

**Final Environmental Assessment and
Habitat Conservation Plan for the
Issuance of an Incidental Take Permit to
Boulder County Under Section
10(a)(1)(B) of the Endangered Species
Act for the Mayhoffer/Singletree Trail**

June 5, 2003

**Submitted to the U.S. Fish and Wildlife Service
Colorado Field Office**

**By
Boulder County Parks and Open Space Department**

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Introduction

Boulder County Parks and Open Space Department (Applicant or County) has applied to the U.S. Fish and Wildlife Service (Service) for a permit to allow the incidental and temporary take of Preble's meadow jumping mouse (*Zapus hudsonius preblei*) (PMJM), a species listed as threatened under the Endangered Species Act (ESA) of 1973 as currently amended.

Location of Requested Permitted Activity

The activity will occur on the Mayhoffer/Singletree property, west of McCaslin Blvd. and south of old town Superior and Coal Creek Road. This property is within Boulder County, Colorado (T1S, R70W, Sect. 24) and owned by the County in partnership with the City of Boulder and Town of Superior. The property is approximately 5600 ft. in elevation.

Description of Requested Permitted Activity

The proposed action involves the construction of a multiple-use trail on a property potentially used by PMJM (Figure 1). A detailed description of the project is given below.

Permittee/Applicant

The activities will be done by Boulder County Parks and Open Space Department (BCPOS), which is requesting the permit.

Applicant's Qualifications

The Applicant is a public land management agency with experience in natural resource management and planning. Staff members involved in the project include a wildlife biologist (Mark Brennan; BS Ecology, MS Wildlife Sciences), landscape architect (Kathy Clark; BLA Landscape Architecture), plant ecologist (Claire DeLeo; BS Biology, MS Rangeland Ecosystem Science), operations project manager (Brent Wheeler; BS Parks and Recreation Administration) and special projects manager (Ben Pearlman; BA Political Science, JD).

Term

The Applicant is requesting an incidental take permit for ten years from the time of issuance, to allow for the construction of the trail and for implementation and completion of all associated mitigation.

Other Conditions

The Mayhoffer/Singletree (M/S) property was acquired by BCPOS in 2000 in cooperation with the City of Boulder. Although M/S is co-owned by these entities, BCPOS is solely responsible for all management and activities covered in this EA/HCP.

Acreage estimates

The property encompasses a total of 171.3 acres, including a segment of Coal Creek. About 21 acres are considered riparian habitat. The remaining 150 acres are primarily upland grassland, irrigated hay meadow and non-compatible habitat types (Table 1). The permitted activity will impact a total of 0.67 acres permanently and 0.85 acres temporarily during construction.

Environmental Assessment

Purpose and Need For Action

The master plan for Boulder County Parks and Open Space calls for the development of trails for public recreational use where feasible (available upon request). Recreational trails are an integral part of the multiple use objectives for Boulder County on its public open space lands. These objectives also call for the preservation of wildlife habitat, urban buffer and the agricultural heritage of Boulder County in the use and management of public lands.

The M/S trail is being constructed as part of an IGA with the Town of Superior and the City of Boulder and Boulder County that specifies the development of a recreational trail on the property (available upon request). This trail will connect with an existing trail system on the City of Boulder Open Space and Mountain Parks property west of the M/S property. This trail system will include the abandonment of Coal Creek Road and its conversion to a recreational trail.

The purpose of this EA/HCP is to evaluate the environmental impacts of the section 10 permit that will authorize the construction of the trail. The EA/HCP complies with the requirements of NEPA and section 10 of ESA, as amended.

Potential impacts to Preble's habitat expected from the completion of the proposed alternative are limited to permanent impacts to 0.67 acres and temporary impacts to 0.85 acres, as is further describe herein. Any incidental take of Preble's or Preble's habitat will not appreciably reduce the likelihood of the survival and recovery of the species in Boulder County.

Description of the Affected Environment

Vegetation

The vegetation within the project boundaries includes riparian habitat, shortgrass prairie, hayfields, wet meadows and noxious weed communities. The vegetation along the abandoned railroad grade is primarily noxious weeds and includes cheatgrass (*Bromus tectorum*), diffuse knapweed (*Acosta diffusa*), dalmation toadflax (*Linaria genistifolia subsp. dalmatica*), sulfur cinquefoil (*Potentilla recta*), and scotch thistle (*Onopordum acanthium*). The vegetation in the upland areas beyond the railroad grade where the trail will go includes shortgrass prairie dominated by the grasses blue grama (*Bouteloua gracilis*) and buffalograss (*Buchloe dactyloides*). The shortgrass prairie is also heavily infested with diffuse knapweed. The hayfields contain primarily non-native grasses, including smooth brome (*Bromopsis inermis*), orchard grass (*Dactylis gromerata*), tall fescue (*Festuca arundinacea*), red top (*Agrostis gigantea*), and Kentucky bluegrass (*Poa pratensis*). The hay field also has a significant infestation of chicory (*Cichorium intybus*), a noxious weed.

The understory of the riparian area is a mosaic of introduced grasses, native plants, and noxious weeds. The riparian overstory is dominated by native plains cottonwood (*Populus deltoides*) and coyote willow (*Salix exigua*). The riparian communities are illustrated in Figure 2.

Wildlife

The Coal Creek corridor sustains a diverse avian community. The riparian habitat hosts numerous resident and migratory passerine species. The Applicant has not completed a quantitative analysis of avian use on this proposed activity site. Frequent site visits, however, have indicated that the plant community composition and varied age structure of the canopy vegetation do support a very diverse avian winter population and breeding population.

The proposed activity area is at the northern end of a large block of public lands that supports an extensive black-tailed prairie dog complex. Prairie dog towns do exist on the M/S property to the south and north of the proposed project area.

There is some use of this area by wintering raptors, especially along the isolated cottonwood trees along the Community Ditch south of Coal Creek. These raptors are associated with the extensive prairie dog complex on this and adjacent properties. An existing raptor nest structure near the project area has had a great-horned owl pair using it in recent years.

Herpetiles known to inhabit the riparian habitat include the northern leopard frog, chorus frog, bullfrog, and western terrestrial garter snake. Upland habitat contains bull snakes, prairie rattlesnakes and tiger salamanders.

Threatened or Endangered Species

This reach of the Coal Creek corridor is considered to be viable Preble's meadow jumping mouse habitat by the Service. The Applicant is proceeding with this EA/HCP under the assumption that this project area is viable PMJM habitat. The trail project on the M/S property will be in the vicinity of Coal Creek near Superior. Preble's meadow jumping mice have been found near this creek in 1999, approximately 0.5 miles upstream from the proposed project area, along the Hake Ditch running north of the creek (Figure 1).

There are no other federally listed species on the M/S property with the exception of bald eagles (*Haliaeetus leucocephalus*), which occasionally perch in winter on isolated large cottonwoods hundreds of yards from the trail and hunt prairie dogs in the vicinity. The proposed project would not effect bald eagles because no trees would be removed and the current, non-sanctioned, recreational use of the area will be directed to a designated trail away from the areas used by the bald eagles.

A 1999 survey on the M/S property for Ute ladies' tresses by the Woods Environmental consulting firm did not find any of the rare orchids. The previous owner did this survey prior to the property being purchased by the Applicant. A survey completed by BCPOS plant ecologists on the M/S property in 2002 also did not find any Ute ladies' tresses in the vicinity of the trail alignment. Other recent surveys by staff ecologists did not find the Colorado butterfly plant (*Gaura neomexicana ssp. coloradensis*) on the M/S property.

Wetlands

In the areas irrigated by the Hake Ditch, extensive artificial wetlands have also been created. The wet meadow created by Hake Ditch leakage contains a diversity of sedges, rushes, and other wetland plants. Some of the dominant sedges include Emory's sedge (*Carex emoryi*),

blackcreeper sedge (*Carex praegracilis*), woolly sedge (*Carex lanuginosa*), fox sedge (*Carex vulpinoidea*), and pointed broom sedge (*Carex scoparia*).

Geology and Soils

Soils within the proposed trail alignment on the M/S property are primarily clay loam and sandy loam, with some cobble elements. All soils are less than 3% slope and are not highly subject to erosion.

Land Use

The Applicant has only recently acquired the M/S property. Current uses include grazing of livestock under an agricultural lease that is consistent with previous use under private ownership. This use of the land will be continued in the future. The property is also designated for passive recreational use. That use is being fulfilled by this trail project.

Cultural Resources

A complete (100%) Class III pedestrian cultural resource survey was conducted on the M/S property in September 2002 (Appendix A). The cultural resource inventory is on file with the State Historical Preservation Office. Significant cultural resources, as determined by this survey, include the Industrial Coal Mine site and the abandoned Colorado and Southern railroad grade. This railroad grade was the location of the Interurban line between Boulder and Denver. It was abandoned in the late 1940's following the closure of the Industrial Coal Mine. The Hake ditch on the M/S property is a registered ditch that is considered one of the oldest in Boulder County.

Air Quality

There are no known concerns about air quality in the vicinity of the trail project. Continuous urban growth on surrounding private lands is most likely causing some increased detriment to air quality in the area with increased vehicle traffic and commerce. Most of the surrounding land to the south and west of the project site is public open space and does not have any air quality concerns that are known by the Applicant.

Water Resources and Water Quality

The project is in the Coal Creek riparian area and includes part of the Hake Ditch. There are no known water quality issues with this waterway. Livestock grazing has been removed from the riparian area by installation of fencing. This will result in an increase in water quality from pre-purchase levels. There are no livestock tanks or other contained bodies of water in the project area. The Community Ditch is on this property, south of Coal Creek, but is completely outside of the project area.

Alternatives Including the Proposed Action

Alternative 1- Proposed Action/Proposed Alternative

The proposed alternative allows for the construction of the trail on the M/S property by the Applicant as depicted in Figure 1. It will result in incidental take to PMJM habitat. It will require the issuance of an incidental take permit by the Service if implemented. This is the preferred alternative for the Applicant to allow it to fulfill its obligations to the Town of Superior and City of Boulder.

Alternative 2- Alternate Trail Alignment

An alternative trail alignment was initially investigated for the M/S property prior to the decision to use the currently proposed alignment. This alternative alignment would also have used the railroad grade through the riparian habitat. The alternative alignment would have put the upland portion of the trail on the south side of Coal Creek, proximate to the Community Ditch. This alignment would have traveled through a large prairie dog colony and near the numerous remote cottonwood trees in this upland area. This site is an important raptor conservation area, used extensively by bald eagles, golden eagles and ferruginous hawks in the winter. This alternative was rejected primarily due to concerns about disturbing these birds of prey and interrupting their ability to hunt on the prairie dog colony as a result of a trail in the area.

Alternative 3- No Action Alternative

A no-action alternative will result in not constructing the trail on this property. This alternative will not result in either incidental or direct take of the PMJM. This alternative would prevent the Applicant from fulfilling its obligation with the Town of Superior and the City of Boulder as contained in the IGA. Therefore it is not the preferred alternative for the Applicant.

