weeds. If aggressive nonnative invaders are established, the areas will be subject to weed management through mowing and plant-specific herbicide treatments as necessary.

TABLE 5
Upper Terrace Seed Mix

Common Name	Scientific Name	Seed/Pound	% Mix	PLS*Lbs/Acre
Prairie sandreed	<i>Calamovilfa longifolia</i>	273,000	20	3.7
Slender wheatgrass	<i>Elymus trachycaulus</i>	159,000	20	6.3
Thickspike wheatgrass	<i>Elymus lanceolatus</i>	154,000	15	4.9
Sand dropseed	<i>Sporobolus cryptandrus</i>	5,200,000	15	0.1
Indian ricegrass	<i>Achnatherum hymenoides</i>	141,000	12	4.2
Green needlegrass	<i>Stipa viridula</i>	181,000	10	2.8
Prairie coneflower	<i>Ratibida columnaris</i>	1,200,000	2	0.1
Plains coreopsis	<i>Coreopsis tinctoria</i>	1,400,000	2	0.1
Purple coneflower	<i>Echinacea pallida</i>	117,000	2	1.0
Blanket flower	<i>Gaillardia aristata</i>	132,000	2	0.8
	Total		100	24

*PLS: Pure live seed.

Enhancement (61.9 Acres)

Enhancement will consist of: leafy spurge control (*Euphorbia esula*), native grass seeding, tree and shrub planting, and wetland creation.

Leafy Spurge Control. Leafy spurge control will consist primarily of the application of herbicides and biological controls.

Areas dominated by leafy spurge are shown in Figure 5. These areas will be treated with either Campaign or Roundup in the spring of the first growing season. The specific herbicide used will follow the recommendations of the Douglas County weed inspector, Jonathon Rice, and the Cottonwood Canyon State Park ranger. A strong herbicide is recommended for the first treatment. In the following late summer/early fall, the status of the leafy spurge will be assessed and, if it appears to be seeding, will be mowed. If it is exhibiting significant growth, the leafy spurge will be sprayed with the broadleaf herbicide Plateau. Plateau is the recommended herbicide for follow-up treatments because it is less strong but effective. Although the herbicides specified in the HCP may be used near the creek, they should be applied with a hand sprayer and directed away from the water. Shrubs and trees should not be sprayed, because the herbicides can damage or kill them. If necessary, the shrubs and trees should be covered during herbicide application. The timing of herbicide treatments and mowing will be aimed for the inactive mouse period but may slightly overlap with the active mouse period because of the need to manage weeds during the growing season.

During the spring of the second year, the leafy spurge will be sprayed again with Plateau. In the following fall, the areas will be either mowed and/or sprayed. By the third season, the leafy spurge should be under control. During this period, only limited hand or backpack spraying should be necessary.

Leafy spurge biological control consists of the use of insects to attack and control the density and dispersal of the weed. The insects are closely screened to confirm that they do not attack desirable plants, such as natives. Because a single insect species typically cannot exert enough damage to injure the leafy spurge, a complex of insects is released (Colorado Division of Plant Industry 2000). Common biological control agents for leafy spurge include: the spurge hawk moth (*Hyles euphorbiae*), the flea beetle (*Aphthona cyarissiae*), and the long horned beetle (*Oberea erythrocephala*). These insects, or comparable biological controls, will be released in the riparian area during June or July over several consecutive years. The well-vegetated riparian area along the lower terrace is being targeted because it supports many native species that could be harmed by the application of herbicides.

Native Grass Seeding During the Growing Season. Native grasses will be seeded on upland and intermediate terraces where leafy spurge is being managed. In areas where topsoil is lacking, such as parts of Bayou Gulch, Biosol will be added as a soil amendment prior to seeding. The intermediate terraces adjacent to Cherry Creek will be seeded with a native grass mix (Table 6) and mulched. Drier areas along the intermediate terrace of Cherry Creek and upper terraces will be drill seeded with the mix shown in Table 5 and mulched. During the first summer of mitigation, seeding will occur only in areas where herbicide treatments have not been carried out. During the second summer, areas that were successfully treated with herbicide will be seeded and mulched. Because native plants and seedlings can be killed by herbicides, leafy spurge must be controlled prior to planting or seeding an area.

TABLE 6
Intermediate Terrace Seed Mix

Common Name	Scientific Name	Seeds/Lb.	% Mix	PLS*Lbs/Acre
Switchgrass	<i>Panicum virgatum</i>	389,000	36	4.6
Big bluestem	<i>Andropogon gerardii</i>	130,000	15	5.8
Western wheatgrass	<i>Pascopyrum smithii</i>	110,000	15	6.8
Big bluegrass	<i>Poa ampla</i>	882,000	15	1.0
Yellow Indian grass	<i>Sorghastrum nutans</i>	132,800	8	3
Black-eyed Susan	<i>Rudbeckia hirta</i>	1,700,000	3	0.1
Dotted gayfeather	<i>Liatris punctata</i>	128,000	2	1.0
Lewis' flax	<i>Linum lewisii</i>	293,000	2	0.3
Golden banner	<i>Thermopsis montanus</i>	29,510	2	3.4
	Total		100	26 PLS Lbs/Ac

*PLS: Pure live seed.

Tree and Shrub Plantings. Riparian trees will be planted along either side of Cherry Creek including: plains cottonwood (*Populus deltoides*), narrow-leaved cottonwood (*Populus angustifolia*), peach-leaved willow (*Salix amygdaloides*), box elder (*Negundo aceroides*) and mountain maple (*Acer glabrum*). Riparian trees will be planted approximately every 60 feet along the creek. Trees will be containerized stock at least 1- to 2-inch caliper in size. (See Figure 6.)

Riparian shrubs planted along either side of Cherry Creek will include coyote willow (*Salix exigua*), bluestem willow (*Salix irrorata*), skunkbush, sumac, chokecherry (*Padus virginiana*), golden currant (*Ribes aureum*), American plum (*Prunus americanus*), hawthorn (*Crataegus occidentalis*), and snowberry. Riparian shrubs will be planted every 20 feet on either side of the creek in clumps of 3 to 5. Shrubs will be containerized stock between 1 and 5 gallons in size. (See Figure 6.)

Species will be planted according to the various microhabitats found at the site. In areas along Cherry Creek where leafy spurge has not been heavily sprayed, trees and shrubs will be planted during the first growing season. Where leafy spurge has been heavily sprayed, the trees and shrubs will be planted during the second growing season. Postponing planting until leafy spurge control has progressed will help avoid damage to young plants by further spraying/mowing.

The intermediate and upper terraces will be enhanced by planting the same species of trees and shrubs at the same densities as the restoration areas: sand cherry, skunkbush sumac, snowberry, mountain mahogany, sand sagebrush, and rabbitbrush. Upland trees planted throughout the restoration areas will include hackberry. As on the lower terrace, specific locations of species plantings will be matched to the microhabitat. In general, species able to thrive in moister habitats will be planted in the lower lying areas of the intermediate terrace, while drier portions of the upper terrace will be planted with more drought tolerant species.

Wetland Creation. Five wetland detention ponds will be created at the site to conform to stormwater management guidelines. These ponds are expected to exhibit seasonal inundation and to function as emergent wetlands and open water habitat during times of high precipitation and runoff.

The detention ponds will be planted and seeded with a combination of wetland/upland plants (Figure 6). Herbaceous wetland species (Table 7) will be planted in the interior parts of the detention ponds where standing water is expected on a seasonal basis. Riparian shrubs that tolerate moist conditions will be planted in clumps of 3 to 5 around the perimeter of the detention ponds and below the outfall structures. The perimeter areas and areas below the outfall structures will also be seeded with the wetland/upland seed mix shown in Table 7 and on Figure 6.

