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**Natural Resource Assessment Report
for the Walden Village
Property
El Paso County, Colorado**

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NATURAL RESOURCES ASSESSMENT REPORT FOR WALDEN VILLAGE PROPERTY

APRIL, 2003

1. Introduction

Land Resource Associates (LRA) retained ERO Resources Corporation to conduct a Natural Resource Assessment for the proposed Walden Village Residential Development site in El Paso County, Colorado (Figure 1). Site visits were conducted in the fall of 2002 by ERO ecologists Ron Beane and Clint Henke to review natural resources. During this site review, activities included a review of potential wetlands, identification of potential threatened and endangered species habitat, and identification of other natural resources that might affect development of the property. Table 1 lists environmental issues addressed for this project.

Table 1. Criteria and determination of sensitive environmental issues addressed in this report.

| | Criteria | Determination |
|--|---|--|
| Wetlands | Contains any jurisdictional wetlands or waters of the U.S. | Contains jurisdictional Waters of the U.S. and - jurisdictional wetlands (see Appendix A) |
| Federally Threatened and Endangered Species | Located within any critical habitat for state or federally designated threatened or endangered species. Provides any significant habitat for a federally designated threatened or endangered species. | Property is not located within any officially designated critical habitat for state or federally designated threatened or endangered species. Property contains no habitat for a federally designated threatened or endangered species, including the Preble's meadow jumping mouse (see Appendix B). |
| State T&E Species and State Species of Concern | Is determined to serve as significant habitat for any of the species on the Colorado Division of Wildlife's Colorado Listing of Endangered and Threatened Wildlife Species and Species of Special Concern (April 2001). | Ponds and wetlands on the site provide potential seasonal habitat for northern leopard frog. The project will completely avoid permanent disturbance to ponds and will mitigate any impacts at two road crossings within jurisdictional Waters of the U.S. |
| Colorado Natural Heritage Program Rare Species | Located within critical wildlife habitat, a significant natural community, a rare plant area, or a riparian corridor as defined by CNHP. | Property is not located within or adjacent to critical wildlife habitat, a significant natural community, a rare plant area, or a riparian corridor. |
| Candidate Species | Contains significant habitat for the black-tailed prairie dog (<i>Cynomys ludovicianus</i>), a federal candidate species or mountain plover, a proposed threatened species. | No black-tailed prairie dogs are present on or near the property. The site provides no potential habitat for the Mountain Plover |

2. Project Description and Location

The Walden Village Property consists of an area of about 337 acres in which a proposed rural residential development is planned. The project site is generally located in the SW ¼ of Section 14, SE ¼ of Section 15 and the NW ¼ Section 23, T11S, R66W Black Forest and Monument Quadrangles, El Paso County, Colorado. The UTM coordinates for the approximate center of the project site are Zone 13 4326000 mN and 521500 mE, (Figure 1). The proposed project site is located immediately southeast of the intersection of Colorado 83 and Colorado 105. The elevation of the project site is ranges from 7,480 to 7,600 feet above sea level.

3. Methods

This Natural Resources Assessment included analysis of topographical maps of the proposed project area, and a review of existing information available from the Colorado Division of Wildlife (CDOW) Natural Diversity Information System (NDIS), Colorado Natural Heritage Program (CNHP), the U.S. Fish and Wildlife Service (FWS) and the El Paso County Comprehensive Plan. The assessment also included a site reconnaissance to identify and address any potential wildlife issues associated with the project. The following sources were used for this review and analysis:

U.S. Fish and Wildlife Service Region 6 Website (www.r6.fws.gov/index.html)

Colorado Listing of Endangered, Threatened and Wildlife Species of Special Concern, October 2001.

Colorado Natural Diversity Information System (<http://ndis.nrel.colostate.edu/>)

El Paso County Policy Plan

Colorado Natural Heritage Program

Survey of Critical Biological Resources, El Paso County, Colorado

Survey of Critical Wetlands and Riparian Areas in El Paso and Pueblo Counties, Colorado

After a review of existing data, field reconnaissance surveys were conducted by a certified ecologist and wetland scientist in October 2002. Field reconnaissance concentrated on identification of wetlands and on the presence of habitat suitable to support sensitive wildlife.

4. Environmental Setting

A review of environmental maps provided in the El Paso County Comprehensive Plan revealed that the Walden Village project site is within the Black Forest Planning Unit. The project site contains no Colorado Natural Heritage Conservation sites according to maps produced by the CNHP or Preservation Areas designated in the El Paso County Comprehensive Plan.

The Walden Village site is generally within the Rangeland Grass and Conifer Forest vegetation zones (mapped by the NDIS) associated with the Palmer Divide of Northern El Paso and Southern Douglas Counties. Grasslands on the site support primarily a shortgrass prairie vegetation and wildlife community. The following sections provide descriptions of the general vegetation and wildlife communities found on the property.

4.1. Vegetation Communities

Walden Village is a parcel of land that is dominated by native grassland vegetation with some patches of introduced grasses and invasive weeds. One ephemeral headwater tributary of West Cherry Creek bisects the property from south to north. This tributary is characterized by a vegetated upland swale with small patches of wetlands supporting *juncus* and *carex* species (see Appendix A – wetlands report).

4.1.1. Rangeland Grass

The rangeland grass community provides important year-round foraging areas for both mule deer (*Odocoileus hemionus*) and pronghorn antelope (*Antilocapra americana*). Vegetation within the rangeland grass community consists primarily of introduced pasture grasses, particularly smooth brome (*Bromopsis inermis*), and shortgrass species such as blue grama (*Bouteloua gracilis*), little bluestem (*Schizachyrium scoparium*), and sand dropseed (*Sporobolus cryptandrus*) (Photo 1).

4.1.2. Conifer forest

This vegetation class consists of a mature ponderosa pine (*Pinus ponderosa*) forest with little to no understory (Photo 2). This community supports common forest bird and mammal species, including Northern flicker (*Colaptes auratus*), Black-capped chickadee (*Poecile atricapilla*), pine siskin (*Carduelis pinus*) and Steller's jay (*Cyanocitta stellerii*), and mule deer.

4.1.3. Wetlands and Open Water

The USGS shows one small drainage flowing northwest through the Walden Village property (Figure 1). The drainage is a dry, vegetated swale with no defined bed and bank is not believed to be under the jurisdiction of the U.S. Army Corps of Engineers (Corps). This drainage consists primarily of upland vegetated swales dominated by blue grama, and smooth brome with patches of Baltic rush (*Juncus balticus*) (Photos 3 and 4).