Environmental Consequences/Ecological Assessment

Alternative 1-Proposed Action

Onsite Impacts

Onsite Impacts: Vegetation

The proposed trail alignment has been designed to minimize or avoid, where possible, direct impact to what is considered viable PMJM habitat. The railroad bed being incorporated into this trail design currently contains some sparse and weedy vegetation due to insufficient maintenance. This vegetation does not have the density or percent cover of the surrounding vegetation in the riparian area or adjacent upland grassland. No riparian vegetation will be impacted, since the trail stays on the existing elevated railroad bed throughout the riparian zone. The railroad bed does not support any riparian vegetation. Only 0.53 acres of grassland and hay meadow outside of the railroad grade will be permanently impacted by the trail construction. This vegetation is primarily non-native pasture grass species planted for hay cropping and livestock grazing.

Onsite Impacts: Wildlife

The Coal Creek corridor sustains a diverse avian community. The property, owing to its proximity to Old Town Superior, has been historically used by local residents for recreational activities such as hiking and equestrian use under previous private ownership. The avian community that exists in this area should not be altered as a result of similar recreational use along a sanctioned trail. It is anticipated that avian species will be able to better utilize riparian habitat outside of the designated trail corridor on the property that has historically been utilized by recreational activity under previous ownership.

The trail alignment was purposefully designed to avoid the wintering raptor use area by Community Ditch in order to prevent or minimize any potential negative impact to these raptors. The trail alignment will also avoid the existing prairie dog colonies on the property.

Onsite Impacts: Threatened or Endangered Species

The population status for PMJM on this property has not been established. The small amount of soil being disturbed for this projects will not likely result in any direct take of PMJM during construction. Construction will occur during the active season for PMJM, making it likely that individual mice will be able to respond to and avoid mortality from construction activities. The indirect level of take after the trail is complete will likely be minimal as well, due to the relatively small amount of permanently altered habitat in relation to the total habitat on the property. Mitigation activities, combined with existing weed abatement and habitat improvement projects planned by the Applicant, could actually result in an increase in available PMJM habitat on the property over time.

Onsite Impacts: Wetlands

Per personal communication with Terry McKee of the Army Corps of Engineers, the artificial wetlands created by leakage from the Hake Ditch are not considered jurisdictional wetlands by the Army Corps of Engineers since the source of water is entirely from the man-made ditch and the wetland vegetation would not exist if the ditch did not leak. Should the ditch ever be lined with concrete, the hydrophytic vegetation would no longer exist. The wetlands are also considered isolated wetlands by the Army Corps of Engineers since they do not connect with Coal Creek, and therefore are not wetlands that they regulate. Regardless, we have made the best effort possible to minimize effects to the wetland. The trail will cross the ditch at a point where wetland vegetation is only along the ditch itself.

Onsite Impacts: Geology and Soils

The majority of the trail alignment will be along an existing elevated railroad grade, with the remainder placed at ground level. The use of the existing railroad grade will reduce the amount of impact to these soils at ground level. The section of trail at ground level will be on soils of less than 2% slope. These aspects of the trail design will result in minimal potential for erosion resulting from this project.

Onsite Impacts: Air and Water Quality

No adverse effect to water quality in Coal Creek or its associated ditches will occur from this project. Minimal soil disturbance will occur due to the use of a previously established railroad bed and the relatively flat aspect of this site. This will result in minimal erosion, if any, during construction. Where there is any potential for even minor runoff resulting from the construction process, silt barrier fencing or hay bales will be placed to prevent runoff into the waterways. Post-construction rehabilitation per the mitigation plan will be done to ensure that erosion will be prevented.

No adverse effect to air quality will occur due to the small scope of this project. Some limited amount of fugitive dust might be created when spreading crusher fines. This will be limited to the short duration of time that the materials are actually placed along the trail. The completion of

this trail and the concurrent closure of Coal Creek Road and its conversion to part of this trail will probably lead to an increase in local air quality with less vehicle use in the immediate area.

Onsite Impacts: Cultural Resources

The Industrial Coal Mine site is on the M/S property, but not within the area of the trail alignment or in PMJM habitat. The abandoned Colorado and Southern railroad grade that the trail will be on was the location of the Interurban line between Boulder and Denver. It was abandoned in the late 1940's following the closure of the Industrial Coal Mine. Its use as a trail corridor enhances its cultural and historic value to the community.

This project is not considered to be detrimental to the cultural value of the Hake ditch. It will retain full function with no interruption of water conveyance from the trail crossing.

The Applicant will also contract with a licensed archaeologist to conduct an in-depth survey of the actual trail corridor prior to construction. Any significant cultural resources identified along this corridor will be collected and curated appropriately.

Onsite Impacts: Land Use

Current uses of the M/S property include grazing of livestock under an agricultural lease that is consistent with previous use under private ownership. This use will be maintained during and after the trail construction. No other impacts to current land use will occur as a result of project construction.

Offsite Impacts

Offsite Impacts: Vegetation

The construction of this trail will not have any negative impacts on vegetation beyond the designated project corridor. In fact, directing existing recreational use onto a designated trail corridor should result in the recovery of impacted vegetation outside of the project area.

Offsite Impacts: Wildlife

The project will not have any significant negative impacts to wildlife beyond the trail corridor. It is assumed that current wildlife communities have adapted to the existing level of unsanctioned recreational use in the area. Directing recreational use to this designated trail will allow avian species diversity to increase in areas of the property outside of the trail corridor. Other species could also expand into areas previously disturbed periodically by non-sanctioned recreational use. Other species outside of the project area, such as wintering raptors, should not be negatively impacted. The trail corridor was chosen to prevent or minimize any potential impact to this resource. Nearby prairie dog communities will not be impacted.

Offsite Impacts: Threatened or Endangered Species

No negative impact to PMJM outside of the project area will occur. The reduction in random recreational access to the Coal Creek riparian habitat outside of the designated trail corridor could actually benefit adjacent PMJM populations. No other T&E species are known to occur on the property outside of the project area with the exception of bald eagles, which occasionally perch in winter on isolated large cottonwoods hundreds of yards from the trail and hunt prairie

dogs in the vicinity. Bald eagles would not be impacted by the project because no trees would be removed and because their perch sites are outside of the zone of influence of the trail.

Offsite Impacts: Geology and Soils

No other geological or soil impact effects will occur outside of the project area as a result of its implementation.

Offsite Impacts: Air and Water Quality

No adverse effect to water quality in Coal Creek or its associated ditches outside of the project area will occur. Where there is any potential for even minor runoff into the creek or ditch resulting from the construction process, silt barrier fencing or hay bales will be placed to prevent this. Post-construction vegetation rehabilitation will be done to assure that erosion will not result in any off-site impacts.

No adverse effect to air quality outside of the project area will occur due to the small scope of this project. Some limited amount of fugitive dust might be created when spreading crusher fines. This will be limited to the short duration of time that the materials are actually placed along the trail. The completion of this trail and the concurrent closure of Coal Creek Road and its conversion to part of this trail will probably lead to an increase in local air quality with less vehicle use immediately outside of the project area.

Offsite Impacts: Cultural Resources

The Industrial Coal Mine site is on the M/S property, but not within the area of the trail alignment or in PMJM habitat. Existing fencing will keep trail users on the designated trail and away from the mine site.

This project is not considered to be detrimental to the cultural value of the Hake ditch beyond the project area. It will retain full function above and below the trail crossing with no interruption of water conveyance or access by licensed users.

Offsite Impacts: Land Use

Current uses of the M/S property and adjacent county properties include grazing of livestock under agricultural leases. This use will be maintained during and after the trail construction. No other impacts to current adjacent land use will occur as a result of project construction.

The M/S property is contiguous with over 3,000 acres of other County and City of Boulder open space on the south, west and northwest. There are over 100 acres of private land north of the property up to Coal Creek Road, both in incorporated Superior and unincorporated Boulder County. Some of this private acreage currently has an auto salvage yard and a self-storage business on it and two private residences. The remaining adjacent private acreage to the north is currently undeveloped. This project will not have any detrimental effect on any of the current uses of these properties, both public and private.

Cumulative Impacts Analysis

Vegetation

The establishment of a formal trail corridor on this property will control the level of potential impact from unregulated recreation on the entire property. Historical unsanctioned use by recreationists did not prevent users from going into sensitive riparian habitat and did not limit the total area that experienced disturbance from these activities. A designated trail alignment and enforcement of closed areas will greatly reduce the current and historic level of impact from recreational activities. This will allow currently impacted vegetation along social trails in the area to recover.

Wildlife

The trail corridor primarily exists already as a railroad grade with significantly less cover than the adjoining habitat on the M/S property. There has been some level of unofficial recreational use and private recreational use on this property in the recent past and under prior ownership. Therefore it is unlikely that the use of this railroad bed corridor as a designated trail will have any more significant indirect effect than what currently exists. The development of a designated trail corridor on the property should reduce the potential for disturbance to the local PMJM population. Historic unsanctioned use by recreationists did not prevent users from going into sensitive riparian habitat and did not limit the total area that experienced disturbance from these activities. A designated trail alignment and enforcement of closed areas will greatly reduce the current and historic level of impact from recreational activities.

Threatened or Endangered Species

It is understood that the maintenance of a trail and its use by recreationists could result in some minor or modest indirect effects to PMJM if predator presence is enhanced. However, given this historic unsanctioned use, it is unlikely that this will be elevated beyond the current level of predator response to recreational use.

The M/S trail will only be open to public use during daylight hours. This will eliminate much of the potential for any indirect negative effects to PMJM during their active hours on this site.

Geology and Soils

This project will not have any cumulative impacts to geological characteristics of the area or to the soils.

Air and Water Quality

This project will not have any cumulative impacts to either air or water quality in the vicinity of this project.

Cultural Resources

This project will not have any cumulative impacts on either the Industrial Mine or the Hake Ditch.

Land Use

All current and planned land use for this property will be retained during and after the implementation of this project. There will be no cumulative negative effects to land use.

Alternative 2- Alternate Trail Alignment

This alternative would have negatively impacted raptors and other species using the adjacent prairie dog colony. Upland vegetation would also have been impacted at the same level that the preferred alternative trail alignment will. There would have been no difference in impact to vegetation in the riparian corridor as would occur under the preferred alternative, since riparian vegetation will not be impacted by the use of the railroad grade. There would also have been no difference in impact to air or water quality, or land use. Some negative impact to the cultural resources found in the Industrial mine site could have occurred due to increased exposure to recreationists.

Alternative 3- No Action Alternative

This alternative would consist of no trail construction on the M/S property and thus no direct or indirect incidental take to PMJM. It would also result in no direct impact to vegetation, other wildlife, wetlands, geology, soils, air or water quality or cultural resources. Land use on this property would be limited to existing agricultural use only and would preclude the Applicant from fulfilling its obligations under the IGA with the city of Superior for limited development of recreational opportunities on the property.

Habitat Conservation Plan

The intent of this Habitat Conservation Plan (HCP) is to minimize and mitigate any potential incidental and temporary take of PMJM resulting from this project. The HCP is being prepared in accordance with section 10 of the ESA. Other than the Preble's, no other federally listed species are known to occur on this property within the project impact zones that could potentially be disturbed.

The trail alignment presented in this HCP is the result of extensive efforts to minimize impacts to any sensitive habitat and utilize previously disturbed areas and existing infrastructures as much as possible. It fulfills the multiple-use objectives for this property as described in the county Comprehensive Plan for Parks and Open Space. Additionally, the construction of the trail on the M/S property as proposed fulfills the IGA obligation with Boulder and Superior. Any future potential for the Applicant to acquire more open space for habitat protection will depend on the continued fulfillment of public expectations for this program and their support for future elective tax programs to fund them.