TABLE 7

Wetland Plant Species List

Common Name	Scientific Name	Florescence (color)	% Mix	Quantity of Plants
Wetland Forbs and Gramanoids to be Planted				
Hardstem bulrush	<i>Scirpus lacustris</i>		20	2178
Small-fruited bulrush	<i>Scirpus microcarpus</i>		20	2178
Torrey rush	<i>Juncus torreyi</i>		20	2178
Colorado rush	<i>Juncus confuses</i>		10	1089
Swamp milkweed	<i>Asclepias incarnata</i>	Pink	10	1089
Blue vervain	<i>Verbena hastata</i>	Blue	10	1089
Marsh sunflower	<i>Helianthus nuttallii</i>	Yellow	10	1089
		Total Number of Plants/Acre		10,890
Wetland Seedling				
Common Name	Scientific Name	Seeds/Lb.	% Mix	PLS*Lbs/Ac
Streambank wheatgrass	<i>Elymus lanceolatus</i>	156,000	20	10
Fowl bluegrass	<i>Poa palustris</i>	3,156,000	20	0.5
American sloughgrass	<i>Beckmannia syzigachne</i>	1,500,000	20	1
Big bluestem	<i>Andropogon gerardi</i>	130,000	10	6
Switchgrass	<i>Panicum virgatum</i>	389,000	10	2
Nebraska sedge	<i>Carex nebrascensis</i>	534,100	10	1.5
Creeping spikerush	<i>Eleocharis palustris</i>	620,000	10	1.3
	Total		100	22.3

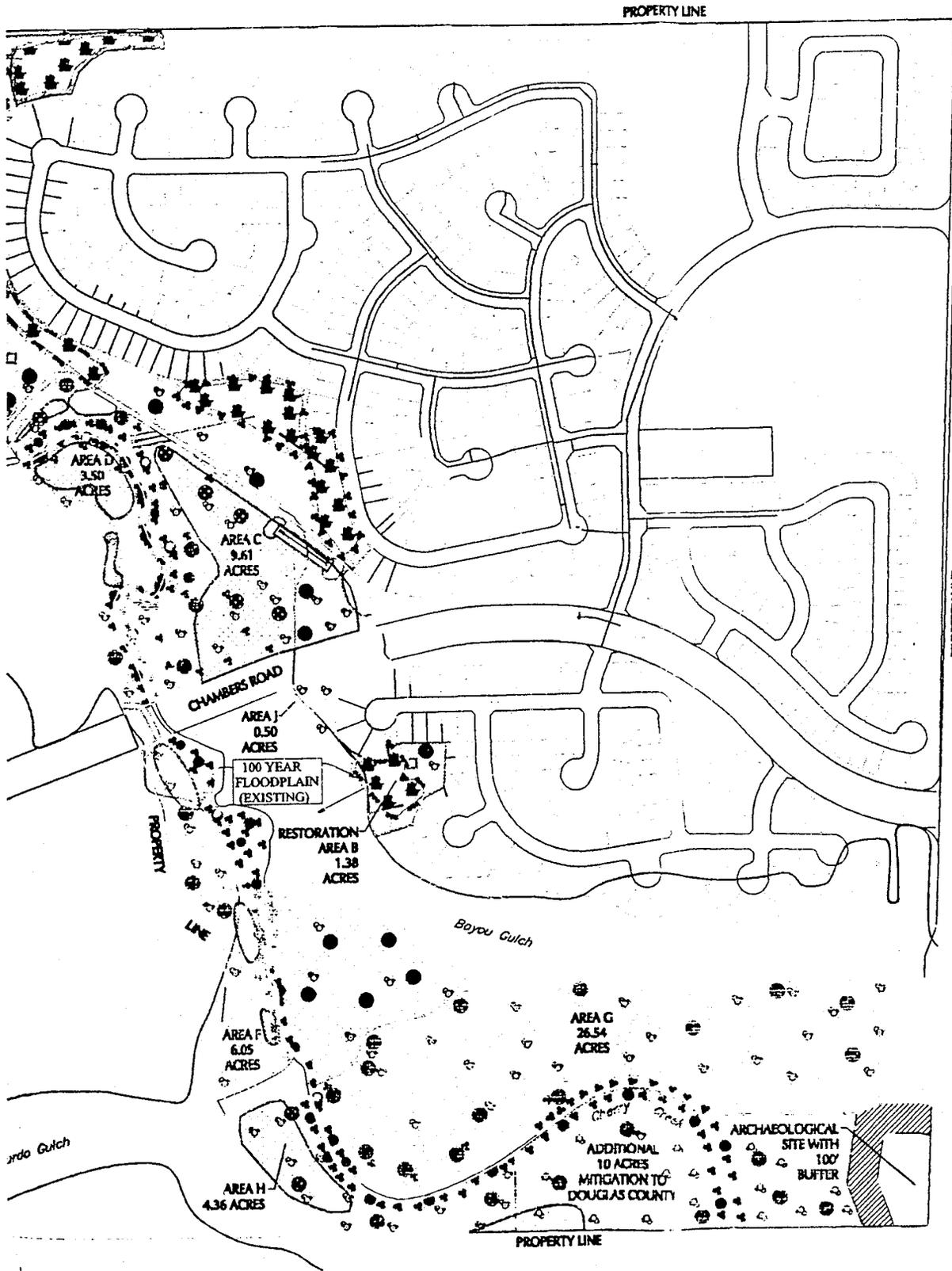
*PLS: Pure live seed.

Timing of Mitigation

The treatment of leafy spurge on the lower and intermediate terraces will begin in the fall of 2001 and/or spring of 2002. Areas subject to leafy spurge control will be sprayed again in the spring and fall of 2002 and the spring of 2003. If leafy spurge has been largely controlled, the areas will then be seeded and planted later in the fall of 2002 and spring of 2003. If leafy spurge continues to persist, planting and seeding will be postponed until later in the summer of 2003.

Upper terraces that do not exhibit a leafy spurge invasion will be treated with herbicides and filled to eliminate existing weeds and will be seeded and planted in the fall of 2001 or spring of 2002. Detention basins will also be seeded and planted in 2001 or 2002.

Seeding and planting on the site should be completed by the fall of 2002 or spring of 2003.



CONTINENTAL HOMES - PINERY GLEN
MOUSE PROPOSED PLANTING PLAN
 JUNE, 2001

PROJECT NO.
001-039.000

FIGURE
6

APPENDIX C

General Permit Procedures

50 CFR 13 GENERAL PERMIT PROCEDURES

SUBPART A -- INTRODUCTION

- § 13.1 General.
- § 13.2 Purpose of regulations.
- § 13.3 Scope of regulations.
- § 13.4 Emergency variation from requirements.
- § 13.5 Information collection requirements.

SUBPART B -- APPLICATION FOR PERMITS

- § 13.11 Application procedures.
- § 13.12 General information requirements on applications for permits.

SUBPART C -- PERMIT ADMINISTRATION

- § 13.21 Issuance of permits.
- § 13.22 Renewal of permits.
- § 13.23 Amendment of permits.
- § 13.24 Right of succession by certain persons.
- § 13.25 Permits not transferable, agents.
- § 13.26 Discontinuance of permit activity.
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SUBPART D -- CONDITIONS

- § 13.41 Humane conditions.
- § 13.42 Permits are specific.
- § 13.43 Alteration of permits.
- § 13.44 Display of permit.
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- § 13.46 Maintenance of records.
- § 13.47 Inspection requirement.
- § 13.48 Compliance with conditions of permit.
- § 13.49 Surrender of permit.
- § 13.50 Acceptance of liability

AUTHORITY: 16 U.S.C. 668a; 16 U.S.C. 704, 712; 16 U.S.C. 742j-1; 16 U.S.C. 1382; 16 U.S.C. 1538(d); 16 U.S.C. 1539, 1540(f); 16 U.S.C. 3374; 18 U.S.C. 42; 19 U.S.C. 1202; E.O. 11911, 41 FR 15683; 31 U.S.C. 9701.

SUBPART A -- INTRODUCTION

§ 13.1 General.

Each person intending to engage in an activity for which a permit is required by this subchapter B shall, before commencing such activity, obtain a valid permit authorizing such activity. Each person who desires to obtain the permit privileges authorized by this subchapter

must make application for such permit in accordance with the requirements of this part 13 and the other regulations in this subchapter which set forth the additional requirements for the specific permits desired. If the activity for which permission is sought is covered by the requirements of more than one part of this subchapter, the requirements of each part must be met. If the information required for each specific permitted activity is included, one application will be accepted for all permits required, and a single permit will be issued. SOURCE: 39 FR 1161, Jan. 4, 1974.