Two stock ponds occur within the drainage and a third isolated stock pond is in a small depression west of the drainage. The two stock ponds that occur along a mapped intermittent drainage are considered jurisdictional by the Corps. The small isolated stockpond has no surface connection of a navigable waterway and is considered to be isolated in nature, thus it is not a jurisdictional wetland (see Appendix A – wetlands report). All three stock ponds support very little shoreline vegetation with a few scattered cattails (*Typha* spp.) and smooth brome dominating dams. One small patches of sandbar willow (*Salix exigua*) intermixed with smooth brome, common mullein (*Verbascum thapsus*) and other upland species occur in a seasonal seep directly below the largest stock pond (Photo 5). A letter from the Corps accepting the wetlands delineation is provided in Appendix C.

4.2. Wildlife Communities

Large mammals on the property are typical of shortgrass prairie habitats in Colorado, consisting of ungulates such as mule deer, pronghorn, carnivores such as coyote (*Canis latrans*), and red fox (*Vulpes vulpes*). Small mammals include rodents such as voles (*Microtus* spp.), northern pocket gopher (*Thomomys talpoides*) and thirteen-lined ground squirrels (*Spermophilus tridecemlineatus*). Open water and wetland areas provide seasonal breeding habitat for amphibians such as northern leopard frog (*Rana pipiens*) and tiger salamander (*Ambystoma tigrinum*), and seasonal habitat for waterbirds such as killdeer (*Charadrius vociferus*), Canada geese (*Branta canadensis*) and various ducks.

The value of the habitat of the project property based on vegetation communities and the presence of wildlife sign was generally high.

5. Species of Concern in El Paso County

Currently El Paso County has no official list of Species of Concern. In the absence of a specific county list, a list of threatened and endangered and sensitive species potentially occurring on the project site was developed based on the following criteria:

Federal Threatened, Endangered and Candidate Species

State Threatened, Endangered and Species of Special Concern

Species Listed as Rare or Imperiled by The Colorado Natural Heritage Program

Raptors, including the golden eagle, that are protected by federal regulations such as the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

Economically important species

A summary of available information on the range, distribution and habitat affinities of Species of Special Concern within El Paso County is presented in the following subsections. The full list of Species of Special Concern was initially evaluated and several species eliminated from further consideration based on their distribution and habitat requirements. Information of species distribution and habitat affinities was gathered from the best available information and published reports including: Colorado NDIS; CNHP species occurrence database; FWS-designated critical and potential habitat for T&E species; Colorado Birds (Andrews and Righter 1992); Mammals of Colorado (Fitzgerald et al. 1994); Colorado Breeding Bird Atlas (Kingery 1998); Distribution of Mammals in Colorado (Armstrong 1972); Amphibians and Reptiles in Colorado (Hammerson 1999); and various field surveys conducted on or near the property (see literature cited section). Special Concern Species, including Federal threatened, endangered and candidate species, potentially occurring on the Walden Village property, were then evaluated as to their likelihood of occurrence and potential to be impacted by the development proposed for the property.

6. Threatened, Endangered, and Candidate Species

Federally threatened and endangered species are protected under the Endangered Species Act (ESA) of 1973 as amended (16 U.S.C. 1531 et seq.). Significant adverse effects to a federally listed species or its habitat would require consultation with the U.S. Fish and Wildlife Service (FWS) under Section 7 of the ESA.

Populations of the following federally listed threatened and endangered species potentially occur in El Paso County.

1. Bald eagle
2. Preble's meadow jumping mouse
3. Mexican spotted owl
4. Black-footed ferret
5. Southwestern willow flycatcher
6. Whooping crane
7. Ute ladies'-tresses orchid
8. Colorado butterfly plant

Additionally, the black-tailed prairie dog and the mountain plover are considered candidates for federal listing as threatened.

6.1. Bald Eagle (*Haliaeetus leucocephalus*)

6.1.1. Species Background

The bald eagle is a large North American bird with a historical distribution throughout most of the U.S. The bald eagle was listed as an endangered species in 1978. Population declines are attributed to habitat loss, the use of organochlorine pesticides, and mortality from shooting. Since its listing, the population trend for the bald eagle has been increasing. The bald eagle was downlisted from endangered to threatened in 1995 and the FWS is proposing to delist the bald eagle due to population recovery. If the bald eagle is removed from the list of threatened and endangered species, it will continue to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Bald eagles are primarily winter residents in Colorado, although nesting along the Colorado Front Range has increased in recent years. Most nesting in Colorado occurs near lakes or reservoirs or along rivers. Typical bald eagle nesting habitat consists of forests or wooded areas that contain many tall, aged, dying and dead trees (Martell 1992).

6.1.2. Potential Impacts

No habitat suitable as winter roost sites or important foraging areas for bald eagles occurs in the study area and no designated critical or essential eagle habitat would be impacted by the proposed project. There are no known bald eagle nest sites currently in El Paso County (Kingery 1998). However, due to the abundance of tall ponderosa pine trees and possible abundance of small mammalian prey in the area, bald eagles could occasionally forage in the study area.

6.2. Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)

6.2.1. Species Background

The Preble's meadow jumping mouse (PMJM) is listed as threatened under the ESA. Typically, PMJM is located in low undergrowth consisting of grasses and forbs, in open wet meadows, riparian corridors near forests, or where tall shrubs and low trees provide adequate cover. Along Colorado's Front Range, PMJM is found below 7,500 feet in elevation, generally in lowlands with medium to high moisture along permanent or intermittent streams and irrigation canals (Meaney et al. 1997).

6.2.2. Potential Impacts

A habitat assessment was conducted for PMJM in early November 2003. No potential habitat for PMJM was found on or near the project site. A habitat assessment report has been submitted to the U.S. Fish and Wildlife Service (Appendix B) and the FWS concluded that the proposed project on the site should not have direct adverse effects to Preble's (letter provided in Appendix C)

6.3. Mexican Spotted Owl (*Strix occidentalis* ssp.)

6.3.1. Species Background

The Mexican spotted owl is listed as threatened under the ESA. It is found from southern Colorado and Utah through portions of New Mexico, Arizona, Texas, south to central Mexico. This species typically inhabits areas with steep exposed cliffs and canyons that are characterized by piñon-juniper and old-growth forests mixed with Douglas-fir, ponderosa pine, and white fir (Andrews and Righter 1992). Spotted owls have been found in western El Paso County and nearby Douglas County. Critical habitat has been designated in the Pike National Forest in western El Paso and Douglas Counties.