Description of Plan Area

The area covered under this HCP is limited to the M/S property and specifically the area being impacted by the construction of the trail. The location is given in the Introduction of the Environmental Assessment element. The actual trail project is depicted in Figures 1 and 2.

Description of Proposed Activities

The proposed activities under this HCP are limited to the construction of a recreational trail on the property. Construction of the trail will utilize an existing abandoned railroad bed for a large portion of the total trail alignment (Figure 1). A footbridge will be reconstructed over Coal Creek using existing bridge supports on the site, if possible. If the existing bridge supports are considered to be inadequate, new concrete abutments will be placed within the existing impacted trail surface along the railroad grade bed. This is already accounted for in the calculations of impacted area, and will result in no additional loss of habitat if done. The trailhead at the south end is on an existing impacted upland area currently used as a turn-around at the end of Second Street in Superior.

Most of the trail alignment (2150 ft.) would be on the abandoned railroad bed going through the M/S property, which is elevated a minimum of 6 feet above the floodplain for most of its length. Approximately 1,550 ft. of the trail will be constructed at grade level. The north trailhead and approximately 600 feet of the trail alignment are outside of PMJM habitat, defined by USFWS guidelines to include the 100-year floodplain plus 300 ft. beyond the floodplain. Most of this is still on the old railroad grade, but at ground level and not elevated. The surface of this and the elevated trail sections will be composed of crusher fines.

Determination of Incidental Take

There will be a total of 0.85 acres of temporarily disturbed habitat and 0.67 acres of permanent habitat loss incurred from the trail project on the M/S property (Table 1). The proposed trail and associated facilities will be partially within and partially outside of designated PMJM habitat. The project within PMJM habitat will consist of the following level of take:

- A main trail on an abandoned raised railroad grade, 8 feet wide and 2,150 feet in length (0.4 acres);
- A main trail at ground-level, 8 feet wide and 1,550 feet in length (0.27 acres);
- A bridge crossing over Coal Creek on existing support structures (no impact).
- Temporary take acreage will also result from a 5 ft. buffer area on each side of the trail and surrounding the other infrastructure components that are to be built (0.85 acres).

These figures represent the permanent take acreage (Table 2) and temporary take acreage (Table 3). This temporary take acreage will be re-vegetated, per the mitigation plan, immediately upon the completion of trail construction.

Mitigation Plan

Conservation Measures

Boulder County Parks and Open Space Department (Applicant) is dedicated to the conservation of our natural resources and native wildlife species. A significant portion of County Open Space is allocated solely towards this goal. The majority of acquired riparian habitat is permanently protected from development and further degradation. The Applicant continues to work towards the restoration of riparian habitat that was in a degraded condition when acquired by the County.

The M/S property was originally zoned and approved for residential development. Its subsequent acquisition by the Applicant for public open space has protected these acres from

large-scale development and the inevitable impact to PMJM habitat. The M/S property is strategically located among other public open space properties in the Coal Creek riparian corridor. This enhances the habitat value of this property for PMJM in maintaining contiguous undeveloped riparian habitat beyond this specific property. This property is currently being and will continue to be restored to improve wildlife habitat.

The Applicant has designated this property for agricultural use, wildlife habitat preservation and limited passive recreation. Agricultural use will primarily be limited to grazing outside of the fenced riparian corridor. With the prior approval of the Service, a limited amount of prescriptive grazing for short durations within the fenced corridor may be allowed under prescriptive management plans for noxious weed control. Passive recreation on M/S will include hiking, cycling and equestrian use. No motorized uses or developed recreational activities, such as ballfields, will be allowed.

The riparian habitat corridor along Coal Creek on the M/S property has been fenced to keep livestock out of the riparian zone and restore riparian habitat. The grazing lease has been amended to allow for recovery from overgrazing under previous ownership.

The Applicant has a comprehensive set of regulations in place for recreational use on County Parks and Open Space properties. These include provisions for protecting wildlife both directly and indirectly. Regulations pertaining to habitat protection exist in the Boulder Valley Comprehensive Plan as well as in the Boulder County Comprehensive Plan. Strict guidelines for recreational use exist in the Boulder County Parks and Open Space Department rules and regulations. All recreational activities will be limited to daytime hours and will be limited to hiking, bicycling and equestrian use. Dogs will only be allowed on leash. Recreational fishing on the M/S property will not be an issue. Coal Creek is an intermittent stream and does not support an active sports fishery.

Mitigation Efforts

The Applicant, as mentioned previously, has acquired most of its public properties for the purpose of preventing extensive development on them. A significant portion of this acreage encompasses critical and sensitive wildlife habitat, including riparian habitat. This includes all acreage falling within a designated 100-year floodplain plus 300 feet beyond, below 7600 ft. elevation.

There are about 80 acres of available Preble's habitat on the M/S property. Of these acres, only 0.67 acres, or 0.8 percent, will be permanently affected by this project. The 0.85 acres of temporarily impacted habitat will only be approximately 1 percent of the available habitat. This temporarily impacted habitat will be reclaimed immediately upon the construction of this trail and related infrastructure.

On the M/S property, the riparian zone has been fenced to exclude livestock. It is expected that this riparian habitat will thus improve over time. Noxious weed control is also planned for this property (Figure 2)(Table 3). Controlling noxious weeds such as diffuse knapweed (*Acosta diffusa*) is critical to maintaining grassland and riparian ecosystem health on this property. This will allow the native vegetation to recover on its own without further replanting and habitat

disturbance. Any incidental take associated with weed control activities pursuant to this HCP are covered by the proposed Incidental Take Permit.

All temporarily impacted areas resulting from trail construction will be mitigated on site at a minimum of 1.5:1 ratio by replanting these areas into similar native vegetation to what existed prior to trail construction (Table 2). Primarily, these areas are currently in weedy vegetation and will, instead, be planted back into native grasses. Shrub habitat will be replaced with identical native shrub species. The goal will be to achieve total aerial cover of 60% in the temporarily disturbed areas, of which 75% will be native plants typically found in similar naturally occurring ecosystems -- a mix of blue grama, buffalograss, western wheatgrass, side oats grama, fringed sage -- after a period of three years from seeding following the completion of the trail or until success criteria are achieved.

Additional mitigation activities for temporary take will include weed control at a ratio of 8:1 on M/S property (Table 2). Mitigation activities for permanent take will be in the form of weed control at a ratio of 15:1 and will occur on the M/S property (Table 3).

Previous disturbance of the M/S property has removed much of the native vegetation and noxious weeds have become established. Within the project area, 16.9 acres will be treated for noxious weeds. The Applicant will conduct weed control in accordance with the County's existing Integrated Pest Management Plan (Appendix B). A total of 12.37 acres of weed control is necessary to mitigate the temporary and permanent impacts of the project (see Table 2 and Table 3). The County must successfully remove weeds on at least 12.37 of the 16.9 acres, following the guidelines contained in the Integrated Pest Management Plan.

Weed control primarily consists of herbicide spraying or use of other methods of removal as determined by the existing Integrated Pest Management Plan being used by the Applicant. We will follow the following criteria for meeting these objectives on the M/S property:

- Contain the current noxious weed infestations to the boundaries mapped in the summer of 2002 and prevent the increase in acreage affected by noxious weeds.
- Diffuse knapweed will be the first priority for weed management. Contain and reduce diffuse knapweed cover by 50% within 4 years. Concentrate weed management of diffuse knapweed in heavily infested area, particularly the shortgrass prairie, while improving the vegetative cover of native species.
- Contain and reduce sulfur cinquefoil cover by 50% over 4 years. Concentrate weed management of sulfur cinquefoil on the southeastern portion of the riparian area.
- Contain and eliminate smaller populations of noxious weeds within 4 years, including the Dalmation toadflax and Scotch thistle.
- Reduce chicory infestation in the hayfields and receding wetlands by at least 50% in the next 4 years (note: entire extent of this weed was not mapped in 2002).
- Manage cheatgrass as needed to prevent the cheatgrass from outcompeting native vegetation.

Numerous techniques will be used to achieve these goals. This will include selective herbicide treatment using Tordon, Curtail and Transline, among others, and some use of Roundup for spot

treatment. Physical treatment will include seasonal mowing to remove seedheads and some selective hand pulling for spot treatment. All of these treatments will result in some periodic reduction in vertical plant biomass, but will not result in the total removal of vegetation. Plant cover for PMJM habitat will be retained. These methods do not include tillage of soil to manage for weed control on this property. All of these weed control activities

Maintenance, Monitoring and Reporting

The Service will be responsible for compliance monitoring of this HCP, and applicant is responsible for supplying all necessary information to the Service. The Applicant will be responsible for the restoration and mitigation actions described in this HCP. The Applicant will be responsible for evaluations of vegetation changes and habitat conditions and for submitting an annual report to the Service each year following the completion of the project for three years, or until mitigation success is achieved. This will include photo-documentation (permanently established photo points) and transects of all impacted areas showing recovery status and the status of any mitigation sites. The Applicant will also be willing to work with the Service or CDOW and perhaps other researchers if they wish to investigate PMJM populations or ecology on this property in the future.

Unforeseen or Extraordinary Circumstances

Should changes to the environmental baseline in the case of a natural event, such as a flood or fire, occur on this property, BCPOS will continue mitigation efforts until success criteria have been achieved. This may include measures such as replanting vegetation from initial mitigation efforts lost to flood or fire prior to achieving the determined success level. It could also require other efforts such as importing soil or other prep work to replace resources lost from such natural or unforeseen events prior to achieving mitigation success. Should other unforeseen circumstances occur that prevent us from achieving the accepted success criteria within the time agreed upon, BCPOS will negotiate with the Service to determine alternate mitigation measures.

This HCP only authorizes take for the Preble's meadow jumping mouse. No other federally listed species are known to occur on the M/S property. In the event that other listed species are subsequently found on this property during the term of this HCP, the Service will be contacted and appropriate actions to amend this HCP to comply with the ESA will be taken.

Funding Availability

The Applicant will fund all aspects of this project and mitigation efforts described in this HCP. Most of these activities are considered normal management activities on the public lands managed by the Applicant and are budgeted accordingly. The trail construction on M/S will be partially funded by a GOCO grant, the Town of Superior, and the City of Boulder Open Space and Mountain Parks. Boulder County Youth Corps volunteers and BCPOS staff will do all of the construction and mitigation work. Therefore no other funding should be needed to complete this project and fulfill the HCP requirements. Ongoing funding for mitigation and management will be the responsibility of the Applicant. Project and mitigation funding will primarily come from our Capital Improvement Project budget. These funds have been guaranteed through 2007.

Ongoing maintenance and management funding will primarily come from the Applicant's General Tax Fund.

Additional Measures and Concerns

There are no other additional measures or concerns that need to be considered for this project.