§ 13.2 Purpose of regulations.

The regulations contained in this part provide uniform rules, conditions, and procedures for the application for and the issuance, denial, suspension, revocation, and general administration of all permits issued pursuant to this subchapter B. SOURCE: [54 FR 38147, Sept. 14, 1989]

§ 13.3 Scope of regulations.

The provisions in this part are in addition to, and are not in lieu of, other permit regulations of this subchapter and apply to all permits issued thereunder, including "Import and Marking" (part 14), "Feather Imports" (part 15), "Injurious Wildlife" (part 16), "Endangered Wildlife and Plants" (part 17), "Marine Mammals" (part 18), "Migratory Birds" (part 21), "Eagles" (part 22) and "Endangered Species Convention" (part 23). As used in this part 13, the term "permit" shall refer to either a license, permit, or certificate as the context may require. SOURCE: [42 FR 10465, Feb. 22, 1977, as amended at 42 FR 32377, June 24, 1977; 45 FR 56673, Aug. 25, 1980]

§ 13.4 Emergency variation from requirements.

The Director may approve variations from the requirements of this part when he finds that an emergency exists and that the proposed variations will not hinder effective administration of this subchapter B, and will not be unlawful. SOURCE: 39 FR 1161, Jan. 4, 1974.

§ 13.5 Information collection requirements.

(a) The information collection requirements contained within this Part 13 have been approved by the Office of Management and Budget under 44 U.S.C. 3507 and assigned Clearance Number 1018-0022. This information is being collected to provide information necessary to evaluate permit applications. This information will be used

Type of permit	Fee
Import/Export License (Section 14.93)	\$125 & inspection fees
Marine Mammal (Section 18.31)	100
Migratory Bird-Banding or marking (21.22)	None
Bald or Golden Eagles (Part 22)	None

(e) Abandoned or incomplete applications. Upon receipt of an incomplete or improperly executed application, or if the applicant does not submit the proper fees, the issuing office will notify the applicant of the deficiency. If the applicant fails to supply the correct information to complete the application or to pay the required fees within 45 calendar days of the date of notification, the Service will consider the application abandoned. The Service will not refund any fees for an abandoned application. SOURCE: [47 FR 30785, July 15, 1982, as amended at 50 FR 52889, Dec. 26, 1985; 54 FR 4031, Jan. 27, 1989; 54 FR 38147, Sept. 14, 1989]

§ 13.12 General information requirements on applications for permits.

(a) General information required for all applications. All applications must contain the following information:

(1) Applicant's full name, mailing address, telephone number(s), and, (i) If the applicant is an individual, the date of birth, height, weight, hair color, eye color, sex, and any business or institutional affiliation of the applicant related to the requested permitted activity; or (ii) If the applicant is a corporation, firm, partnership, association, institution, or public or private agency, the name and address of the president or principal officer and of the registered agent for the service of process;

(2) Location where the requested permitted activity is to occur or be conducted;

(3) Reference to the part(s) and section(s) of this subchapter B as listed in paragraph (b) of this section under which the application is made for a permit or permits, together with any additional justification, including supporting documentation as required by the referenced part(s) and section(s);

(4) If the requested permitted activity involves the import or re-export of wildlife or plants from or to any foreign country, and the country of origin, or the country of export or re-export restricts the taking, possession, transportation, exportation, or sale of wildlife or plants, documentation as indicated in § 14.52(c) of this subchapter B;

(5) Certification in the following language: I hereby certify that I have read and am familiar with the

regulations contained in title 50, part 13, of the Code of Federal Regulations and the other applicable parts in subchapter B of chapter I of title 50, Code of Federal Regulations, and I further certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to suspension or revocation of this permit and to the criminal penalties of 18 U.S.C. 1001.

(6) Desired effective date of permit except where issuance date is fixed by the part under which the permit is issued;

(7) Date;

(8) Signature of the applicant; and

(9) Such other information as the Director determines relevant to the processing of the application.

(b) Additional information required on permit applications. As stated in paragraph (a)(3) of this section certain additional information is required on all applications. These additional requirements may be found by referring to the section of this subchapter B cited after the type of permit for which application is being made:

Type of permit	Section
Importation at nondesignated ports:	
Scientific	14.31
Deterioration prevention	14.32
Economic hardship	14.33
Marking of package or container:	
Symbol marking	14.83
Import/export license	14.93
Feather import quota: Importation or entry	15.21
Injurious wildlife: Importation or shipment	16.22
Endangered wildlife and plant permits:	
Similarity of appearance	17.52
Scientific, enhancement of propagation or survival, incidental taking for wildlife	17.22
Scientific, propagation, or survival for plants	17.62
Economic hardship for wildlife	17.23
Economic hardship for plants	17.63
Threatened wildlife and plant permits:	
Similarity of appearance	17.52
General for wildlife	17.32
American alligator-buyer or tanner	17.42(a)
General for plants	17.72
Marine mammals permits:	
Scientific research	18.31
Public display	18.31
Migratory bird permits:	
Banding or marking	21.22
Scientific collecting	21.23
Taxidermist	21.24
Waterfowl sale and disposal	21.25
Special aviculturist	21.26
Special purpose	21.27
Falconry	21.28
Raptor propagation permit	21.30

the location; any books, records, or permits required to be kept by this Subchapter B, and any wildlife or plants kept under authority of the permit.

(f) Term of permit. Unless otherwise modified, a permit is valid during the period specified on the face of the permit. Such period shall include the effective date and the date of expiration.

(g) Denial. The issuing officer may deny a permit to any applicant who fails to meet the issuance criteria set forth in this section or in the part(s) or section(s) specifically governing the activity for which the permit is requested. SOURCE: [39 FR 1161, Jan. 4, 1974, as amended at 42 FR 32377, June 24, 1977; 47 FR 30785, July 15, 1982; 54 FR 38148, Sept. 14, 1989]

§ 13.22 Renewal of permits.

(a) Application for renewal. Applicants for renewal of a permit must submit a written application at least 30 days prior to the expiration date of the permit. Applicants must certify in the form required by § 13.12(a)(5) that all statements and information in the original application remain current and correct, unless previously changed or corrected. If such information is no longer current or correct, the applicant must provide corrected information.

(b) Renewal criteria. The Service shall issue a renewal of a permit if the applicant meets the criteria for issuance in § 13.21(b) and is not disqualified under § 13.21(c).

(c) Continuation of permitted activity. Any person holding a valid, renewable permit, who has complied with this section, may continue the activities authorized by the expired permit until the Service has acted on such person's application for renewal.

(d) Denial. The issuing officer may deny renewal of a permit to any applicant who fails to meet the issuance criteria set forth in § 13.21 of this part, or in the part(s) or section(s) specifically governing the activity for which the renewal is requested. SOURCE: [54 FR 38148, Sept. 14, 1989]

§ 13.23 Amendment of permits.

(a) Permittee's request. Where circumstances have changed so that a permittee desires to have any condition of his permit modified, such permittee must submit a full written justification and supporting information in conformity with this part and the part under which the permit was issued.

(b) Service reservation. The Service reserves the right to

amend any permit for just cause at any time during its term, upon written finding of necessity.

(c) Change of name or address. A permittee is not required to obtain a new permit if there is a change in the legal individual or business name, or in the mailing address of the permittee. A permittee is required to notify the issuing office within 10 calendar days of such change. This provision does not authorize any change in location of the conduct of the permitted activity when approval of the location is a qualifying condition of the permit. SOURCE: [54 FR 38148, Sept. 14, 1989]

§ 13.24 Right of succession by certain persons.

(a) Certain persons, other than the permittee are granted the right to carry on a permitted activity for the remainder of the term of a current permit provided they comply with the provisions of paragraph (b) of this section. Such persons are the following:

- (1) The surviving spouse, child, executor, administrator, or other legal representative of a deceased permittee; and
- (2) A receiver or trustee in bankruptcy or a court designated assignee for the benefit of creditors.