6.3.2. *Potential Impacts*

Due to the lack of suitable habitat within the study area, it is highly unlikely that the Mexican spotted owl would be affected by the proposed project. Additionally, this project is not near any designated critical habitat area.

6.4. Black-footed Ferret (*Mustela nigripes*)

6.4.1. *Species Background*

The black-footed ferret is listed as endangered under the ESA. Black-footed ferrets are associated with prairie dog colonies where they depend on this species for food and shelter. Over the past century, prairie dog distribution has been substantially reduced due to habitat loss, plague and poisoning practices. Due to the loss of prairie dog habitat, the black-footed ferret has nearly been completely extirpated. Current FWS criteria for defining potential black-footed ferret habitat consist of any black-tailed prairie dog town or complex of greater than 80 acres (FWS 1989).

6.4.2. *Potential impacts*

No prairie dogs were seen in or near the study area; thus, no black-footed ferrets would inhabit the area. Because of the lack of prairie dogs on or near the study area, the site does not meet the minimum criteria of ferret habitat established by the FWS.

6.5. Southwestern Willow Flycatcher (*Empidonax traillii*)

6.5.1. *Species Background*

The southwestern willow flycatcher is listed as threatened by the ESA. It is found from southern California east to southern Kansas. In Colorado, this species breeds in riparian shrublands, primarily those containing stands of willows.

6.5.2. *Potential Impacts*

The Walden Village Property lacks shrub riparian vegetation, particularly willow stands. Due to the lack of suitable habitat within the study area, it is highly unlikely that the southwestern willow flycatcher would be affected by the proposed project.

6.6. Whooping Crane (*Grus Americana*)

Currently, the whooping crane is federally listed as endangered by the ESA, and is also state listed as endangered. Whooping cranes prefer unvegetated, wide river channels with areas of shallow, slow moving water and a fine substrate (such as sand) for nesting.

In Colorado, the cranes occur as migrants, stopping over in the San Luis valley on their way to and from their wintering grounds. Four occurrences of whooping cranes have been noted in eastern Colorado between 1900 and 1965 (Andrews and Righter 1992).

6.6.1. Potential Impacts

The Walden Village Property consists primarily of rangeland and forested habitat unsuitable for the whooping crane. This site also lacks riverine roosting habitat and potential forage resources. It is highly unlikely that the proposed project would affect foraging or roosting whooping cranes.

6.7. Ute Ladies'-Tresses Orchid (*Spiranthes diluvialis*)

6.7.1. Species Background

The Ute-ladies'-tresses orchid is federally listed as threatened. Ute ladies'-tresses orchid (ULTO) occurs at elevations below 6,500 feet in moist to wet alluvial meadows, flood plains of perennial streams, and around springs and lakes (CNPS 1989). Once thought to be fairly common in low elevation riparian areas in Colorado, Utah, and Nevada, currently only sixteen populations are reported to occur in Colorado with most populations occurring along the Front Range. Generally, the vegetative cover is relatively open; dense, overgrown sites are not conducive to ULTO establishment. Where the ULTO is found, soils are typically alluvial deposits of sandy, gravelly material that are saturated to within 18 inches of the surface for at least part of the growing season.

6.7.2. Potential Habitat

The project site provides no suitable habitat for ULTO because it is above the elevational range of the orchid and lacks the necessary soil characteristics that support ULTO.

6.8. Colorado Butterfly Plant (*Gaura neomexicana* ssp. *coloradensis*)

6.8.1. Species Background

The Colorado butterfly plant (CBP) is a short-lived perennial herb found in moist areas of flood plains. This species is federally listed as threatened under the ESA and is found within a small area in southeastern Wyoming, western Nebraska, and north-central Colorado. It occurs on sub-irrigated, alluvial soils on level or slightly sloping flood plains and drainage bottoms at elevations 5,000 to 6,000 feet (CNPS 1989). Colonies are

often found in low depressions or along bends in wide, active, meandering stream channels a short distance upslope of the actual channel. Typical Colorado butterfly plant habitat is relatively open without dense or overgrown vegetation.

6.8.2. *Potential Habitat*

The study area is above the elevation limit for CBP. Therefore the proposed project will not affect the Colorado butterfly plant.

6.9. Black-Tailed Prairie Dog (*Cynomys ludovicianus*)

6.9.1. *Species Background*

In 1998, FWS received a petition from the National Wildlife Federation to list the black-tailed prairie dog as a threatened species under the ESA. In the February 4, 2000 Federal Register, FWS announced that listing of the black-tailed prairie under the ESA is warranted but precluded by other higher priority actions. The status of this species will be re-evaluated annually by the FWS. Its current status as a candidate species does not protect the prairie dog under the ESA; however, future listing of the prairie dog would require consultation with the FWS before disturbing a colony.

6.9.2. *Potential Impacts*

No prairie dogs or prairie dog burrows exist within the study area. Impacts to this species would not be an issue with the proposed project.

6.10. Mountain Plover (*Charadrius montanus*)

6.10.1. *Species Background*

The mountain plover is a federal candidate species that inhabits dry tablelands and the Colorado Plateau. This species nests primarily in shortgrass prairie sites used historically by prairie dogs, bison, and pronghorn. This species breeds from northern Montana, Wyoming, and Colorado to central New Mexico. The wintering range extends from central California to southern Arizona into northern Mexico. The mountain plover's habitat requirements generally consist of open, flat tablelands and short, intensively grazed grasslands. Typically plovers nest in areas with at least 30 percent bare ground and are often found in disturbed habitats, burned prairie, fallow agricultural fields, and prairie dog colonies (Knopf 1996). This species avoids vegetation over 6 inches tall and hillsides.

6.10.2. Potential Impacts

The proposed project contains no suitable habitat for the mountain plover because most of the land consists of rolling topography covered by vegetation over 6 inches tall, primarily montane ponderosa pine forest, and higher elevation meadows. The proposed project will not affect the mountain plover.

7. Other El Paso County Species of Concern

In addition to federally listed sensitive species, several wildlife species potentially occur on the project site that are listed as a threatened or species of species concern by the State of Colorado, or as rare or imperiled in the state by the Colorado Natural Heritage Program. Table 2 presents a list of species of special concern for El Paso County based on the above criteria. The habitat affinities and potential impacts to these species are provided in the following discussion.