Table 1- Property Acreage and Impacted Habitat From Proposed Recreational Development on the Mayhoffer/Singletree Property

Total acres	171.30
Adjusted total acres ¹	160.40
Riparian acres	21.30
Upland acres	139.10
Preble's habitat ²	80.00
Permanent riparian impact	0.14
Permanent upland impact	<u>0.53</u>
Total Permanent impact	0.67
Temporary riparian impact	0.18
Temporary upland impact	<u>0.67</u>
Total Temporary impact	0.85

Table 2- Mitigation of Temporary Take on Mayhoffer/Singletree

Temporary Impact	Mitigation Project	Acreage	Ratio	Mitigated Acreage
	replant/reseed/restore temporarily disturbed areas to native species	0.67	1.5:1	0.56
	weed control on property	<u>2.32</u>	8:1	<u>.29</u>
0.85		2.99		0.85

Table 3- Mitigation of Permanent Take on Mayhoffer/Singletree

Permanent Impact	Mitigation Project	Acreage	Ratio	Mitigated Acreage
	weed control on property	<u>10.05</u>	15:1	<u>2.32</u>
0.67		10.05		0.67

¹ Excludes non-compatible habitat types (e.g.: surface water, unvegetated areas, cement-lined ditches)

² USFWS designation of 100 year floodplain plus 300 ft. beyond, within property boundaries

³ Consists of on-site reclamation of temporarily disturbed acreage

Figure 1: Mayhoffer/Singletree Proposed Trail

FIGURE 1:
Mayhoffer-Singletree
Proposed Trail



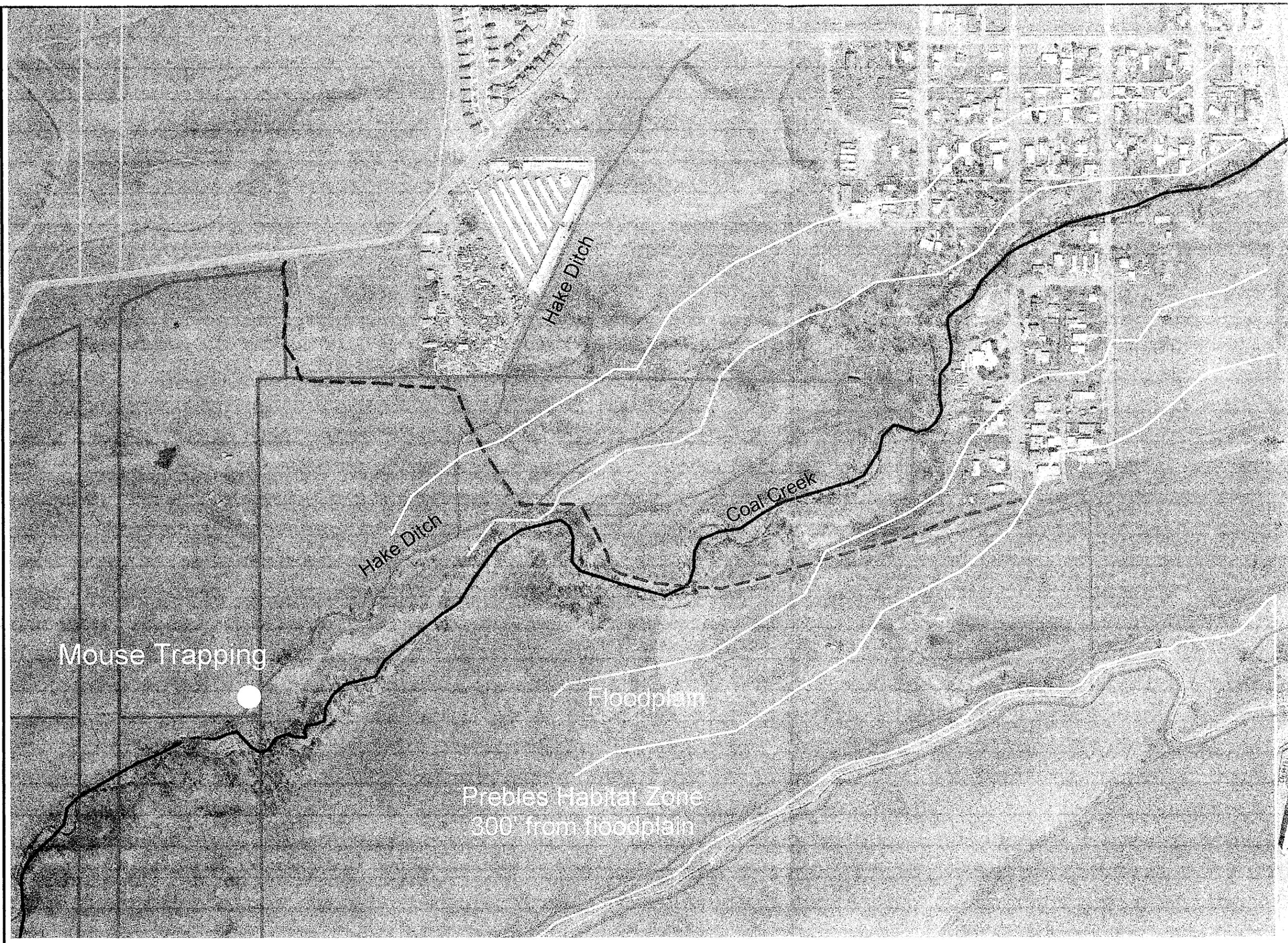
-  Prebles Habitat Zone
-  Floodplain
-  Proposed Trail
-  Irrigation Ditches
-  Streams
-  Major Tributary
-  Intermittent Stream
-  Boulder Open Space
-  Joint City /County
-  County Open Space



0 200 400 Feet

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 County of Boulder, Colorado

DISCLAIMER
 This map is for illustrative purposes only, and is not suitable
 for parcel-specific decision making. The areas depicted here
 are approximate. More site-specific studies may be required
 to draw accurate conclusions.



Mouse Trapping

Hake Ditch

Hake Ditch

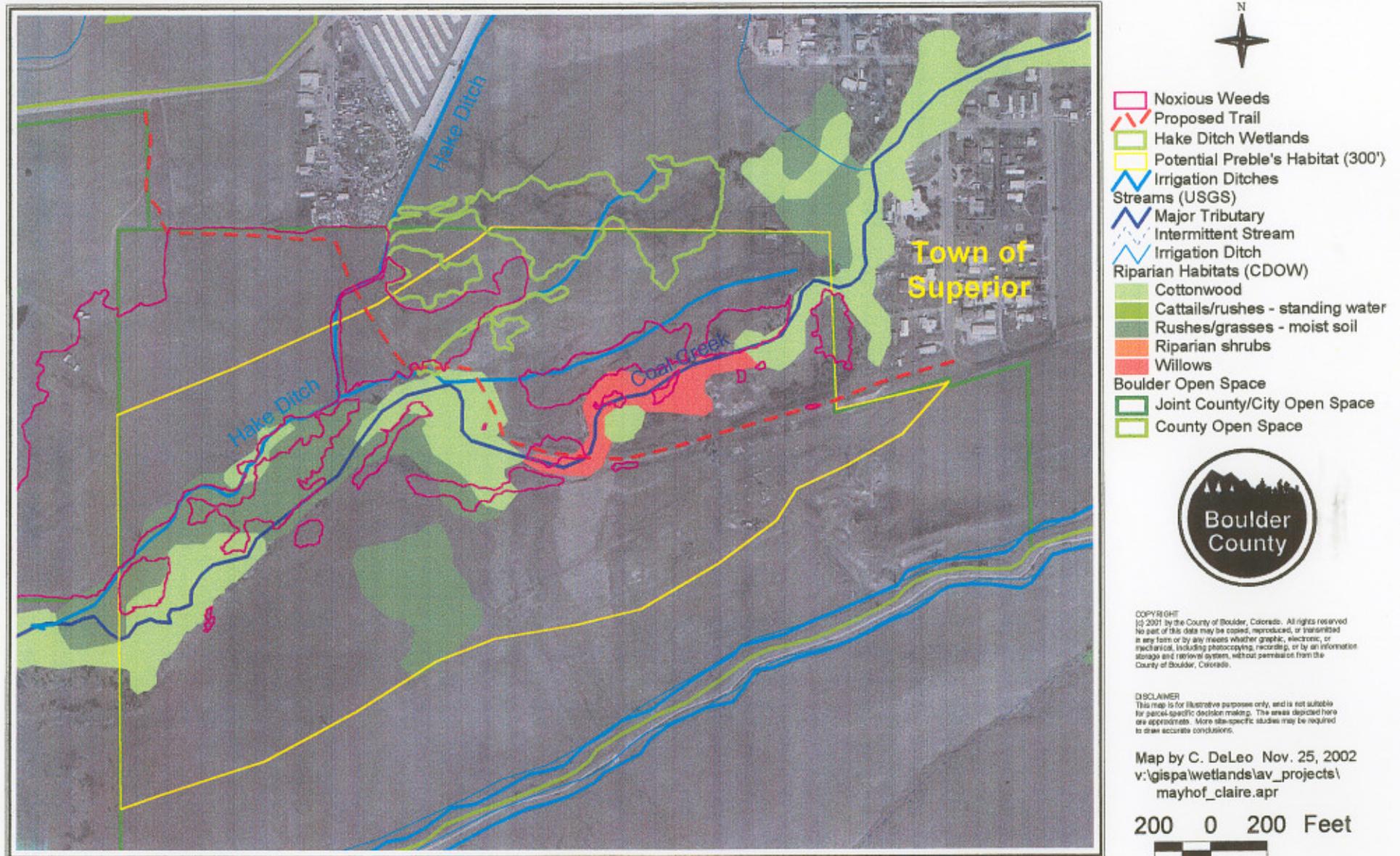
Coal Creek

Floodplain

Prebles Habitat Zone
 300' from floodplain

Figure 2: Mayhoffer/Singletree Vegetation Resources

Figure 2. Mayhoffer/Singletree vegetation resources.



References

- Boulder County Planning Commission. 1999. Boulder county comprehensive plan: goals, policies and maps element.
- Clippinger, N.W. 2002. Biogeography, community ecology and habitat of Preble's meadow jumping mouse (*Zapus hudsonius preblei*) in Colorado. Ph.D. Dissertation. University of Colorado: Boulder.
- U.S. Fish and Wildlife Service. 1996. Habitat conservation planning and incidental take permit processing handbook.
- U.S. Fish and Wildlife Service. 2002. Federal Register Notice: amended special regulations for the Preble's meadow jumping mouse. Vol. 67, No. 190.

Appendices

- Appendix A - Cultural Resource Inventory of the Mayhoffer/Singletree Parcel
- Appendix B- Boulder County Integrated Pest Management Plan
- Appendix C- Conservation Easement of Mayhoffer/Singletree Parcel

Appendix A

Cultural Resource Inventory of the Mayhoffer/Singletree Property

NATIVE CULTURAL SERVICES

CULTURAL RESOURCE INVENTORY OF THE MAYHOFFER/SINGLETREE PARCEL

**BOULDER COUNTY OPEN SPACE
& CITY OF BOULDER OPEN SPACE**

BOULDER COUNTY, COLORADO

By

Peter J. Gleichman

Prepared for:

**Boulder County Parks & Open Space
P.O. Box
Boulder, Colorado 80306**

Submitted by:

**Peter J. Gleichman
Principal Investigator
Native Cultural Services
Ward, Colorado**

September 2002

MANAGEMENT SUMMARY

An intensive cultural resource inventory of the Mayhoffer/Singletree parcel was completed by Native Cultural Services for the Boulder County Parks & Open Space Department. The parcel is jointly owned by the City of Boulder Open Space Department.