(b) In order to secure the right provided in this section the person or persons desiring to continue the activity shall furnish the permit to the issuing officer for endorsement within 90 days from the date the successor begins to carry on the activity. SOURCE: [54 FR 38149, Sept. 14, 1989]

§ 13.25 Permits not transferable; agents.

(a) Permits issued under this part are not transferable or assignable. Some permits authorize certain activities in connection with a business or commercial enterprise and in the event of any lease, sale, or transfer of such business entity, the successor must obtain a permit prior to continuing the permitted activity. However, certain limited rights of succession are provided in § 13.24.

(b) Except as otherwise stated on the face of the permit, any person who is under the direct control of the permittee, or who is employed by or under contract to the permittee for purposes authorized by the permit, may carry out the activity authorized by the permit, as an agent for the permittee. SOURCE: [54 FR 38149, Sept. 14, 1989]

§ 13.26 Discontinuance of permit activity.

When a permittee, or any successor to a permittee as provided for by § 13.24, discontinues activities authorized

the procedures for requesting reconsideration.

(4) Unless a permittee files a timely request for reconsideration, any wildlife held under authority of a permit that is revoked must be disposed of in accordance with instructions of the issuing officer. If a permittee files a timely request for reconsideration of a proposed revocation, such permittee may retain possession of any wildlife held under authority of the permit until final disposition of the appeal process. SOURCE: [54 FR 38149, Sept. 14, 1989]

§ 13.29 Review procedures.

(a) Request for reconsideration. Any person may request reconsideration of an action under this part if that person is one of the following:

- (1) An applicant for a permit who has received written notice of denial;
- (2) An applicant for renewal who has received written notice that a renewal is denied;
- (3) A permittee who has a permit amended, suspended, or revoked, except for those actions which are required by changes in statutes or regulations, or are emergency changes of limited applicability for which an expiration date is set within 90 days of the permit change; or
- (4) A permittee who has a permit issued or renewed but has not been granted authority by the permit to perform all activities requested in the application, except when the activity requested is one for which there is no lawful authority to issue a permit.

(b) Method of requesting reconsideration. Any person requesting reconsideration of an action under this part must comply with the following criteria:

- (1) Any request for reconsideration must be in writing, signed by the person requesting reconsideration or by the legal representative of that person, and must be submitted to the issuing officer.
- (2) The request for reconsideration must be received by the issuing officer within 45 calendar days of the date of notification of the decision for which reconsideration is being requested
- (3) The request for reconsideration shall state the decision for which reconsideration is being requested and shall state the reason(s) for the reconsideration, including presenting any new information or facts

pertinent to the issue(s) raised by the request for reconsideration.

(4) The request for reconsideration shall contain a certification in substantially the same form as that provided by § 13.12(a)(5). If a request for reconsideration does not contain such certification, but is otherwise timely and appropriate, it shall be held and the person submitting the request shall be given written notice of the need to submit the certification within 15 calendar days. Failure to submit certification shall result in the request being rejected as insufficient in form and content.

(c) Inquiry by the Service. The Service may institute a separate inquiry into the matter under consideration.

(d) Determination of grant or denial of a request for reconsideration. The issuing officer shall notify the permittee of the Service's decision within 45 days of the receipt of the request for reconsideration. This notification shall be in writing, shall state the reasons for the decision, and shall contain a description of the evidence which was relied upon by the issuing officer. The notification shall also provide information concerning the right to appeal, the official to whom an appeal may be addressed, and the procedures for making an appeal.

(e) Appeal. A person who has received an adverse decision following submission of a request for reconsideration may submit a written appeal to the Regional Director for the region in which the issuing office is located, or to the Director for offices which report directly to the Director. An appeal must be submitted within 45 days of the date of the notification of the decision on the request for reconsideration. The appeal shall state the reason(s) and issue(s) upon which the appeal is based and may contain any additional evidence or arguments to support the appeal.

(f) Decision on appeal.

- (1) Before a decision is made concerning the appeal the appellant may present oral arguments before the Regional Director or the Director, as appropriate, if such official judges oral arguments are necessary to clarify issues raised in the written record.
- (2) The Service shall notify the appellant in writing of its decision within 45 calendar days of receipt of the appeal, unless extended for good cause and the appellant notified of the extension.
- (3) The decision of the Regional Director or the Director shall constitute the final administrative decision of the

APPENDIX D

Colorado Natural Heritage Program Report and
Colorado Division of Wildlife Letter Regarding
Threatened and Endangered Wildlife

January 22, 2001

Alison Cowie
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2490 West 26th Avenue, Suite 100A
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College of Natural Resources
254 General Services
Fort Collins, Colorado 80523-6021
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Dear Ms. Cowie:

The Colorado Natural Heritage Program (CNHP) is in receipt of your request for information regarding the Continental Homes Pinery Glen Development project. In response, CNHP has searched its Biological and Conservation Datasystem (BCD) for natural heritage resources (occurrences of significant natural communities and rare, threatened or endangered plants and animals) documented from the vicinity of T 7S R66W Sections 15 and 22 in Douglas County, Colorado.

The enclosed report describes natural heritage resources known from the area and gives location (by Township, Range, and Section), precision of the locational information, and the date of last observation at that location. Please note that "precision" reflects the resolution of original data. For example, an herbarium record from "4 miles east of Colorado Springs" provides much less spatial information than a topographic map showing the exact location of the occurrence. "Precision" codes of Seconds, Minutes, and General are defined in the report footer.

The report also outlines the status of the known elements. We have included status according to Natural Heritage Program methodology and legal status under state and federal statutes. Natural Heritage ranks are standardized across the Heritage Program network, and are assigned for global and state levels of rarity. They range from "1" for critically imperiled or extremely rare elements, to "5" for those that are demonstrably secure.

As you will note in the report, there are several occurrences for Prebles meadow jumping mouse (*Zapus hudsonius preblei*) federally listed as a **threatened** species within the vicinity of the project area. In addition to those shown on the report there is another occurrence (positive capture in 1999) in the immediate project area of T7S R66W Section 22 along Cherry Creek.

There is one CNHP designated Potential Conservation Area located close to the project area (see enclosed map). In order to successfully protect populations or occurrences, it is necessary to delineate conservation areas. These conservation areas focus on capturing the ecological processes that are necessary to support the continued existence of a particular element of natural heritage significance. Conservation areas may include a single occurrence of a rare element or a suite of rare elements or significant features.

The goal of the process is to identify a land area that can provide the habitat and ecological processes upon which a particular element or suite of elements depends for their continued existence. The best available knowledge of each species' life history is used in conjunction with information about topographic, geomorphic, and hydrologic features, vegetative cover, as well as current and potential land uses. Consideration of specific activities or land use changes proposed within or adjacent to the preliminary conservation planning boundary should be carefully considered and evaluated for their consequences to the element on which the conservation unit is based.



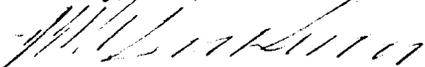
The Colorado Division of Wildlife has legal authority over wildlife in the state. CDOW would therefore be responsible for the evaluation of and final decisions regarding any potential effects a proposed project may have on wildlife. If you would like more specific information regarding these or other vertebrate species in the vicinity of the area of interest, please contact the Colorado Division of Wildlife.

The information contained herein represents the results of a search of Colorado Natural Heritage Program's (CNHP) Biological and Conservation Data System (BCD). However, the absence of data for a particular area, species or habitat does not necessarily mean that these natural heritage resources do not occur on or adjacent to the project site, rather that our files do not currently contain information to document their presence.

The information provided can be used as a flag to anticipate possible impacts or to identify areas of interest. If impacts to wildlife habitat are possible, these data should not be considered a substitute for on-the-ground biological surveys.

Although every attempt is made to provide the most current and precise information possible, please be aware that some of our sources provide a higher level of accuracy than others, and some interpretation may be required. CNHP's data system is constantly updated and revised. Please contact CNHP for an update or assistance with interpretation of this natural heritage information.