Table 2. Species Listed by the State of Colorado or as Rare or Imperiled by the Colorado Natural Heritage Program that could occur on the Walden Village site.

| Common Name | Scientific name | State or CNHP Status |
|--------------------------------|---------------------------------|----------------------|
| Amphibians and Reptiles | | |
| Common Garter Snake | <i>Thamnophis sirtalis</i> | SC |
| Northern Leopard Frog | <i>Rana pipiens</i> | SC |
| Birds | | |
| Western Burrowing Owl | <i>Athene cunicularia</i> | ST |
| American White Pelican | <i>Pelecanus erythrorhychos</i> | SC |
| Black-crowned Night Heron | <i>Nycticorax nycticorax</i> | R/I |
| Great Blue Heron | <i>Ardea herodias</i> | R/I |
| Snowy Egret | <i>Egretta thula</i> | R/I |
| Greater Sandhill Crane | <i>Grus canadensis tabida</i> | SC |
| Black-necked Stilt | <i>Himantopus mexicanus</i> | R/I |
| Long-billed Curlew | <i>Numenius americanus</i> | SC |
| Western Snowy Plover | <i>Charadrius alexandrinus</i> | SC |
| Mammals, | | |
| Merriam's Shrew | <i>Sorex merriami</i> | R/I |
| Swift Fox | <i>Vulpes Velox</i> | SC |
| Fringed Myotis | <i>Myotis thysanodes</i> | R/I |
| Big Free-tailed Bat | <i>Nyctinomops macrotis</i> | R/I |
| Brazilian Free-tailed Bat | <i>Todarida brasiliensis</i> | R/I |

| Common Name | Scientific name | State or CNHP Status |
|---------------------------------------|------------------------------|----------------------|
| Bushy-tailed Woodrat | <i>Neotoma cinerea</i> | R/I |
| Raptors | | |
| American Peregrine Falcon | <i>Falco Peregrinus</i> | ST |
| Ferruginous Hawk | <i>Buteo regalis</i> | SC |
| Red-tailed Hawk | <i>Buteo jamaicensis</i> | R/I |
| Golden Eagle | <i>Aquila chrysaetos</i> | R/I |
| Prairie falcon | <i>Falco neomexicana</i> | R/I |
| Northern Harrier | <i>Circus cyaneus</i> | R/I |
| Sharp-shinned Hawk | <i>Accipiter striatus</i> | R/I |
| Cooper's Hawk | <i>Accipiter cooperii</i> | R/I |
| Northern Goshawk | <i>Accipiter gentilis</i> | R/I |
| Long-eared Owl | <i>Asio otus</i> | R/I |
| Flammulated Owl | <i>Otus flammeolus</i> | R/I |
| Economically Important Species | | |
| American Elk | <i>Cervus elaphus</i> | R/I |
| Mule Deer | <i>Odocoileus hemionus</i> | R/I |
| Pronghorn | <i>Antilocapra americana</i> | R/I |
| Black Bear | <i>Ursus americanus</i> | R/I |
| Mountain Lion | <i>Felis concolor</i> | R/I |

†SE = State Endangered; ST = State Threatened; SC = State Special Concern; R/I = CNHP Rare or Imperiled)

7.1.1. Amphibians And Reptiles

Common Garter Snake. The common garter snake (*Thamnophis sirtalis*) occurs only along the South Platte River drainage below 6,000 feet in northeastern Colorado (Hammerson 1986) and is listed as a Colorado Species of Special Concern. This snake is essentially restricted to aquatic and riparian habitats within floodplains and inhabits marshes, ponds, and stream edges. The project site is outside the range of this species.

Northern Leopard Frog. The northern leopard frog (*Rana pipiens*) is considered globally secure by the CNHP, but is listed as a Colorado Species of Special Concern. This species typically inhabits the banks and shallow portions of wetlands, ponds, lakes, streams, and other permanent bodies of water. The elevational range of the northern leopard frog extends from below 3,500 feet to above 11,000 feet in Colorado

(Hammerson 1999). This species breeds in shallow, non-flowing portions of permanent water bodies and in seasonally flooded areas. Leopard frogs typically emerge from winter dormancy in March and remain active until cold weather forces them into hibernation in October or November (Hammerson 1986, 1999).

Leopard frogs would only likely occur at the small wetland areas and ephemeral drainages that are present on the property. Because of avoidance and preservation of wetland and aquatic areas, habitat for this species will be largely preserved by the proposed project design.

7.1.2. Birds

Burrowing Owl. The burrowing owl (*Athene cunicularia*): is a small migratory owl occupies prairie dog towns in Colorado during the summer breeding season. The owl is active during the day and uses abandoned prairie dog burrows for nesting and roosting. The burrowing owl has been listed as threatened by the Colorado Division of Wildlife and is protected under the Migratory Bird Treaty Act, which prohibit the killing of burrowing owls. Burrowing owls typically are present in Colorado between March 1 and October 31.

Burrowing owls mainly inhabit prairie dog burrows in Colorado. No prairie dogs or prairie dog burrows were observed on the property; therefore, the proposed project would have no adverse impacts to the burrowing owl.

American White Pelican. The American white pelican (*Pelecanus erythrorhynchos*) is a state species of special concern. White pelicans breed on islands on large water bodies and may travel up to 30 miles to forage. This species currently nests on three lakes in Colorado with the nearest site being Antero Reservoir in Park County (Kingery 1998). Stock ponds, when full, could provide resting habitat during migration; however, open water areas on the project site do not provide any forage fish and it is unlikely that any migrant or foraging pelicans would visit the property.

Black-Crowned Night Heron. The black-crowned night heron (*Nycticorax nycticorax*) is considered globally secure, but a rare breeder in Colorado. This small heron forages in shallow water bodies and along the edges of lake, reservoirs and rivers (Kingery 1998). They nest in dense cover and often nest in colonies with other colonial

waterbirds such as great blue heron, and double-crested cormorant. Black-crowned night herons may occasionally forage along the stock ponds; however, no suitable nesting or roosting sites for heron exists on or near the property.

Great Blue Heron. The great blue heron (*Ardea herodias*) is a colonial nesting migrant and summer resident to Colorado. This species typically nests in large trees along major river systems, lakes and reservoirs. Herons will fly great distances to feed and may travel up to 25 miles from nesting sites (Kingery 1998). Recent surveys found breeding Great Blue Herons only along Fountain Creek in El Paso County (Kingery 1998). No trees suitable for nesting or roosting are available on the site.

Snowy Egret. The snowy egret is globally secure, but listed as a rare breeder in Colorado. This egret is a large white wading bird that feeds in wetlands, wet meadows, streams and the shores of shallow ponds and reservoirs. This species nests in colonies in trees and tall emergent vegetation. The only known breeding colonies in eastern Colorado exist at Barr Lake and Riverside Reservoir. No records of snowy egrets have been reported in El Paso County (Kingery 1998).