The Mayhoffer/Singletree Parcel consists of approximately 169 acres in Section 24, T.1S., R.70W., 6th P.M., in Boulder County Colorado. A 100% or intensive cultural resource inventory was completed.

The purpose of the study was to locate, record, and evaluate the visible historic and prehistoric cultural resources within the inventory area and to provide the Boulder County Parks and Open Space Department with recommendations for the treatment of cultural resources within the area.

Two previously documented historic irrigation ditches traverse the parcel. Site **5BL2711**, a segment of the **Community Ditch**, and **5BL3101**, a segment of the **South Boulder and Coal Creek Ditch**, are considered ineligible to the National or State Registers. The South Boulder and Coal Creek Ditch is formally abandoned. The Community Ditch has been modified and no longer represents a 19th century ditch.

A previously recorded railroad bed also traverses the parcel. Site **5BL3119/5BL400** is the **Denver, Marshall, and Boulder Railroad** and the **Colorado and Southern Railway**. The railroad was operated by the Denver, Marshall & Boulder RR from 1886 to 1899, when it was taken over by the Colorado & Southern. The C & S operated this segment, which became the Industrial Branch, later the Industrial Spur until the Industrial Mine closed in 1945. The Denver and Interurban RR, a subsidiary of the C & S, ran a trolley service on this railway, between Denver and Eldorado Springs, until 1926. The railway is associated with important developments in transportation of coal, agricultural products, and recreation/tourism. Though the tracks and bridges have been removed, the railroad bed is eligible to the National and State Registers. It is also eligible for local Landmarking. The RR bed may be useful as part of a recreational trail.

Site **5BL9032** is the **Industrial Mine**. The Industrial Mine operated from 1895 to 1945, and was one of the largest coal mines in the Northern Coal Field. The town of Superior formed around the Industrial. The site is an extremely important historic archaeological site, containing the remnants of numerous buildings, structures, features, and associated artifacts. It is eligible for the National and State Registers and for local Landmarking, for its ability to provide data important to the study of history, and for

its association with coal mining, the labor movement, Wm. C. Hake and the Town of Superior.

Site **5BL9044** is the **William C. Hake Ditch**, an irrigation ditch dating to 1861. The ditch was dug by William C. Hake, founder and long time mayor of Superior, and is eligible for its association with the development of irrigation agriculture, and its association with Hake.

Isolated find **5BL9045** is a wooden feed trough. It is not eligible.

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**Colorado Office of Archaeology and Historic Preservation
CULTURAL RESOURCE SURVEY MANAGEMENT INFORMATION FORM**

Please complete this form and attach a copy behind the Table of Contents of each standard survey report.

Federal acres of Potential Effect/Project: 0 Acres surveyed: 0
 State acres of Potential Effect/Project: 169 Acres surveyed: 169
 Private acres of Potential Effect/Project: 0 Acres surveyed: 0
 TOTAL: 169 TOTAL: 169

Legal Location of Project *(add additional pages if necessary)*

Principal Meridian: 6 Quad. map name(s) and date(s) Louisville 7.5' 1965/pr1979
 County: Boulder
 Township: 1S Range: 70W Sec.: 24 1/4s SW SE NW
 Township: _____ Range: _____ Sec.: _____ 1/4s _____
 Township: _____ Range: _____ Sec.: _____ 1/4s _____
 Township: _____ Range: _____ Sec.: _____ 1/4s _____
 Township: _____ Range: _____ Sec.: _____ 1/4s _____

	Smithsonian Number	Resource Type				Eligibility				Management Recommendations						
		Prehistoric	Historical	Paleontological	Unknown	Eligible	Not Eligible	Need Data	Contributes to National Register District	No Further Work	Preserve/Avoid	Monitor	Test	Excavate	Archival Research	Other (specify on additional pages)
Sites	5BL2711		X				X			X						
	5BL3101		X				X			X						
	5BL400/ 5BL3119		X			X										rails to trails
	5BL9032		X			X				X			X			dig it someday
	TOTAL		4			2	2			2	1					
Isolated Finds	5BL9045		X				X			X						
	TOTAL		1				1			1						

Principal Investigator Name: Peter J. Gleichman Date 9-20-02

Principal Investigator's Signature *(please print or type)* Peter J. Gleichman

INTRODUCTION

At the request of the Boulder County Parks & Open Space Department, Native Cultural Services conducted a cultural resource survey of the Mayhoffer/Singletree Parcel. The Mayhoffer/Singletree Parcel is jointly owned by Boulder County Parks and Open Space and City of Boulder Open Space. The work was performed in compliance with Open Space guidelines and management policies concerning the protection of cultural resources on Open Space land.

The Mayhoffer/Singletree Parcel consists of approximately 169 acres in Section 24, T1S, R70W, 6th P.M., in Boulder County, Colorado. The study area is depicted in Figure 1, the Louisville 1965 (photorevised 1979) USGS 7.5' quadrangle map.

A 100% or intensive cultural resource inventory of the study area was completed. The purpose of the study was to locate, record, and evaluate the visible historic and prehistoric cultural resources within the inventory area and to provide the Boulder County Parks and Open Space Department with recommendations for the treatment of cultural resources within the area. Cultural resources are the physical manifestations of cultural behavior which are 50 years old or older.

The field survey was conducted between April 5 and 10, 2002. Peter Gleichman served as Principal Investigator. He was assisted in the field by Michael Landem, Hilary Reynolds-Burton, and Jeannette Tanaka. Field notes are on file at the offices of Native Cultural Services. No artifacts were collected during the inventory.

ENVIRONMENT

The study area is located on the Colorado Piedmont subsection of the Great Plains physiographic province (Fenneman 1931). This area is characterized by gently rolling terrain with mesas and ridges, cut by numerous small drainages, ephemeral streams, and creeks.

The Mayhoffer/Singletree Parcel is located adjacent and southwest of the Town of Superior, east of Lake Mesa and south of Davidson Mesa. Coal Creek flows through the area. Coal Creek is a tributary to Boulder Creek, part of the South Platte River system. The study area ranges in elevation from about 5500 to 5610 feet.

Cobble-covered terrace escarpments are present along the west edge of the study area. Soils in the study area are Nunn clay loams, and Valmont clay loams, with Calkins sandy loam along the creek (Moreland and Moreland 1972).

These soils are deep and well-drained, and formed on valley side slopes and terraces in loamy alluvium. The acreage of this soil is used for irrigated crops and pasture, and for dryland crops.

The study area falls within the Plains Grassland ecological zone and includes a Plains Riparian ecosystem along the creek (Mutel 1976). Native vegetation is mainly short and mid grasses. The growing season in eastern Boulder County averages 140-148 days, and is ideal for cultivation of several crops including alfalfa and corn. Portions of the study area have been cultivated in the past.

A large portion of the study area contains the remnants of the Industrial Coal Mine, the mine around which the Town of Superior formed.

PREVIOUS RESEARCH

The known cultural history of the northeastern plains of Colorado, which includes the present study area, has been thoroughly summarized in several previous documents: the prehistory of the region in "Colorado Prehistory - A Context for the Platte River Basin", (Gilmore et al, 1999) and the history in "Colorado Plains Historic Context" (1984a) and "The New Empire of the Rockies" (Mehls 1984b).

A file search of the study area was conducted at the Colorado Office of Archaeology and Historic Preservation (OAHP) on April 1, 2002. In addition, the cultural resource files at Native Cultural Services were examined for information on known historic and prehistoric sites in the vicinity of the study area.

No previous cultural resource studies have taken place in the current study area. A cultural resource inventory of City of Boulder Open Space in the Marshall Mesa - Davidson Mesa area was conducted by Native Cultural Services in 1994 (Simmons et al 1995). This area contains numerous cultural properties associated with coal mining. The report includes an Historic Context for coal mining in the Marshall area.

Three previously documented linear sites traverse the study area. 5BL2711 is the Community Ditch, an active ditch. 5BL3101 is the South Boulder and Coal Creek Ditch, an abandoned ditch. 5BL3119 is the Denver, Marshall & Boulder Railroad, which became the Colorado & Southern RR (5BL400).

Sites which have been documented adjacent to the study area are 5BL4236, the New Gorham Mine; 5BL5659, the Hake homestead; and 5BL5710, the Tollson property.

OBJECTIVES

The primary objective of the present study was to provide the Boulder County Parks and Open Space Department with an inventory of cultural properties in the study area, and to produce management recommendations for the cultural resources. Any cultural resources located would be documented and their significance assessed in terms of eligibility for inclusion on the National Register of Historic Places (NRHP), the State Register of Historic Properties (SRHP), and for local landmarking.

The presence of cultural resources in or near any proposed recreational development may also provide the opportunity for education regarding the history and prehistory of Boulder County, through the use of interpretive signs or trail maps/brochures discussing points of interest of the cultural landscape. In addition, an attempt has been made to further our understanding of the prehistory and history of the area through the development of a set of expectations based on findings during previous investigations in the vicinity.

It was expected that if aboriginal cultural resources were located within the study area, information obtained from these resources would be applicable to a number of research concerns such as regional chronology, settlement patterns, resource utilization, site function, and cultural affiliation. Data concerning historic Euro-American sites could be used to address questions about late 19th and early 20th century agriculture and coal mining in Boulder County.

Archaeological site density in this part of eastern Colorado is variable. Previous cultural resource surveys in the vicinity have identified historic Euro-American resources (generally associated with irrigation agriculture or coal mining) and a few aboriginal sites and isolated artifacts. Aboriginal camps tend to be located near water sources in areas of low slope such as terraces or ridge tops. The proximity of a water source such as Coal Creek, may have attracted prehistoric peoples to the area, especially from the Ceramic Period (A.D. 1-1550) on. It is well known that the Boulder area was occupied by various tribal groups during the 18th and 19th centuries, ending in the mid 1860's. No evidence of aboriginal use of the study area was expected, however, due to the historic coal mining and agricultural use of the area and the proximity of urban development.

Historic Euro-American manifestations were known to occur in the study area, including three irrigation ditches, a railroad bed, and the Industrial Mine, one of the largest coal mines in the Boulder-Weld Coal Field.

METHODS

The project area was inventoried by a crew of three walking a series of adjacent parallel transects at intervals of 20 meters or less.

Evidence of cultural resources was sought in the form of material debris, structural remains, or any other unusual surface anomaly. Isolated Finds were defined as a single cultural feature or fewer than four artifacts in the space of 100 x 100 meters. Sites were minimally defined by the presence of four or more artifacts, two or more features, or the remains of at least one structure. When sites or isolates were located, the appropriate Colorado OAHP site forms were completed, photographs taken and a sketch map drawn of each site. Artifacts were to be described in the field. No testing was conducted, nor were any artifact collections made.

At the time of this study, the State of Colorado Inactive Mine Reclamation Program (CIMRP) was planning to cap the vent shaft at the Industrial Mine. The CIMRP had begun filling out OAHP site forms, including the Management Data Form, and an Historic Architecture Component Form. Native Cultural Services agreed to create detailed maps of the site, and complete a Historic Archaeological Component Form.

RESULTS AND DISCUSSION

The cultural resource inventory documented the Industrial Coal Mine, The W.C. Hake irrigation ditch, and an isolated livestock feed trough. The Colorado & Southern RR and two previously recorded historic irrigation ditches are also in the study area. As expected, no prehistoric or aboriginal material was encountered. The study areas history of association with agriculture and particularly with extractive industry (coal mining) is apparent.