Sincerely,



Beth Van Dusen
Environmental Review Coordinator

enc.



Colorado Natural Heritage Program Environmental Review
 Locations and Status of Rare and / or Imperiled Species known from the T7S R66W Sections 15 and 22
 Proposed Development Project Area in Douglas County, Colorado

report generated: 22 January 2001

taxonomic group	scientific name	common name	prec	last obs	town/range	section	grank	srank	ESA	fed stat	st stat
Insects	ERYNNIS MARTIALIS	MOTTLED DUSKY WING	G	1970-06-02	006S066W	22	G3G4	S263			
Insects	HESPERIA OTTOE	OTTOE SKIPPER	G	1975-07-05	006S066W	22	G3G4	S2			
Mammals	THOMOMYS TALPOIDES MACROTIS	NORTHERN POCKET GOPHER SUBSP.	S	1994-06-29	006S066W	30,31	G5T1	S1			
Mammals	ZAPUS HUDSONIUS PREBLEI	MEADOW JUMPING MOUSE SUBSP.	S	1998-08-27	006S067W	02	G5T2	S1	LT	FS	T
Mammals	ZAPUS HUDSONIUS PREBLEI	MEADOW JUMPING MOUSE SUBSP.	S	1998-06-28	006S066W		G5T2	S1	LT	FS	T
Mammals	ZAPUS HUDSONIUS PREBLEI	MEADOW JUMPING MOUSE SUBSP.	S	1999-08-10	006S066W	27	G5T2	S1	LT	FS	T
Plant Communities	PINUS PONDEROSA CEROCARPUS MONTANUS/ANDROPOGON GERARDII	FOOTHILLS PONDEROSA PINE SCRUB WOODLANDS	S	1991-10-09	006S065W	07,18	G2	S27			
Plant Communities	PINUS PONDEROSA CEROCARPUS MONTANUS/ANDROPOGON GERARDII	FOOTHILLS PONDEROSA PINE SCRUB WOODLANDS	S	1995-08-08	006S065W	07	G2	S27			
Plant Communities	STIPA COMATA - EAST	GREAT PLAINS MIXED GRASS PRAIRIES	S	1998-05-29	006S067W	36	G2	S2			
Plants	CAREX SAXIMONTANA	ROCKY MOUNTAIN SEDGE	S	1998-05-29	006S066W	31	G5	S1			
Plants	HEUCHERA RICHARDSONII	RICHARDSON ALUM-ROOT	S	1994-06-14	006S066W	22	G5	S1			

COLORADO NATURAL HERITAGE PROGRAM
POTENTIAL CONSERVATION AREA SUMMARY

S.USCOHP8*3243
NEWLIN GULCH

Locators:

COUNTY NAME: Douglas
WATERSHED: UNDEFINED
USGS QUADRANGLE NAME(S): PARKER and CASTLE ROCK NORTH

TOWNRANGE: SECTION:

006S066W	18,19,29,30,31,32,33	ME
006S067W	01,12,13,14,22,23,24,25,26,27,34,35,36	6P
007S066W	04,05,06,07,08,18	6P
007S067W	01,02,03,10,11,12,13,14,15	6P

LOCATION:

Site Description:

Area consists of rolling short to midgrass prairie dissected by steep, eroded dr through the deep sand substrates. Patches of Gambel's oak occur on the slopes of Cheatgrass, knapweed, and Allyssum spp. are common in disturbed areas and ravine grasses still dominate hill tops. Area has been used for cattle production for a years.

Site Design:

MAP DESIGN: COMPLETED
MAP DATE: 96-01-20
DESIGNER: ELLINGSON, AARON
PRIMARY ACRES:

BOUNDARY JUSTIFICATION: The site encompasses the two occurrences as well as the boundary also provides a buffer to limit direct and indirect disturbances.

Site Significance:

BIODIVERSITY SIGNIFICANCE: B3: HIGH SIGNIFICANCE
BIODIVERSITY COMMENTS: [Rank assigned 1997-07-28:] Two unranked occurren
PROTECTION URGENCY: PROTECTION URGENCY LEVEL 3: DEFINABLE THREAT/OPPOR
PROTECTION URGENCY COMMENTS: Development is sure to occur in this site as it li
Douglas County is already planning for this area, called the "High Plateau Conse
would like to keep it as open space but the landowners in the area are looking t
city of Parker intends to build a water storage facility in the form of a reserv
Gulch itself.
MANAGEMENT URGENCY: MANAGEMENT URGENCY UNASSIGNED

Management and Protection:

SITE OWNERSHIP: HISTORIC VERIFICATION

Stewardship:

Element Occurrence Information:

SCIENTIFIC NAME:

COMMON NAME:

GLOB.
RANK

THOMOMYS TALPOIDES MACROTIS
THOMOMYS TALPOIDES MACROTIS

NORTHERN POCKET GOPHER SUBSP.
NORTHERN POCKET GOPHER SUBSP.

G5
G5

STATE OF COLORADO
Bill Owens, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE

AN EQUAL OPPORTUNITY EMPLOYER

Russell George, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192



*For Wildlife-
For People*

January 12, 2001

Blair Leasure
Wright Water Engineers
2490 W. 26th Ave. Suite 100A
Denver, CO 80211

RE: Threatened/Endangered Wildlife – Property at Cherry Creek and Bayou Gulch

Dear Ms Leasure:

I have reviewed the map you sent regarding this property but did not visit the site. The only threatened or endangered species of wildlife which might be expected to occur in this area are:

Bald Eagle – (Federal threatened) – Bald eagles use the Denver area extensively as a feeding area during the winter – mostly hunting prairie dogs but also fish and waterfowl. Bald eagles might occasionally hunt or perch along this portion of Cherry Creek.

Preble's Meadow Jumping Mouse – (Federal Threatened) – You are already aware of them as per you letter.

Note that we do not have information on threatened/endangered **plants** or **insects**. For plant or insect information, you might wish to contact:

Colorado Natural Heritage Program
254 General Services Building
Colorado State University
Fort Collins, CO 80523
PH: (970) 491-1309 FAX: (970) 491-0279

Please let me know if you have any questions.

Sincerely,

Dave Weber
Habitat Biologist

cc: Susanne Tracey, DWM
Peter Plage, USFWS
Beth Van Dusen, CNHP



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/GJ-6-CO-02-F-001
Permit Number: TE-048568-0
Mail Stop 65412

FINDING OF NO SIGNIFICANT IMPACT FOR ISSUANCE OF AN INCIDENTAL TAKE PERMIT FOR THE PREBLE'S MEADOW JUMPING MOUSE TO PINERY GLEN RESIDENTIAL SUBDIVISION DOUGLAS COUNTY, COLORADO

The U.S. Fish and Wildlife Service (Service) is proposing to issue a section 10(a)(1)(B) permit under the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (Act), to Continental Homes (the Applicant). The permit would authorize the incidental take of the federally threatened Preble's meadow jumping mouse (*Zapus hudsonius preblei*) (Preble's) in association with the construction of the Pinery Glen Subdivision (541 residential single-family lots) and associated roads, trails, and detention ponds on a 160-acre property in Douglas County, Colorado. This property is located in portions of Sections 15 and 22 of Township 7 South, Range 66 West, southwest of the Town of Parker. The duration of the proposed permit is 10 years. The Environmental Assessment (EA) evaluates the potential environmental effects associated with construction of the proposed subdivision. Approximately 64 of the 160 acres will be impacted by development. The additional 96 acres were deeded to Douglas County upon platting of the Pinery Glen Subdivision. Populations of Preble's are known to occur along Cherry Creek, located directly west of the Pinery Glen property. No other federally-listed threatened or endangered species occur on the property.