Sandhill Crane. The sandhill crane (*Grus canadensis*) is an abundant migrant in San Luis Valley, and a few nest in the northern mountains of Colorado. Irregular migrant on eastern plains, where it is often locally abundant in fall but is usually rare to uncommon in spring. Migrant cranes occur on mudflats around reservoirs, in moist meadows, and in agricultural areas. Breeding birds have not been recorded in El Paso County (Andrews and Righter 1992, Kingery 1998).

Black-necked Stilt. The black-necked stilt is considered globally secure, but a rare breeder in Colorado. This wading bird prefers freshwater lakes and ponds, wet meadows, and irrigated fields. They nest in small colonies of a few to several dozen pairs, selecting dry sites near water to nest. This species breeds in scattered sites across the western U.S. and have been recorded in eastern Larimer and western Weld Counties, the San Luis Valley and the lower Arkansas Valley. No stilts have been recorded breeding within El Paso County (Andrews and Righter 1992; Kingery 1998).

Long-billed Curlew. The long-billed curlew is globally secure, but listed as a state imperiled breeder in Colorado. This species mostly nests on shortgrass prairies (Kingery

1998). The presence of water may influence initiation of nesting in the first year. Site fidelity may then cause the bird to return even if nearby water has dried up (McCallum 1977). Breeding curlews arrive on breeding grounds in April and eggs hatch from early to mid-June. No records of breeding curlews exist in the area near the project site.

Western Snowy Plover. The western snowy plover (*Charadrius alexandrinus*) is a state species of special concern. This small shorebird typically breeds on sandy beaches and islands in coastal areas. Inland they breed on alkali flats and alongside reservoirs, sewage and evaporation ponds (Andrews and Righter 1992, Kingery 1998). This species is an uncommon breeding bird in Colorado, primarily along the lower Arkansas River and San Luis Valley. No breeding snowy plovers were located within El Paso County during recent Breeding Bird Surveys conducted in the early 1990's (Kingery 1998). This species is unlikely to occur on the study area, either during breeding or fall and spring migrations due to the total absences of mudflats, sandy shorelines or other suitable habitat.

7.1.3. *Mammals*

Merriam's Shrew. The Merriam's shrew (*Sorex merriami*) is considered rare in Colorado by the CNHP. This species is a medium-sized shrew that occupies drier habitats in Colorado, particularly sagebrush and semidesert shrubland (Fitzgerald et al. 1994). Little is known about this species in Colorado, but the project site is within the mapped distribution for the species. Recent specimens of Merriam's shrew have been reported for El Paso, Gunnison, Rio Blanco and Garfield counties suggesting that the species is probably more common and widespread than previously thought (Armstrong and Jones 1971, Fitzgerald et al. 1994).

Swift Fox. The swift fox is a Colorado Species of Concern. The distribution of swift fox includes the grasslands of the Great Plains including eastern Colorado (Fitzgerald et al. 1994). Den sites are usually located on sites dominated by native shortgrass prairie species such as blue grama and buffalo grass. They are sometimes associated with prairie dog towns although they generally excavate their own dens (Fitzgerald et al. 1994). The Walden Village property is within the swift fox overall activity area (NDIS 2002), however due to past disturbance and agricultural activity, the site generally lacks the

habitat components necessary to support swift fox. Reconnaissance surveys of the site did not locate any signs of swift fox or of den sites.

Fringed Myotis. The fringed myotis (*Myotis thysanodes*) is yellowish brown to reddish brown bat with large ears. The fringed myotis apparently is not common in Colorado. It is found in ponderosa pine woodlands, greasewood, oakbrush, and saltbush shrublands. Caves, mines, and buildings are used as both day and night roosts. Hibernation sites include caves and buildings. The fringed myotis is a species of coniferous woodlands and shrublands at elevations to 2,290 m (7,500 ft). Fringed Myotis could potentially occur in ponderosa forests on and near the project site.

Big Free-tailed Bat. The big free-tailed bat is listed by the CNHP as globally secure, but as a critically imperiled species in Colorado. They typically roost in crevices on cliff faces or in buildings. The big free-tailed bat has been found scattered in five counties across Colorado, including El Paso County. However, there are no records of a breeding population in Colorado (Fitzgerald et al. 1994). There were no signs of the big free-tailed bat found in on the Walden Village property.

Brazilian Free-Tailed Bat. The Brazilian free-tailed bat (*Tadarida brasiliensis*) occurs at lower elevations, in piñon-juniper woodlands, arid grasslands, and semidesert shrublands. The animals typically roost in caves, mines, rock fissures, or buildings. The distribution of populations of Brazilian free-tailed bats is limited and patchy because of their need for secure, properly ventilated roosts. Seasonal migrations typically occur from summer to winter range, with only a few reports of animals overwintering in the West. In Colorado, bats begin to appear in mid-June and reach highest numbers between July and early September. By late September numbers are reduced to a few hundred individuals (Freeman and Wunder 1988). The project site lacks typical roosting habitat for the Brazilian free-tailed bat and the species is unlikely to occur on the site.

Bushy-tailed Woodrat. The bushy-tailed woodrat (*Neotoma cinerea*) is large and has a bushy tail. In Colorado this is the woodrat of montane and subalpine forests - especially Douglas fir, ponderosa pine, and aspen communities. It also occurs in lower elevation canyon country in semidesert shrublands, and piñon-juniper woodlands, typically in rimrock, rock outcrops, and similar geologic features. Bushy-tailed woodrats

potentially occur on the site; however the site lacks rock outcrops or other preferred habitat features.

7.1.4. Economically Important Species

America Elk. The American elk (*Cervus elaphus*) is an important big game species in Colorado. A review of the Colorado NDIS revealed that the Walden Village site is low priority elk habitat. Elk may occasionally visit the project site

Mule Deer. The mule deer (*Odocoileus hemionus*) is also an important big game species in Colorado that occupies all ecosystems in Colorado from grasslands to alpine tundra (Fitzgerald et al. 1994). This species reaches its greatest densities in shrublands that provide abundant forage and cover. A review of the Colorado NDIS revealed that the Walden Village site is low priority Mule Deer habitat. Mule deer may visit the site at relatively low numbers in summer and into winter. Deer on Walden Village site will experience both short-term and long-term impacts from the proposed development; however, deer also have the ability to acclimate to human presence, particularly in the absence of hunting.