Site 5BL3119/5BL400, the Denver, Marshall, and Boulder Railroad/Colorado and Southern Railway grade. This railroad bed was owned and operated by different railroads. The Denver, Marshall & Boulder Railroad was organized by the Union Pacific in 1885 to take over the Denver Western & Pacific line. The route extended 6.1 miles to a point two miles north of Superior. In 1886 the track was extended from Superior to Marshall and into Boulder. The line from Denver to Boulder went into service August 1, carrying freight and coal. Passenger service began in September 1890.

The Colorado & Southern Railway Co. took control of the line in

1899. The railroad carried coal to the smelter at Argo Junction until 1932, when the section between Marshall and Boulder was closed. The section between Coalton (Coaltown) and Superior became the Industrial Branch and later the Industrial Spur, until the Industrial Mine closed in 1945.

The Denver and Interurban Railroad Company (a subsidiary of the Colorado and Southern) ran a trolley service along this line, connecting Eldorado Springs to Denver and Boulder. This trolley service was discontinued in 1926, and the rails were removed in 1927.

The railroad bed is readily visible in the study area. It runs east-west along the northern edge of the Industrial Mine, then crosses Coal Creek and runs north. There are concrete abutments on either side of Coal Creek, where the railroad crossed. The bridge itself is no longer present. The railway represents an important aspect of early mass-transportation efforts in Boulder County, and is therefore considered field eligible to the National Register of Historic Places (NRHP) or the State Register of Historic Properties (SRHP).

Site **5BL2711** is the **Community Ditch**. This is a large active irrigation ditch recorded by Native Cultural Services in 1989 (Harrison 1989), which is clearly marked on the USGS 7½' quad maps. The ditch originates in Eldorado Springs in a diversion from South Boulder Creek, flowing basically to the east. It was constructed in 1884-1886 and represents a later development of agriculturally related irrigation in southern Boulder County. It has a comparatively late fee appropriation date of 6 June 1885, and due to modifications such as concrete lining, the ditch is no longer considered representative of one built during the nineteenth century. The Community Ditch is considered ineligible for inclusion on the National Register.

Site **5BL3101** is the **South Boulder and Coal Creek Ditch**. This is an inactive ditch recorded by Native Cultural Services in 1990 (Gleichman 1990). This ditch has a date of fee appropriation of 1 June 1872, and a date of decree of 2 June 1882. It was closed down in September 1939 due to damage from the 1938 flood of South Boulder Creek. This ditch was replaced by the Community Ditch (**5BL2711**), which was built in 1885. The South Boulder and Coal Creek Ditch begins just up stream from the Community Ditch in Eldorado Springs at South Boulder Creek. In the study area it parallels the Community Ditch. It is ineligible to the National Register.

Site **5BL9032** is the **Industrial Mine**. The Industrial Mine was one of the largest and most important coal mines in the Northern Coal

Field (aka Boulder/Weld Coal Field). The Industrial employed as many as 200 men. The shaft was 300 feet deep. The following historical summary is abstracted from Smith (1989) and the Biennial and Annual reports of the Inspector of Coal Mines.

In 1860 William Charles Hake and family arrived from Superior, Wisconsin to homestead the Coal Creek Valley. The area became known as Superior in the late 1890s. The flood of 1864 exposed a coal seam on Hake's land. In 1895 Hake signed an agreement with James H. Hood to construct the primary shaft of what became the Industrial Mine. Hood became president of the Industrial Mining Company.

The Industrial operated from 1895-1945. By 1903 Hood had sold the Hake family interest in the mine, and the Northern Coal and Coke Company was the operator. In 1903, 42,033 tons of coal were produced. In 1904 production was 47,639 tons. At that time, 85 men were employed working a seven-foot vein of lignite coal. J.D. Skinner was the general manager and J.C. Williams the division superintendent. The mine was served by the Colorado & Southern RR. A fan erected in 1895 circulated 16,000 cubic feet of air/minute. In 1905 57,025 tons of coal were produced. Production for 1906 was 47,296 tons. In June 1906, a fire started in the boiler house and surface buildings including the tipples burned down. 37 men in the mine were rescued by being hauled to the surface through vent shafts by rope. The mine was closed for repairs through September.

The Industrial operated all year during the labor strike of 1910, producing 91,208 tons of coal. Violence including fighting and gunfire did affect Superior and the Industrial. F.H.L. McCormack was both superintendent at the Industrial and police magistrate. He was replaced as police magistrate of Superior in September, after assaulting strikers. In December 1910, after a night of gunfire, William Hake was asked to vacate the office of Mayor of Superior, and did so.

By 1911 the Northern Coal and Coke Company was absorbed by the Rocky Mountain Fuel Company. Labor strife continued, with an ongoing strike at the Industrial. On November 28, a gunfight began at the Superior train station, between scabs and striking miners. The town's night watchman shot and killed a scab who had started the shooting. Rumors of an attack by scabs and hired guns resulted in 100 armed strikers converging on Superior from Louisville. The situation was defused by the sheriff.

In 1914 89 men were employed, producing 77,234 tons of coal. In 1915 70,111 tons of coal were produced. By 1925 there were 30-35 company houses, a company boarding house, company store, casino/saloon, and school (Figure 2). The mine continued to operate until 1945 when high costs and new safety requirements resulted in closure. Total production was 3,994,741 tons.



The Industrial mine at Superior.—Photo, Lafayette Public Library

FIGURE 2: Historic photo of the Industrial Mine, probably ca 1920s-1930s.

The Industrial Mine currently consists of one partially standing building, remnants of at least 30 structures, at least 25 features, and numerous artifacts (Figures 3-5). The building is the fan house for the vent shaft. Other structures are indicated by concrete and brick foundations, wall segments, and concrete piers. Concentrations of brick and stone rubble and artifacts are present. Historical photos show numerous buildings at the site, including housing for miners. The Industrial Mine is considered eligible to the NRHP and SRHP for its ability to yield information important to history (archaeological potential) and for its association with events and persons.

Site **5BL9044** is the **William C. Hake Ditch**. This ditch, dug in 1861 by William C. Hake, was the second one diverting water from Coal Creek (Dyner 1989). This ditch was granted a fee appropriation on June 1, 1861, and adjudicated on June 2, 1882 for 2.94 cfs (Dyner 1989). A transfer of 0.72 cfs of Autry Eggleston Ditch water was made to the Hake Ditch. The State Engineers Office lists the physical capacity of the ditch at 5 cfs. The diversion for the ditch begins in the SW $\frac{1}{4}$ of Section 24, T1S, R70W. The ditch is approximately 2m deep and 3m wide, and runs NNE through Section 24. The ditch is still active.

The William C. Hake Ditch is considered eligible for the NRHP and SRHP because of its association with the development of irrigation agriculture around Superior, and for its association with William C. Hake, founder and long time mayor of the town of Superior.

Isolated Find **5BL9045** is a wooden trough for feeding livestock. The trough is 110" long by 27" wide, with three compartments. It is built of 1 x 12 milled planks and 2 x 4s, with nuts and bolts and wire nails. One end is plywood, which may be a repair. The trough shows cribbing on the wood, from being chewed by horses.

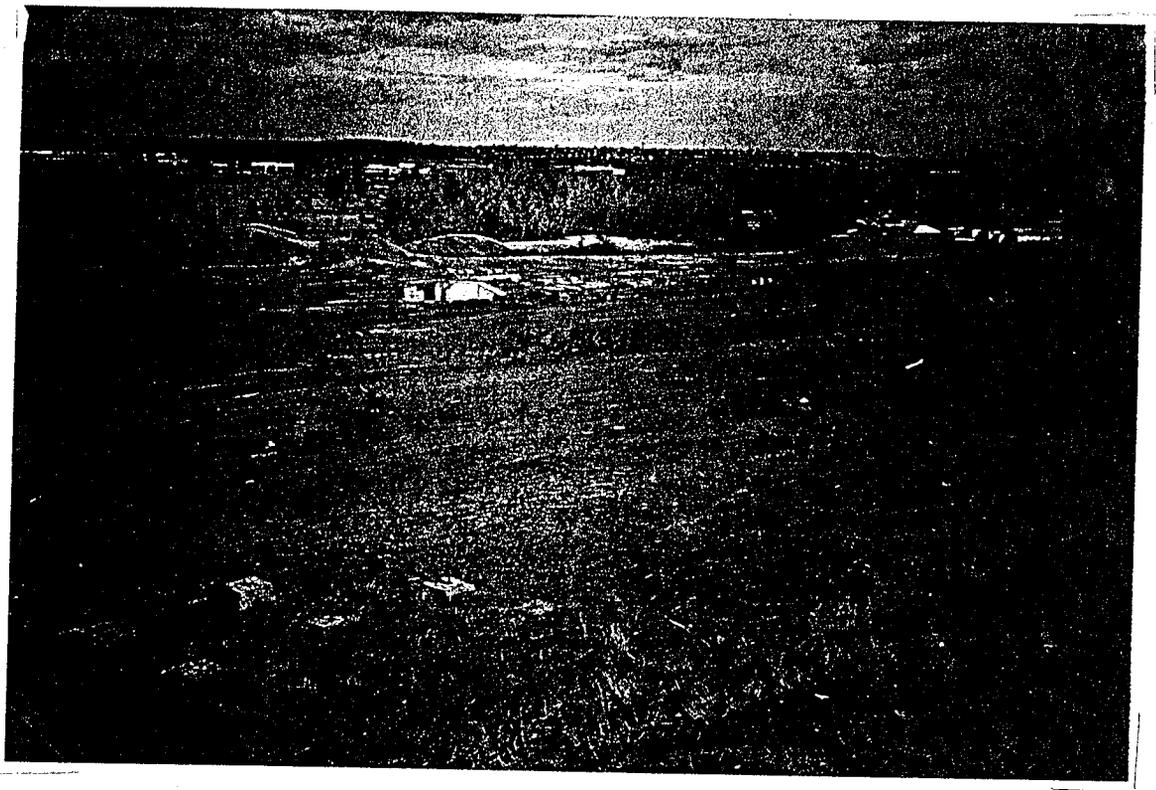


FIGURE 4 - 5BL9032 - View NNE at site of Industrial Mine.