The Applicant has prepared a habitat conservation plan (HCP) which describes minimization and mitigation measures to be implemented to reduce and offset the effects of the proposed project on Preble's and its habitat. The implementation of the HCP is intended to contribute to the conservation of Preble's. The primary mitigation measure of the HCP is the proposed enhancement and restoration of vegetation on site at a ratio of 3:1 where impact has already occurred and 1.5:1 to offset future impacts. The permit authorizes a limited amount of incidental take associated with disturbances that will occur with the completion of the proposed project. These mitigation activities include restoration of 13.76 acres of previously impacted habitat and 46.9 acres of habitat enhancement. Further, Continental Homes has proposed to enhance an additional 5 acres in the event that all 46.9 acres required do not reach success criteria. Continental Homes has also agreed to enhance an additional 10 acres for Douglas County for use as a mitigation bank. Activities will consist of planting willows and native grasses and removing non-native plant species.

This alternative was selected as the proposed action as it will allow development of the property to be completed and provide a conservation plan to minimize and offset the potential impact to Preble's by providing for on-site conservation measures that will promote viability of the species along Cherry Creek.

Documents used in the preparation of this finding of no significant impact include: the HCP and the EA for the HCP (WWE 2002), any and all written agreements between Continental Homes and the Service (Appendices A, B, and F), the biological opinion on the Pinery Glen permit application (Service 2002a) and the recommendations and findings for the Pinery Glen residential project (Service 2002b). All documents are incorporated by reference, as described in 40 CFR 1508.13.

The proposed permit would authorize the incidental take of an unquantifiable number of Preble's within the 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. This upland field provides potential foraging and hibernating habitat for Preble's. All construction activities will take place in upland areas during the day. Because Preble's are nocturnal and they most frequently use riparian areas, no direct incidental take is anticipated. The Service is unable to determine the specific number of individuals of Preble's that would be taken because the numbers of individuals present on site may vary from year to year and due to their small size and secretive nature. Although take of individuals cannot be quantified, proper implementation of the HCP, which requires meeting identified performance standards, should ensure that Preble's will be maintained on the site.

The Service has determined that the loss of 21.65 acres of potential habitat associated with issuance of the permit to Continental Homes would not compromise the status of Preble's or its recovery needs for several reasons. The 75.66 acres of mitigation, as described in the HCP, include approximately 65.66 acres of land that has been deeded to Douglas County upon platting. This land will be protected by a county restrictive covenant that will limit the type and amount of development that may occur. (Please see Appendix A of the HCP.) The additional approximately 10 acres of detention pond area restored for Preble's held by the Pinery Glen Subdivision is protected from further development under long-term Douglas County water facility regulations. The detention pond areas will remain as open space and for detention purposes, as required by the county for long-term water management at the subdivision. The Applicant will restrict access to the mitigation area by constructing a split-rail fence and by erecting "No trespassing—wildlife rehabilitation area" signs at regular intervals. Fencing and signage will be installed in locations adjacent to the subdivision where mitigation areas are more easily accessible. Mitigation areas farther from the subdivision may not need fencing, depending on their accessibility. These actions should restrict unauthorized human access while allowing for movement of wildlife. The Applicant has agreed to mitigate for the 21.65 acres of impacts by the following mitigation methods. Mitigation will compensate for 18.79 acres of impact to Preble's habitat that has occurred since the summer of 1999 and 2.86 acres of impact that is proposed to occur. Mitigation will take several forms including preservation, enhancement, and restoration. During and following implementation of the mitigation measures, Preble's habitat on the property will be protected from activities that threaten Preble's including: grazing, water diversion, stream channelizations and sand and gravel mining. The 13.76 acres of restoration and 61.9 acres of

enhancement are fully described in sections 7.4.4.1 and 7.4.4.2 of the HCP. These measures should produce a net benefit to Preble's.

The environmental effects of the proposed project on other aspects of the human environment such as geology and soils, hydrology, air quality, light, noise, traffic, aesthetics, land use and cultural resources were analyzed in the EA. A summary of these issues and impacts is included in the EA. The Service finds that the proposed issuance of an Endangered Species Action section 10(a)(1)(B) permit for take of Preble's in association with the Pinery Glen residential development project will not have a significant effect on the human environment for the following reasons:

1. The loss of 21.65 acres of potential habitat resulting from construction of the proposed project will not jeopardize the survival or recovery of Preble's.
2. The proposed mitigation measures are consistent with recovery of Preble's and are adequate to compensate for the loss of habitat and loss of individual Preble's.
3. The impact upon populations of native species, including sensitive species, will be minimal due to the small area subject to disturbance.
4. Minimal or no impacts will result to other listed species, other wildlife, wetlands, geology and soils, land use, cultural resources, air quality, and water resources and water quality as the result of the Projects onsite, offsite, or cumulatively.

The Service analyzed the effects of the issuance of a section 10(a)(1)(B) incidental take permit (the proposed action), and three alternatives in the EA: (1) alternate site location; (2) alternate site design; and (3) no action. The proposed project alternative involves issuance of a section 10(a)(1)(B) incidental take permit. The alternate site location alternative involves finding another site to develop the project that would result in no or lesser take of Preble's. The alternative site design involves greater impact to Preble's habitat through the initial site design and would also result in issuance of an incidental take permit. The no-action alternative would mean that no further development occurs and no application for an incidental take permit would be processed. The project would be abandoned, and completion of the proposed residential community and conservation efforts to mitigate for impact to Preble's habitat would not take place.

The Service did not select the alternatives to the proposed action for the following reasons: The alternate site location alternative was rejected for its lack of environmental benefits and its probability of placing undue economic burden on the landowner. The loss of the subdivision completed to date along with restoration of Preble's habitat areas would be extremely costly. Abandoning the project would result in a majority of the already completed subdivision remaining unusable, and the proposed mitigation, as described under the proposed alternative, would not be completed. The alternate design alternative was rejected because it could result in avoidable impacts to riparian habitat and additional Preble's habitat. Additionally, the alternate design alternative would impact wetlands and other riparian-dependent species because alternate site design involved the taking of more Preble's habitat along the riparian edge to increase the buildable area of the proposed subdivision. The no-action

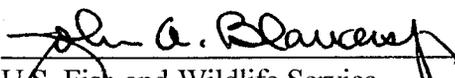
alternative was rejected because it would offer only limited environmental benefits of no further development of Preble's habitat on the site without remediating already impacted areas (as with the alternate site alternative) or enhancing Preble's habitat along Cherry Creek (as with the proposed action).

Because it successfully balances environmental impacts with benefits to the community, the Service chose the proposed action as the preferred alternative. Although 21.65 acres of Preble's habitat will be disturbed, 46.9 acres will be enhanced and 13.76 acres will be restored. The 65.66 acres of mitigation includes the 60.66 acres of required mitigation plus an additional 5 acres in the event that all acres required do not reach success criteria. An additional 10 acres will be mitigated for a Douglas County Preble's habitat bank for the county's mitigation use in the future. (See HCP Appendix A.) These 10 acres bring the total mitigation to be restored and enhanced to 75.66 acres. Through the conservation measures described in section 7 of the HCP, currently degraded habitat will be improved. The project will also provide much-needed affordable housing and permit the landowner's economically viable use of the land.

The Service published a notice of availability of an EA/HCP for issuance of an incidental take permit for the proposed action in the *Federal Register* on October 17, 2001. Publication of a notice initiated a 60-day comment period. Copies of the EA/HCP also were provided to interested parties. The Service received one comment on the proposed action during the public comment period. The responses to that comment are included in the EA/HCP in Appendix G.

Based my review and evaluation of the enclosed Environmental Assessment and Habitat Conservation Plan and other supporting documentation, I have determined that issuance of Endangered Species Act section 10(a)(1)(B) permit TE-048568-0 to the Applicant for take of the federally threatened Preble's meadow jumping mouse associated with the proposed Pinery Glen residential subdivision in Douglas County, State of Colorado, is not a major Federal Action which would significantly affect the quality of the human environment within the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969. Accordingly, preparation of an environmental impact statement on the proposed action is not required. Therefore, an environmental impact statement will not be prepared.

ACTING



U.S. Fish and Wildlife Service
Regional Director

5/25/02

Date

RELATED DOCUMENTS

U.S. Fish and Wildlife Service, 2002a. Intra-Service Section 7 Consultation and Biological Opinion on Issuance of an Incidental Take Permit to Continental Homes, Douglas County, Colorado, Colorado Field Office, Lakewood, Colorado.