Pronghorn. The American pronghorn (*Antilocapra americana*) is an important big game species in Colorado that inhabits grasslands and semi-desert shrublands on rolling topography that provides good visibility (Fitzgerald et al. 1994). A review of the Colorado NDIS revealed that the project site provides year-round habitat for the pronghorn, however, the site is currently surrounded by existing low density residential areas (2- to 5-acre lots) and additional residential construction is on-going or planned in the few remaining open areas surrounding the property. Pronghorn need vast expanses of open areas and are typically sensitive to human presence. Existing and on-going residential construction in the area has already severely diminished the value of the site to support viable populations of pronghorn. The project site contains no areas mapped as winter, summer or resident herd habitat. Over the long term, pronghorn will likely be extirpated from the site and most of the surrounding area as residential development continues, regardless of the proposed Walden Village project.

Black Bear. The black bear (*Ursus americanus*) is Colorado's largest carnivore and inhabits montane shrublands and forests. It also is found in subalpine forests at moderate

elevations, and even ranges from the edge of the alpine tundra to canyon country and lower foothills (Fitzgerald et al. 1994). There were no signs of black bears found during field reconnaissance.

Mountain Lion. Mountain lions (*Felis concolor*) are found in many ecosystems in Colorado. They typically inhabit the foothills and canyon country, especially in areas with montane forests, shrublands, and piñon-juniper woodlands. There are scattered reports of mountain lions in the eastern plains (Fitzgerald et al. 1994). There were no signs of mountain lions found during the site visit.

7.1.5. Raptors and Migratory Birds

A survey for raptors and potential raptor nests was also included as part of the site assessment. The Migratory Bird Treaty Act protects raptors and migratory birds. If a nest or a tree containing a nest of any migratory bird species needs to be removed, the U.S. Fish and Wildlife should be contacted to obtain a nest depredation permit.

A red-tailed hawk was observed perched north of the property. No other raptors or their nests were observed during the site visit. Raptors such as Sharp-shinned hawk, Cooper's hawk, and northern goshawk are species of forests and woodlands and could occur in the surrounding ponderosa pine forest. The long-eared owl and the short-eared owl could also potentially occur on the site; however, due to past grazing practices and surrounding development these species are unlikely to breed on the property. Raptors may occasionally forage at the site, but the site is unlikely to be significantly used for hunting due to the relative lack of habitat for small mammals and other prey species.

8. Species Unlikely To Occur On The Project Site

Numerous species listed by CNHP are at the extreme limits of their distribution in Colorado and would be highly unlikely to occur on the project site. The American redstart (*Setophaga ruticilla*) and willet (*Charadrius alexandrinus*) are at the southern limit of their ranges. The greater sage grouse (*Centrocercus urophasianus*) requires habitats that contain large contiguous areas of sagebrush (Kingery 1998). The property lacks this type of habitat and this species would not be expected to occur on the Walden Village property. Habitat is not present for other listed species as well, including the

lesser prairie chicken (*Tympanachus pallidicinctus*), least tern (*Sterna antillarum*), and sharp-tailed grouse (*Tympanuchus phasianellus columbianus*).

8.1. Wildlife Corridors

A review of known movement patterns for all large mammal species available in the Colorado NDIS website revealed that no identified wildlife corridors exist on the Walden Village property.

9. Summary of Impacts

The proposed Walden Village development site does provide some breeding habitat for songbirds and rodents, and year-round range for mule deer and pronghorn. The site also provides potential nesting habitat for raptors; however, no existing nest sites for any raptors were found during site reconnaissance of the property. The project site does provide foraging or wintering habitat for raptors such as northern harrier, golden eagle and ferruginous hawk. The site also provides foraging habitat and breeding for predators such as coyote and red fox. No extensive riparian areas exist on the project site and all wetland areas will be avoided to the maximum extent practicable.

The site does not contain any potential habitat for the federally threatened PMJM. No other critical habitat for any federal, state, or local threatened, endangered or sensitive species exists on the proposed project site. No identified wildlife corridors exist on or near either of the project properties.

10. Professional Qualifications

Ronald Beane is a certified ecologist and a Zoology Research Associate with the Denver Museum of Natural History. Mr. Beane's experience with federally and state-listed threatened, endangered and sensitive species includes field team leader for peregrine falcon recovery efforts in Colorado, discovery of the bald eagle roost on Rocky Mountain arsenal and management and performance of field surveys for endangered plants, birds, mammals, bats, marine mammals and reptiles throughout the west. He is certified or qualified to conduct surveys for the black-footed ferret, southwestern willow flycatcher, northern goshawk, bald eagle, peregrine falcon, mountain plover, boreal toad, and Preble's meadow jumping mouse. He has been accepted by the Colorado Division of Wildlife as qualified to conduct burrowing owl surveys.

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**Figure 1. Project Location
Photolog**

Appendix A
Wetland Delineation Report

**WETLAND DELINEATION REPORT
FOR WALDEN VILLAGE
EL PASO COUNTY, COLORADO**

Prepared for—

Land Resources Associates, Inc.
9736 Mountain Road
Chipita Park, Colorado 80809

Prepared by—

ERO Resources Corporation
1842 Clarkson Street
Denver, Colorado 80218
(303) 830-1188

March 4, 2003

**WETLAND DELINEATION REPORT FOR
WALDEN VILLAGE
EL PASO COUNTY, COLORADO**

MARCH 4, 2003

Introduction

Land Resources Associates, Inc. (LRA) retained ERO Resources to conduct a wetland delineation for the proposed Walden Village development in El Paso County, Colorado (Figure 1). LRA has proposed to construct a rural residential development on a parcel of land approximately 337 acres in size.

On October 22, 2002 and again on March 17, 2003, Clint Henke, an ecologist with ERO Resources Corporation, surveyed the project area for wetlands and other waters of the U.S. Using methods outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual*, wetlands were determined based on the presence of two wetland indicators: hydrophytic vegetation and wetland hydrology. Wetland indicator status for plant species was determined using Sabine (1994).

At the time of this delineation, the soil was frozen, so the delineation was based on vegetative and hydrologic indicators only. ERO field verified the boundaries on March 17, 2003.

1. Location

The site is located on a 337-acre parcel of land just southeast of the intersection between Walker Road and State Highway 83 in El Paso County, Colorado (Figure 1). The exact location is the SW $\frac{1}{4}$ of Section 14, SE $\frac{1}{4}$ Section 15, and the NW $\frac{1}{4}$ Section 23, T11S, R66W, El Paso County, Colorado. The UTM coordinates for the approximate center of study are 4326000mN, and 521500mE.