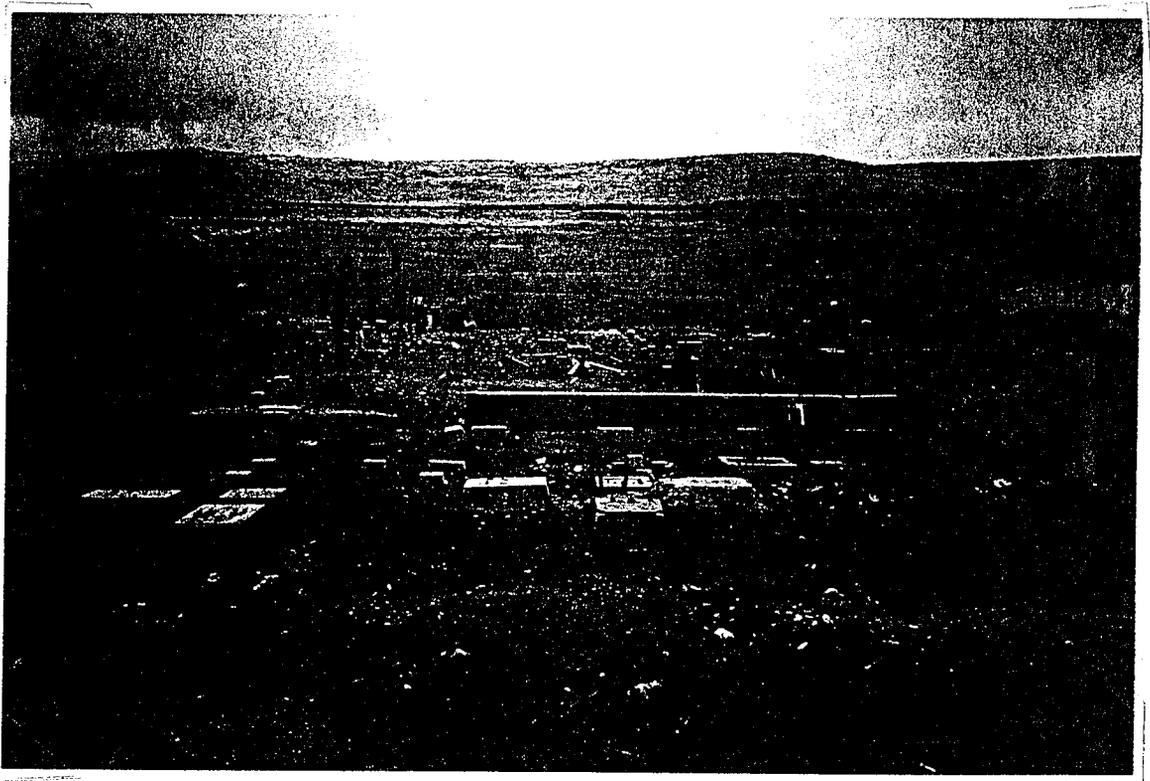


FIGURE 5 - 5BL9032 - View south at site of Industrial Mine

RECOMMENDATIONS

The inventory of the Mayhoffer/Singletree/Singletree Parcel resulted in documentation of the Industrial Mine, the William C. Hake Ditch, and an isolated feed trough. The roadbed for the Colorado & Southern Railroad, aka the Denver, Marshall and Boulder Railroad, crosses the parcel. Two previously recorded irrigation ditches also traverse the parcel.

The Colorado & Southern RR, 5BL400, (the same roadbed as the Denver, Marshall, and Boulder RR, 5BL3119). The railway is associated with important developments in transportation of coal, agricultural products, and recreation/tourism. Though the tracks and bridges have been removed, the railroad bed is eligible to the NRHP and SRHP. It is also eligible for local Landmarking. The RR bed may be useful as part of a recreational trail.

The Community Ditch, 5BL2711, though active, has been altered with improvements, so that it no longer represents a 19th century ditch. The ditch is not eligible for inclusion on the NRHP or SRHP.

The South Boulder and Coal Creek Ditch, 5BL3101, is an abandoned ditch. It is not eligible to the NRHP or SRHP.

The Industrial Mine, 5BL9032, is perhaps the most important historic archaeological site in Boulder County. The site contains the remnants of numerous industrial buildings, domiciles and structures, as well as associated artifacts. Its ability to provide data important to our understanding of the development of coal mining and the associated labor movement is unmatched by other sites in the Northern Coal Field. It is eligible to the NRHP, SRHP, and for local Landmarking for its archaeological potential and its association with coal mining, William C. Hake and the development of Superior. This site should be carefully preserved for future study. If a hiking trail passes near the mine, the opportunity exists for signs or brochures interpreting the history of the mine and the labor movement.

The William C. Hake Ditch, 5BL9044, dates to 1861 and was dug by William C. Hake, the founder of Superior. The ditch is eligible to the NRHP, SRHP, and for local Landmarking for its association with the development of irrigation agriculture around Superior, and for its association with William C. Hake, founder and long time mayor of the town of Superior.

The isolated feed trough, 5BL9045, is ineligible for designation.

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Appendix B

**Boulder County Integrated Pest Management Plan
Weed Management Element**

BOULDER COUNTY

NOXIOUS WEED

MANAGEMENT

PLAN

**Board of County Commissioners
County of Boulder, Colorado
Amended May 4, 1999**

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- B. Current State Rules and Regulations**

21-100 Title, Authority, Jurisdiction & Definitions

1-101 Enactment Authority

- (A) Pursuant to Article 5.5 of Title 35, Colorado Revised Statutes (C.R.S.), the “Colorado Noxious Weed Act”, (**Appendix A**) the Board of County Commissioners of Boulder County adopted a noxious weed (formerly undesirable plant) management plan for the County's unincorporated lands to take effect no later than January 1, 1992. This plan, referred to as the Boulder County Noxious Weed (formerly Undesirable Plant) Management Plan (Plan) or the County Management Plan (CMP), has been subsequently amended to conform with legislative changes in the Colorado Noxious Weed Act. The adoption and implementation of a County-wide noxious weed management plan is another step in accomplishing the goals and objectives of the Boulder County Comprehensive Plan related to preserving and improving the quality of life, and the aesthetic and functional fitness of land uses within the unincorporated County.

1-102 Purpose

- (A) The purpose of the Boulder County Noxious Weed Management Plan is to protect effectively against designated noxious weeds which constitute a present threat to the continued economic and environmental value of lands in the unincorporated County. This Plan implements the mandates of the Colorado Noxious Weed Act, by setting forth practices and criteria which utilize a variety of methods for the integrated management of noxious weeds, such as education, preventive measures, good stewardship, and management techniques. In establishing a coordinated program for the integrated management of noxious weeds, it is the County's intent to encourage and require all appropriate and available management methods, promoting those methods which are the most environmentally benign and which are practical and economically feasible.

1-103 Jurisdiction and Scope of Plan

- (A) This Plan shall apply to all public and private lands within unincorporated Boulder County (“Subject Lands”), with the following exceptions:
- (1) Any municipal service, function, facility, or property, whether owned by or leased to an incorporated municipality; and
 - (2) Any land administered or managed by a federal agency.
- (B) It is the intention of the County to enter into an intergovernmental agreement pursuant to Part 2 of Article 1 of Title 29, C.R.S., or pursuant to Article 20 of Title 29, C.R.S., with

incorporated municipalities in the County; other counties; and state and federal boards, departments, entities and agencies, in order to cooperatively control and manage noxious weeds under the Colorado Noxious Weed Act. The County also may enter into non-binding memoranda of understanding, or undertake other appropriate cooperative efforts, with these governmental entities or agencies.

1-104 Definitions

(A) The following definitions shall apply to the terms used in this Plan:

Act: the Colorado Noxious Weed Act, Article 5.5 of Title 35, C.R.S. as amended.

Adjacent: meeting or touching at some point, or having nothing of the same kind intervening.

Agricultural Extension Agent: the agent in the Colorado State University Cooperative Extension office who provides weed education to the public and assists in the development of individual weed management plans.

Alien Plant: a plant species which is not indigenous to the State of Colorado;

Biological Management: the use of an organism to disrupt the growth of noxious weeds.

Board: the Board of County Commissioners of Boulder County.

CMP: the Boulder County Noxious Weed Management Plan, as further defined under "Management Plan" below.

Chemical Management: the use, as a last resort, of herbicides or plant growth regulators to disrupt the growth of noxious weeds.

County: the County of Boulder (Boulder County).

Cultural Management: those methodologies or management practices conducted to favor the growth of desirable plants over noxious weeds, including but not limited to maintaining an optimum fertility and plant moisture status in the area, planting at

optimum density and spatial arrangement in the area, and planting species and ecotypes most suited to the area.

Escaping Ornamental Plants: exotic horticultural plant species which invade other lands, becoming an ecological or economic nuisance to the present management goals of those lands.

Federal Agency: each agency, bureau, or department of the federal government responsible for administering or managing federal land.

Federal Landowner Manager: the federal agency having jurisdiction over any federal lands affected by the Act.

IMP: an Individual Noxious Weed Management Plan, as further defined under Management Plan below.

Infestation: a spreading or swarming in or over in a troublesome manner.

Integrated Management: the planning and implementation of a coordinated program utilizing a variety of methods for management of noxious weeds, which methods may include but are not limited to education, preventive measures, good stewardship, and the techniques of biological management, cultural management mechanical management and, as a last resort, chemical management.

Land Use Department: the Boulder County Land Use Department, which is authorized to assist the County Weed Coordinator as provided in this Plan.

Landowner: any owner of record of state, municipal, or private land and includes an owner of any easement, Rights-of-way, or estate in the land.

Local Advisory Board: the Board of County Commissioners of Boulder County.

Local Noxious Weed: any plant in the County which has been declared a noxious weed by the Board.

Management: any activity that prevents a plant from establishing, reproducing, or dispersing itself.

Management Plan: a noxious weed management plan developed by any person, or the Board, using integrated management. The "County Management Plan" (CMP or this Plan) shall refer to the County-wide integrated management plan adopted by the Board as required by the Act. An "Individual Management Plan" (IMP) shall refer to an integrated management plan for a specific property or group of properties as required or approved under Section 3-100 or Section 4-100, below.

Management Response: a plan, with schedule, in response to a Notification to Manage. This plan will lay out the approach by the landowner or occupant for eradicating noxious weeds on the owner's or occupant's property.

Mechanical Management: those methodologies or management practices that physically disrupt plant growth, including but not limited to tilling, mowing, burning, flooding, mulching, hand-pulling, grazing and hoeing.

Native Plant: a plant species which is indigenous to the State of Colorado.

Neighboring: any property within a one-half mile radius of the boundary of the subject property.

Noxious Weed: an alien plant or parts of an alien plant that have been designated by rule as being noxious or have been declared a noxious weed by the local advisory board, and meets one or more of the following criteria:

- (a) aggressively invades or is detrimental to economic crops or native plant communities;
- (b) is poisonous to livestock;
- (c) is a carrier of detrimental insects, diseases, or parasites;
- (d) by the direct or indirect effect of the presence of this plant is detrimental to the environmentally sound management of natural or agricultural ecosystems.

Noxious Weed Management: the planning and implementation of an integrated program to manage noxious weed species.

Parks and Open Space Department: the Boulder County Parks and Open Space Department.

Person: or Occupant: an individual, partnership, corporation, association, or federal, state, or local government or agency owning, occupying, or controlling any land, easement, or rights-of-way, including but not limited to any city, county, state, or federally owned and controlled highway, drainage or irrigation ditch, spoil bank, borrow pit, gas and oil pipeline, high voltage electrical transmission line, or rights-of-way for a canal or lateral.

Plant Growth Regulator: a substance used for controlling or modifying plant growth processes without appreciable phytotoxic effect at the dosage applied.

State Noxious Weed: any noxious weed identified by the Commissioner of the Colorado Department of Agriculture by rule after surveying the local advisory boards in the state and prioritizing the top ten weeds, pursuant to a survey which should be conducted every three years.

Subject Lands: all public and private lands within unincorporated Boulder County, with the exceptions:

- (a) of any municipal service, function, facility, or property, whether owned by or leased to an incorporated municipality; and
- (b) any land administered or managed by a federal agency.

Weed: any undesirable plant.