U.S. Fish and Wildlife Service, 2002b. Findings and Recommendations on Issuance of an Incidental Take Permit for the Preble's Meadow Jumping Mouse to Continental Homes for construction of a residential subdivision on the 60-acre site in Douglas County, Colorado.

Wright Water Engineers, Inc., 2002. *Environmental Assessment/Habitat Conservation Plan for the Issuance of an Incidental Take Permit Under Section 10(a)(1)(B) of the Endangered Species Act for Construction of a Residential Subdivision for Continental Homes*, 50 pp. plus exhibits and appendices.

APPENDIX E

Photographs



Photograph 1: – Pinery Glen – Flagged line along silt fence marking where 300 foot setback was calculated



Photograph 2: – Pinery Glen – Riparian Vegetation along Cherry Creek



Photograph 3: – Pinery Glen – Scrub/shrub wetland along Cherry Creek



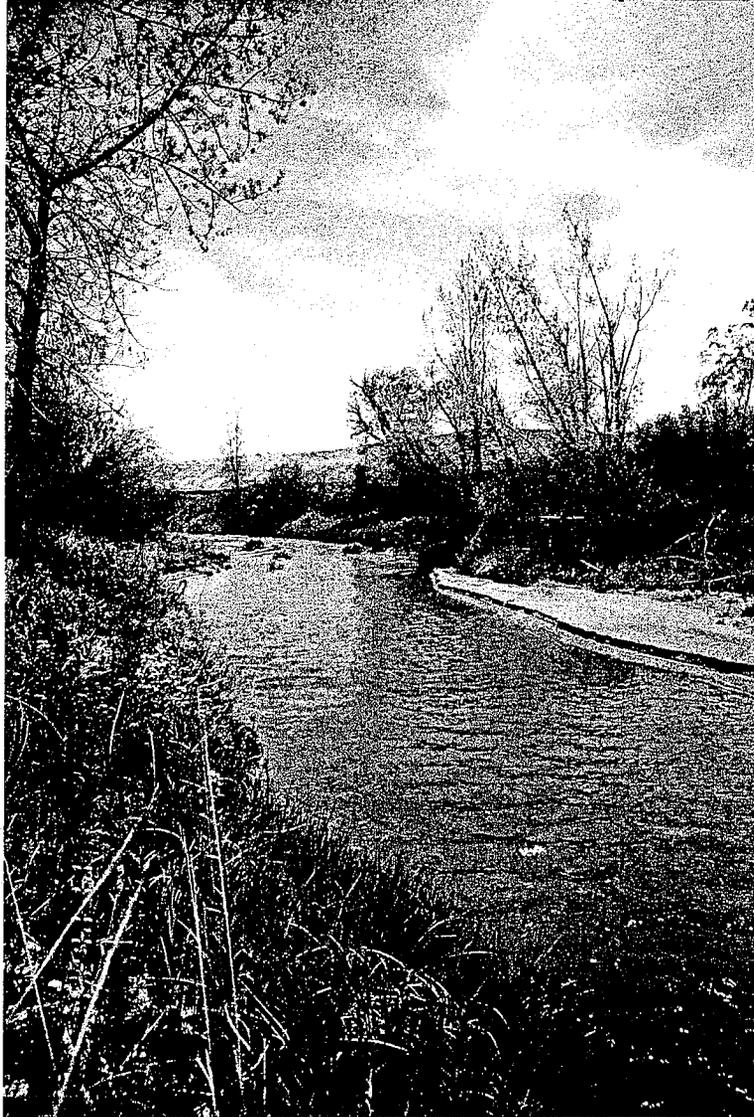
Photograph 4: – Pinery Glen – Riparian forested and scrub/shrub wetland along Cherry Creek



Photograph 5: – Pinery Glen – Intermediate terrace along Cherry Creek



Photograph 6: – Pinery Glen – Intermediate terrace along Cherry Creek



Photograph 7 – Pinery Glen – Leafy spurge and riparian vegetation along lower terrace of Cherry Creek

APPENDIX F

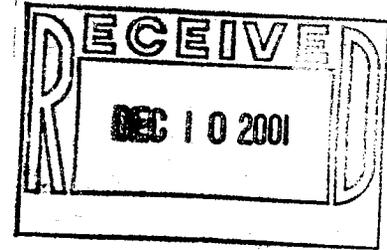
Letter of Credit

APPENDIX G

Comments From Public Notice 45-day-period and
Our Response to Comments

December 4, 2001

LeRoy Carlson
Field Supervisor
U.S. Fish and Wildlife Service, Colorado Field Office
755 Parfet St., Suite 361
Lakewood, CO 80215



Dear Mr. Carlson,

I am sending this letter with comments concerning the Draft Environmental Assessment/Habitat Conservation Plan for Issuance of an Endangered Species Act Section 10(A)(1)(B) Permit for the Incidental Taking of the Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*) at Pinery Glen in Douglas County, Colorado. Please note that the opinions contained in this letter are my own personal opinions as a private citizen and I am not representing my employer (Exponent, Boulder, CO) or place of work (Rocky Flats Environmental Technology Site).

I am pleased to see that the plant species being required for the revegetation work are all native species. One concern I have however is that no mention is made, of what, if anything is planned, to address the problem of the smooth brome (*Bromus inermis*) on the upper terraces near the stream. Smooth brome is a very aggressive grass and simply trying to seed native species into it without first, getting rid of the brome is not likely to succeed. It will simply be a waste of money and effort and you will still end up with a smooth brome stand in the end because the brome will out compete everything seeded. Now perhaps I misunderstand which areas will be seeded, but in one the early sections of the report it mentions that the upper terraces are dominated by smooth brome. If these areas are being scraped off for construction or for recontouring the topography of the site, the smooth brome may be set back or destroyed, but without that, I would suggest that some type of herbicide (like the Roundup being used for the leafy spurge) needs to be applied to the smooth brome areas as well before seeding is done.

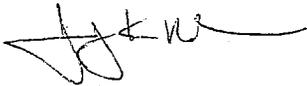
I am encouraged to see that there is some type of requirement for monitoring of the mitigation habitat restoration to see that it achieves some measure of success. However, I have serious concerns about the success criteria that are specified in the draft plan. Based on the vegetation success criteria presented on page 44, success will be achieved when only three native species are present and an overall vegetation cover of 60% (plant cover and litter combined) is established. Given that there is no requirement that the 60% vegetation cover needs to be from native species, success would be achieved if only three individual native plants were present in the entire revegetation area and the rest of the vegetation cover (minimum 60%) came from non-native species and litter. With this for success criteria, the vegetation that is currently in place at the Site probably meets these criteria! Even in a solid stand of smooth brome, which would have a vegetation cover of at least 60%, one could probably find at least three individual native plants! Theoretically you could also have very little actual vegetation cover on the ground if litter is also going to be included in the equation. These criteria are basically a modification of the mined land reclamation guidelines and do little to realistically meet the objective of the HCP to replace Preble's mouse (PMJM) habitat and improve cover and diversity in existing and restored areas. If the USFWS is going to require mitigation restoration of PMJM habitat I think the least we could do is set success criteria requirements such that the restoration will actually replace and improve the quality of the habitat for the PMJM.

The success criteria need to be much more stringent. I suggest that the success criteria be revised to state that vegetation cover requirements will be met when native plant species (a minimum of three native species) provide at least 60% of the total actual foliar vegetation cover (not relative cover and not including litter in the total). If we are going to require the use of native plant species for seeding, then the success criteria needs to specify that these species need to establish and survive. Otherwise it is a waste of money and effort requiring their use. If we are going to spend the time trying to "restore" a quality habitat that enhances the chances for long-term PMJM survival, then I believe we need to set criteria that actually create a higher quality habitat, not just create something that is green!