2. Site Description

The topography of the property consists of rolling hillsides dominated by grazed shortgrass prairie with ponderosa pine forest surrounding the open pastureland. One unnamed drainage traverses the property from south to north. Two stock ponds occur

along the drainage. The northernmost pond is larger and was dry at the time of the site visit. The smaller, southernmost pond was full of water at the time of the site visit. A third stock pond occurs west of the drainage, in the northwest portion of the project area. Dominant vegetation on the property consists of grazed upland species such as smooth brome (*Bromus inermis*), blue grama (*Bouteloua gracilis*) and little bluestem (*Schizachyrium scoparium*) communities. Vegetation within the drainage consists of mostly smooth brome and blue grama with small patches of Baltic rush (*Juncus balticus*) and Nebraska sedge (*Carex nebrascensis*) occurring upstream and in between the ponds. The site is surrounded by forested communities with ponderosa pine (*Pinus ponderosa*) and a few quaking aspen (*Populus tremuloides*) dominating overstory. Several private ranches and houses surround the property.

3. Wetlands and Waters of the U.S. Description

The drainage that occurs on the property is labeled as an intermittent tributary on the USGS quadrangle. Two stock ponds occur along the drainage. Wetlands occur between and upstream of the ponds (Figure 2). After speaking with Terry McKee, a regulatory specialist with the U.S. Army Corps of Engineers (Corps), it was determined that wetlands and open water occurring along the dry swale are under the jurisdiction of the Corps. Upland, vegetated reaches of the swale with no defined bed and bank are not under the jurisdiction of the Corps. A third stock pond on the property, has no surface connection to the drainage and is not under the jurisdiction of the Corps.

3.1. Wetlands

Wetlands were identified based on three indications: vegetation, hydrology, and the presence of hydric soils.

3.1.1. Vegetation

Vegetation within the wetlands consist mostly of Baltic rush and Nebraska sedge. The wetlands are surrounded by upland vegetation, consisting mostly of smooth brome and blue grama.

Two stock ponds occur along the drainage. The northernmost pond was dry at the time of the site visit and the southernmost, smaller pond contained water. Vegetation cover was low around the ponds due to heavy grazing and fluctuations in the water levels.

3.1.2. Hydrology

Although wetland areas were dry at the time of the site visit, drainage patterns were evident in the wetlands indicating sufficient hydrology at times. Furthermore, the soil was saturated at approximately three inches. The only permanent wet area observed during the site visit, was the southernmost stock pond. The drainage likely conveys runoff during storm events for short periods of time.

3.1.3. Soils

Hydric soils are present in the wetland areas, but not in areas lacking hydrophytic vegetation. No mottling or oxidized root channels were observed. According to the SCS maps, the soils within the site are classified as Tomah-Crowfoot loamy sand, which is a mixture of gravelly and coarse sand (SCS 1981).

3.2. Other Waters of the U.S.

No active stream channels are present on the site. The drainage on the site is a vegetated swale with intermittent areas of wetlands, but no defined streambed or bank. However, since the two stock ponds occur along the drainage, they are considered open waters of the U.S. and fall under the jurisdiction of the Corps.

4. Conclusions

Jurisdictional wetlands were mapped based on the presence of hydrophytic vegetation, hydrology and presence of hydric soils. Two stock ponds that occur along the drainage are considered jurisdictional waters of the U.S. Jurisdictional wetlands also occur between the two ponds and upstream of the southern pond (Figure 2). No wetlands occur below the northernmost pond (Figure 3). Completed routine wetland determination forms and photos of representative wetland areas are attached.

5. References

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Appendix B
Preble's Meadow Jumping Mouse Habitat Assessment

**Preble's Meadow Jumping Mouse
Habitat Assessment for the
Walden Village Property
El Paso County, Colorado**

Prepared for—

**David Jones
Land Resource Associates
9736 Mountain Road
Chipita Park, Colorado 80809**

Prepared by—

**ERO Resources Corporation
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(303) 830-1188**

February 18, 2003

**Preble's Meadow Jumping Mouse Habitat Assessment for
Walden Village Property (Project 2225)**

February 18, 2003

1. INTRODUCTION

The Preble's meadow jumping mouse (*Zapus hudsonius preblei*) (Preble's) is currently a species listed as threatened under the Endangered Species Act (ESA). The distribution and habitat requirements of this mouse are currently poorly understood. However, a review of current literature provides some indication of habitat associations for the Preble's. Typically, this mouse occurs below 7,600 feet in elevation, generally in lowlands with medium to high moisture (USFWS 1999, Natural Heritage Program 1996) along permanent or intermittent streams and canals (Armstrong et al. 1997, Meaney et al. 1997). The mouse occurs in low undergrowth consisting of grasses and forbs, in open wet meadows, riparian corridors near forests, or where tall shrubs and low trees provide adequate cover (USFWS 1999, Meaney et al. 1997).

- Current US Fish and Wildlife Service (Service) guidelines describe Preble's Habitat as an area 300 feet beyond the 100-year floodplain for a distance of 1 mile up- and downstream of a known population of Preble's.

2. Objectives

- The purpose of this assessment is to determine the presence or absence of Preble's meadow jumping mouse habitat along on unnamed headwaters tributary of West Cherry Creek in Northern El Paso County.

3. Project Description

- The study area is located in the SW ¼ of Section 14, SE ¼ of Section 15 and the NW ¼ Section 23, T11S, R66W Black Forest and Monument Quadrangles, El Paso County, Colorado. The UTM coordinates for the approximate center of the project site are Zone 13 4326000 mN and 521500 mE, (Figure 1). The proposed project site is located immediately southeast of the intersection of Colorado 83 and Colorado 105. The elevation of the project site is ranges from 7,480 to 7,600 feet above sea level.

- The proposed project consists of a low-density residential development. The site contains a small ephemeral headwater tributary of West Cherry Creek (Figure 1). Existing rural suburban development is rapidly expanding in this area and residential homes on small acreage lots surround the property.

- The project site was surveyed on foot in November 2002 following USFWS guidelines (1999) to determine the suitability of the area to support Preble's.

4. Ecological and Other Features of the Assessment Area

- The Walden Village site is generally within the Rangeland Grass vegetation zone associated with the eastern plains of Colorado. The site supports primarily a shortgrass prairie vegetation and wildlife community. Elevations of the Walden Village range from about 7,480 to 7,600 feet. The following sections provide descriptions of the general vegetation and wildlife communities found on the property.