I am also concerned about the language on page 45 that effectively lets the Applicant "off the hook" after five years, whether or not the success criteria have been met, and transfers the responsibility to Douglas County. If the mitigation restoration is not successful after five years, with this loophole, the taxpayers lose twice. We lose once for the loss of habitat that did not get replaced and then having to pay to recreate it with tax dollars, while the developers get off never having actually satisfied the requirement to mitigate for the loss of habitat. If the USFWS really intends to preserve the PMJM and have a no loss of habitat policy, then we need to actually get the mitigation restorations to work or else what has been gained. Since the developers are the ones who destroyed the PMJM habitat, in the process of their business to make a profit, the least we can do as taxpayers is hold them responsible to do what they are required to do. If they can't restore the habitat, then they shouldn't be allowed to develop!

I appreciate the opportunity to comment on the plan and would hope you seriously consider the points I have made. Thank you.

Sincerely,



Jody K. Nelson
Botanist/Plant Ecologist
175 Marble St. #207
Broomfield, CO 80020
Ph. 303-465-3034
Email: subularia@juno.com

WWE RESPONSE TO PUBLIC COMMENTS

December 2001

On behalf of Continental Homes, Wright Water Engineers, Inc. (WWE) offers the following responses to comments concerning the *Draft Environmental Assessment/Environmental Assessment Plan* for issuance of an Endangered Species Act Section 10(a)(1)(b) Permit for the incidental taking of the Preble's meadow lumping mouse (*Zapus hudsonius preblei*) at Pinery Glen and Douglas County, Colorado. WWE will respond to each of the four comments within the overall response in four separate responses for reading ease.

Comment: I am pleased to see that the plant species being required for the revegetation work are all native species. One concern I have, however, is that no mention is made of what, if anything, is planned to address the problem of the smooth brome (*Bromus inermis*) on the upper terraces near the stream. Smooth brome is a very aggressive grass, and simply trying to seed native species into it without first getting rid of the brome is not likely to succeed. It will simply be a waste of money and effort, and you will still end up with the smooth brome in the end because the brome will outcompete everything seeded. Now, perhaps I misunderstand which areas will be seeded, but in one of the early sections of the report it mentions that the upper terraces are dominated by smooth brome. If these areas are being scraped off for construction or for recontouring the topography of the site, smooth brome may be set back or destroyed but, without that, I would suggest that some type of herbicide (like Roundup being used for the leafy spurge) needs to be applied to the smooth brome areas, as well, before seeding is done.

Response: The goal of the proposed Preble's meadow jumping mouse Mitigation Plan is to establish a self-sustaining community of perennial grasses and forbs on the intermediate and upper terraces of Cherry Creek with noxious weed control (leafy spurge). Appropriate riparian and upland trees and shrubs will be planted to improve Preble's meadow jumping mouse habitat throughout the mitigation area.

Mitigation areas to be seeded have either already been disturbed by grading and construction activities or are leafy spurge dominated areas to be treated by noxious weed control. These areas will then be reseeded with a native seed mix, as described in Table 5 on page 38. If an area is to be seeded with the native seed mix, it will be treated beforehand with herbicides and root undercutting.

Therefore, we agree that any areas to be seeded should receive herbicide treatment if nonnative plants or noxious weeds are present. The overall goal of this mitigation plan is not to remove all smooth brome from the 75.66-acre site. Preble's meadow jumping mouse data does not indicate that native perennial grasses create better Preble's meadow jumping mouse habitat than nonnative

perennial grasses. Smooth brome is not a noxious weed, and the Preble's meadow jumping mouse has been trapped in solid stands of smooth brome.

Comment: I am encouraged to see that there is some type of requirement for monitoring the mitigation habitat restoration to see that it achieves some measure of success; however, I have serious concerns about the success criteria specified in the draft plan. Based on the vegetation success criteria presented on page 44, success will only be achieved when three native species are present and an overall vegetation cover of 60 percent (plant cover and litter combined) is established. Given that there is no requirement that the 60 percent vegetation cover needs to be from native species, success would be achieved if only three individual native plants were present in the entire revegetation area and the rest of the vegetation cover (minimum 60 percent) came from nonnative species and litter. With this for success criteria, the vegetation that is currently in place at the site probably meets these criteria. Even in a solid stand of smooth brome, which would have a vegetation cover of at least 60 percent, one could probably find at least three individual native plants! Theoretically, you could also have very little actual vegetation cover on the ground if litter is also going to be included in the equation. These criteria are basically a modification of the mined land reclamation guidelines and do little to realistically meet the objective of the HCP to replace Preble's mouse (PMJM) habitat and improve cover and diversity in existing and restored areas. If the USFWS is going to require mitigation restoration of PMJM habitat, I think the least we could do is set success criteria requirements such that the restoration will actually replace and improve the quality of the habitat for the PMJM.

Response: The proposed reseeded effort on upland terraces as proposed in this habitat conservation plan (HCP) involves reseeded with a native grass species mix in areas that have been treated for noxious weeds, such as leafy spurge. The entire 75.66-acre mitigation site is not being treated by herbicides and undercut to destroy roots of the existing perennial grasses and forbs. The upland areas on the upper terraces that will be reseeded with upland terrace seed mix, as described in Table 5 on page 38, are dominated by bunch grasses. These grasses do not form a solid stand across an upland field. Bare areas between the clumps of grasses are expected until other forbs are able to establish during later years. In addition, the perennial grasses have at any time a biomass of nonviable plant material (litter), which often represents the previous year's growth. Therefore, attaining 60 percent absolute plant cover of perennial grasses including litter would represent successful perennial grass establishment. The goal of this mitigation plan is to control noxious weeds and introduce a more diverse native grass community within the overall mitigation area. However, the PMJM is often located within nonnative areas of perennial grasses and shrubs. Therefore, it is not the goal of this mitigation plan to replace the entire existing grassland on upper and intermediate terraces with a native seed mix. In areas where noxious weeds will be treated, nonnative perennial grass seed may exist in the soil below. Therefore, if the success of the area includes reestablishment with native or nonnative

perennial grasses and forbs with less than 20 percent leafy spurge cover, the overall goal of this mitigation plan will have been achieved. The PMJM prefers riparian habitat with an overstory of shrubs and an understory of lush grasses. This habitat is the goal of this mitigation plan.

Comment: The success criteria needs to be much more stringent. I suggest that the success criteria be revised to state that vegetation cover requirements will be met when a minimum of three native species provide at least 60 percent of the total actual full-year vegetation cover (not relative cover and not including litter in the total). If we are going to require native plant species for the seeding, then the success criteria needs to specify that these species need to establish and survive. Otherwise, it is a waste of money and effort requiring their use. If we are going to spend the time trying to restore quality habitat that enhances the chances for long-term PMJM survival, then I believe we need to set criteria that actually create a higher-quality habitat, not just create something that is green.

Response: We have amended the monitoring section to include that, of the 60 percent of the total actual cover needed to meet success criteria including litter from last year's growth, one-half of the vegetation should include native species. (See page 44.)

Comment: I am also concerned about the language on page 45 that effectively lets the Applicant "off the hook" after five years, whether or not the success criteria have been met, and transfers the responsibility to Douglas County. If the mitigation restoration is not successful after five years, with this loophole, the taxpayers lose twice. We lose once for the loss of habitat that did not get replaced and then having to pay to recreate it with tax dollars, while the developers get off never having actually satisfied the requirement to mitigate for the loss of habitat. If the USFWS really intends to preserve the PMJM and have a no loss of habitat policy, then we need to actually get the mitigation restorations to work or else what has been gained. Since the developers are the ones who destroyed the PMJM habitat, in the process of their business to make a profit, the least we can do as taxpayers is hold them responsible to do what they are required to do. If they can't restore the habitat, then they shouldn't be allowed to develop!

Response: The Applicant clearly states on page 45 that "During the first five years, the Applicant will conduct or contract all mitigation management, maintenance, and monitoring. Although the land has been dedicated to Douglas County, the Applicant will manage and maintain the mitigation on the property until the five-year period expires and/or success has been achieved. Following the establishment period, the USFWS will expressly allow the Applicant to assign responsibility for long-term monitoring, management, and maintenance to Douglas County." It is clear that the Applicant assumes full responsibility for the success of this Preble's mouse mitigation.