5. Vegetation Communities

- Walden Village is a parcel of land that is dominated by native grassland vegetation with some patches of introduced grasses and invasive weeds. An ephemeral headwater tributary of West Cherry Creek traverses the property. This tributary consists primarily of upland vegetated swale. Surrounding upland vegetation consists of Rangeland grass and ponderosa pine (*Pinus ponderosa*).

6. Upland Communities

- Vegetation within the rangeland grass community consists primarily of introduced pasture grasses, particularly smooth brome (*Bromopsis inermis*), and shortgrass species such as blue grama (*Bouteloua gracilis*), little bluestem (*Schizachyrium scoparium*), and sand dropseed (*Sporobolus cryptandrus*) (Photo 1). The conifer forest occurs primarily along ridges surrounding the rangeland grass community. This vegetation class consists of a mature ponderosa pine forest with little to no understory (Photo 2).

7. Lowland Communities, Wetlands and Open Water

- The USGS shows one small drainage flowing northwest through the Walden Village property (Figure 1). The drainage is a dry, vegetated swale with no defined bed and bank is not believed to be under the jurisdiction of the U.S. Army Corps of Engineers (Corps). This drainage

consists primarily of upland vegetated swales dominated by blue grama, and smooth brome with patches of Baltic rush (*Juncus balticus*).

- One small isolated wetland occurs on the property. This wetland area has no surface connection of a navigable waterway, and considered to be isolated in nature. Two stock ponds occur within the drainage and a third stock pond is in a small depression west of the drainage (Photos 3 and 4). Both stock ponds support very little shoreline vegetation with a few scattered cattails (*Typha* spp.) and smooth brome dominating dams. One small patch of sandbar willow (*Salix exigua*) intermixed with smooth brome, common mullein (*Verbascum thapsus*) and other upland species occurs in a seasonal seep directly below the largest stock pond (Photo 5).
- The site contains no potential habitat for the Ute Ladies Tresses Orchid (*Spiranthes diluvialis*). The SCS maps the soils within the site as Tomah-Crowfoot loamy sand, which is a mixture of gravelly and coarse sand (SCS 1981).

8. Conclusions and Discussion

- Preble's mice typically inhabit areas characterized by well-developed plains riparian vegetation with relatively undisturbed grassland and a water source in close proximity (Armstrong et al. 1997). Recent studies have suggested that Preble's may have a wider ecological tolerance than previously thought, and that the requirement for diverse vegetation and well-developed cover can be met under a variety of circumstances (Meaney et al. 1997). Radio-tracking studies conducted by the Colorado Division of Wildlife (CDOW) have documented Preble's using upland habitat adjacent to wetlands and riparian areas (Shenk and Sivert 1999). Additional research by CDOW has suggested that habitat quality for Preble's can be predicted by the amount of shrub cover available at a site (White and Shenk 2000).
- Ronald Beane of ERO Resources evaluated the site for Preble's meadow jumping mouse habitat and determined that the assessment area is not habitat for Preble's because of the following:
 - The ephemeral tributary to West Cherry Creek on the study area is characterized as a vegetated swale that contains only a seasonal seep with a single small patch of dry willow shrub habitat mostly dominated by vegetation not typically associated with Preble's.
 - Although one small patch of willow occurs below the largest stock pond, the site lacks the overall shrub structure and herbaceous habitat typically associated with Preble's.

- The site is completely isolated from known populations of Preble's or potential habitat.
 - The site is at the upper elevational limit of the Preble's range.
- Given these facts it is highly unlikely that the assessment site supports a population of Preble's mice. ERO recommends that the project be allowed to proceed without a trapping survey.

9. References

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Natural Heritage Program. 1996. Vertebrate characterization abstract (State) *Zapus hudsonius preblei*.

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Soil Conservation Service (SCS). 1981. Soil survey of El Paso County, Colorado. USDA.

Shenk, T.M. and M.M. Sivert. 1999. Movement patterns of the Preble's meadow jumping mouse as they vary across time and space. Fort Collins, Colorado. Colorado Division of Wildlife.

White, Gary C. and Tanya M. Shenk. 2000. Relationship of Preble's Meadow Jumping Mouse Densities to Vegetation Cover. Colorado Division of Wildlife Report.

10. Qualifications of Surveyor

Mr. Beane is a certified ecologist and a Zoology Research Associate with the Denver Museum of Natural History. He has performed small mammal investigations for more than 16 years throughout the Western US. He has completed more than 75 Habitat Assessments and 50 Presence / Absence Surveys for PMJM over the last six years.

Appendix A
***Zapus hudsonius preblei*, Preble's Meadow Jumping Mouse**
Survey Field Data Compilation Form

Walden Village

Z. h. preblei habitat found ? No Dates of Survey: November **2003**

Surveyor:

Organization/Company: **ERO Resources, Inc.**

Full Name(s): **Ronald D. Beane**

Location: Walden Village

Descriptive Site Name (creek, nearby road intersection, etc.): **Ephemeral drainage to West Cherry Creek ay Highway 105 and Highway 83**

U.S.G.S. Quad(s) Name: **Black Forest and Monument** County **El Paso** Elevation: **7,480 to 7,600 feet**

¼¼ Section(s) **SW ¼ of Section 14, SE ¼ of Section 15 and the NW ¼ Section 23**

Township(s) **T11S** Range(s) **R66W**

UTM Coordinates, Zone 13 **13 4326000 mN and 521500 mE**

Directions to Location:

- **Southeast corner of Colorado 105 and Colorado 83. Take 1-25 to Monument, west on 105 to Colorado 83 – South and take first left (east) onto Walden Way, drive through existing Walden III development to Pinehurst circle. Property is to the east.**

Habitat Type: **Rangeland grass/ Ponderosa Pine.**

Land Ownership: **Private**

Habitat:

General Habitat Description: **Walden Village is a parcel of land that is dominated by native grassland vegetation with some patches of introduced grasses and invasive weeds. An ephemeral headwater tributary of West Cherry Creek traverses the property. This tributary consists primarily of upland vegetated swale. Surrounding upland vegetation consists of Rangeland grass and ponderosa pine (*Pinus ponderosa*).**

Dominant Plant Community: **Primarily of introduced pasture grasses, particularly smooth brome (*Bromopsis inermis*), and shortgrass species such as blue grama (*Bouteloua gracilis*), little bluestem (*Schizachyrium scoparium*), and sand dropseed (*Sporobolus cryptandrus*)**

Drainage Type: Perennial Stream **Ephemeral Stream** Pond/Lake Canal and Reservoir

Appendix C

Agency Letters