Weed Coordinator: the Weed Coordinator appointed by the Board through the Director of the Parks and Open Space Department; to conduct the duties and functions of weed management under this Plan. Those duties include, but are not limited to:

- Assisting in the development of the Boulder County Noxious Weed Management Plan.
- Implementing the Noxious Weed Management Plan on County-owned properties and rights-of-way.
- Coordinating with the Land Use Department's Zoning Inspector for notification and enforcement of the Noxious Weed Management Plan on other lands in unincorporated Boulder County.
- Assisting the Boulder County Agricultural Extension Agent in public education and in the development of individual weed management plans.
- Coordinating with other governmental agencies as needed.

Zoning Inspector The person(s) appointed or designated by the Land Use Director/Zoning Administrator to enforce the County's Land Use Code and the provisions of this Plan to manage noxious weeds on lands in unincorporated Boulder County which are not owned by the County.

2-100 Designation of Noxious Weeds

2-101 State Noxious Weeds

- (A) The State designates weeds, as they now exist or are updated from time to time under the Act, shall be managed under this plan. In accordance with the Act and the rules duly adopted by the State Commissioner of Agriculture, the state has identified several plant species that are designated as noxious weeds that the counties are to use to identify their local priorities. The current set of Rules is included in Appendix B.

2-102 Local (County) Noxious Weeds

- (A) The following additional plant species are designated as local noxious weeds (noxious weeds of significance in the County) to be managed under the CMP:
 - (1) leafy spurge (*Euphorbia esula*)
 - (2) Russian knapweed (*Acroptilon repens*)
 - (3) spotted knapweed (*Centaurea maculosa*)
 - (4) diffuse knapweed (*Centaurea diffusa*)
 - (5) Mediterranean sage (*Salvia aethiopis*)

- (6) Dalmatian toadflax (*Linaria genistifolia* var. *dalmatica*)
- (7) yellow toadflax (*Linaria vulgaris*)
- (8) purple loosestrife (*Lythrum salicaria*)
- (9) Canada thistle (*Cirsium arvense*)
- (10) musk thistle (*Carduus nutans*)
- (11) scotch thistle (*Onopordum acanthium* and *tauricum*)
- (12) yellow starthistle (*Centaurea solstitialis*)
- (13) Dyer's woad (*Isatis tinctoria*)

- (B) The noxious weeds which must be managed under this Plan are set forth in this Section 2-100 above. The County retains the authority to designate other noxious weeds under the Act and pursuant to this Plan.

3-100 Required Integrated Management Methods and Plans

3-101 Management Standards and Criteria

- (A) The Act requires all persons to use integrated methods to manage noxious weeds since "certain undesirable plants constitute a present threat to the continued economic and environmental value of lands of the state and if present in any area of the state must be managed."
In addition the Act empowers the Board, through the Zoning Inspector and Land Use Department:
 - (1) to inspect Subject Lands for noxious weed infestations;
 - (2) to notify subject landowners and/or occupants of the presence of noxious weeds; and
 - (3) to refer responsible landowners and/or occupants, wherever possible, to the agricultural extension agent to consult regarding the best available integrated management methods.
- (B) Under the Act the Board has the power to inspect for, notify landowners and occupants of, and require integrated management methods for noxious weeds, regardless of the degree of infestation. Even trace amounts of noxious weeds, although not considered to threaten immediate economic loss, have the ability to quickly spread and cause material damage to both the land on which they are found and to neighboring properties.
- (C) Integrated management uses a combination of several weed control tools (See Section 1-104) to suppress the noxious weed species and stimulate the competitive vigor of the desired plant community. No single method should be used in managing noxious weeds; rather, a combination of methods should be used to achieve an integrated management plan which addresses prevention as well as management. In cases where eradication of a noxious weed species is not a practical or economically reasonable goal, containing and reducing infestations to manageable levels should be the objective.
- (D) The Zoning Inspector or designee shall notify the responsible landowner or occupant where noxious weeds are found under this Plan. In exercising this discretion, the Zoning Inspector may refer integrated weed management questions to the Boulder County Agricultural

Extension Agent or the Weed Coordinator. The Zoning Inspector is responsible for notifying and enforcing the provisions of this Plan but is not responsible for creating integrated weed management plans for property owner.

- (E) It shall be the responsibility of the landowner or occupant to consult with the proper Federal or State authorities (U.S. Fish and Wildlife Service or State Division of Wildlife) regarding the existence of any federally listed or designated endangered or threatened species or designated critical habitat under the Federal Endangered Species Act, 16 U.S.C. 1531 et seq. However, if the Weed Coordinator has actual knowledge of the presence of any such protected species or habitat on any property for which a Noxious Weed Management Plan is to be prescribed or approved, the Weed Coordinator shall identify the species or critical habitat in the plan, and specify management methods for the landowner to follow to avoid jeopardizing the continued existence of the species or causing the destruction or adverse modification of its critical habitat.

3-102 Individual Management Plans (IMP's):

- (A) Voluntary IMPs: The Board encourages all owners of Subject Lands to develop and implement Individual Management Plan (IMP's) for their properties and submit such IMPs to the Zoning Inspector or designee for approval pursuant to Standards and Criteria, Section 3-101, above. Once approved such IMPs shall be enforceable as set forth in Section 4-103, below.
- (B) Required IMPs: A landowner or occupant shall be required to submit an IMP to the Zoning Inspector or designee within 30 days after the date on which the Zoning Inspector or designee mails a written notice to the landowner or occupant that either of the following has occurred:
 - (1) If a Notification to Manage under Section 4-102 (A), below, has been sent to the landowner or occupant two years in a three year period, or
 - (2) If the County has had to expend funds to manage noxious weeds under Section 4-102 (G), below.
- (C) If the submitted plan constitutes an acceptable IMP, the Zoning Inspector, with the assistance of the Weed Coordinator or the Agricultural Extension Agent, shall approve and sign the plan. If the submitted plan is unacceptable or contains insufficient information, the landowner or occupant shall have 30 days after the date of mailing, of a written notice from the Zoning Inspector to resubmit an acceptable plan.
- (D) If any landowner or occupant does not submit an acceptable IMP when and as required, the Zoning Inspector, with assistance from the Agricultural Extension Agent or Weed Coordinator, may develop an IMP for the property relying on the criteria set forth in Section 3-101, above. The Zoning Inspector shall mail a copy of any such IMP to the landowner or occupant whom the Zoning Inspector reasonably believes is responsible for or has control of the surface of the property for noxious weed management purposes. The IMP shall become binding for that property beginning on the third day after the date of mailing.

4-100 Inspection and Enforcement

4-101 Right of Entry on Subject Lands

- (A) The Zoning Inspector or designee shall have the right to enter on any Subject Land, during reasonable business hours, for the purpose of inspecting for the existence of noxious weed infestations, provided that at least one of the following circumstances has occurred:
 - (1) the landowner or occupant has requested an inspection;
 - (2) a neighboring landowner or occupant has reported a suspected noxious weed infestation which might affect the subject property and requested an inspection; or
 - (3) the Zoning Inspector, or designee or other authorized agent of the County has made a visual observation from a public rights-of-way or other area accessible to the public and has reason to believe that an infestation exists.

- (B) Except in cases where the landowner or occupant has requested an entry and inspection, the Zoning Inspector or designee shall not enter upon any property until it first notifies the landowner or occupant, by certified mail, return receipt requested, that an inspection has been scheduled and is pending. Any such notice shall specify the property to be inspected, the noxious weeds which are thought to be on the premises, and the scheduled date and time of the inspection. Where possible, inspections shall be scheduled and conducted with the concurrence of the landowner or occupant.

- (C) Any notice sent by certified mail for which receipt is returned to the Zoning Inspector or Land Use Department showing that the notice was received at the Post Office, shall be construed to constitute a consent to the scheduled entry and inspection, if the landowner or occupant or their authorized agent does not contact the Zoning Inspector or designee prior to the scheduled inspection date to deny the Zoning Inspector or designee access to inspect the property.

- (D) Any notice sent by certified mail which is left unclaimed at the Post Office, shall be considered to constitute a denial of access to the Zoning Inspector or designee.

- (E) If after being notified that an inspection is pending, the landowner or occupant denies access to the Zoning Inspector, the Zoning Inspector or designee may seek an inspection warrant from the Boulder County District or County court having jurisdiction over property. The court shall issue an inspection warrant upon presentation by the Zoning Inspector or designee of a sworn affidavit stating:
 - (1) information which gives the Zoning Inspector reasonable cause to believe and that any provision of the CMP or of the Act is being violated;
 - (2) that the landowner or occupant has denied access to the Zoning Inspector;
 - (3) a general description of the location of the property; and
 - (4) the anticipated scope of the inspection.

- (F) No landowner or occupant shall deny access to such property when presented with an inspection warrant. If the landowner or occupant is not present at the time of the inspection as provided in the warrant, the Zoning Inspector or designee may proceed with the inspection, and shall post a copy of the warrant on the property at the time of the inspection.

- (G) An inspection warrant shall not be required to enter upon and inspect any property which is owned by another governmental entity or which is open to the public.
- (H) If the Zoning Inspector or designee determines, based upon information derived from any of the three circumstances listed in Subsection (A), above, that the suspected noxious weed infestation or noxious weed presence on any Subject Land is of such character or magnitude that it constitutes an imminent threat to the health or safety or economic well-being of neighboring properties, and that it is necessary to inspect the property immediately, the Zoning Inspector or designee may do so without first obtaining an inspection warrant. If the Zoning Inspector or designee has actual knowledge that a dangerous condition exists on the property, including but not limited to electric substations, gas compressors, and hazardous chemical storage sites, the Zoning Inspector shall make a reasonable effort to obtain the owner's or occupant's consent before entering upon the property.
- (I) The Zoning Inspector or designee shall conduct inspections as needed.
- (J) Inspection and management of County-owned lands shall be conducted pursuant to Section 5-100, below.

4-102 Management and Enforcement -- Properties Not Owned by the County

- (A) Whenever an inspection shows the presence of noxious weeds on private property, the Zoning Inspector shall determine whether integrated management methods should be required, based upon the standards and criteria set forth in Section 3-101, above. The Zoning Inspector may consult with the Agricultural Extension Agent or Weed Coordinator in making this determination. If the Zoning Inspector determines that integrated management methods should be required, it shall send to the landowner or occupant whom is reasonably believed to have control of the surface for noxious weed management purposes (or to the record fee owner if such landowner or occupant with surface control is not known), by regular U.S. Mail:
 - (1) a written Notification to Manage which advises the landowner or occupant of the presence of noxious weeds;
 - (2) names the noxious weeds (common and scientific);
 - (3) instructs the landowner or occupant to manage the noxious weeds;
 - (4) refers the landowner to consult with the Agricultural Extension Agent for the appropriate integrated management methods pursuant to Section 3-101(C); and
 - (5) informs the landowner or occupant of the options available under Subsection (D), below.

The Notification to Manage also shall specify that if the landowner or occupant does not comply, the Board may authorize the County to undertake the required management and bill the landowner or occupant, without further prior notice, pursuant to Subsection (G) below. Wherever possible, the Zoning Inspector or designee shall consult with the landowner or occupant in determining the appropriate management methods for the property prior to mailing the Notification to Manage.

- (B) Nothing shall require the Zoning Inspector to send a Notification to Manage to all landowners or occupants of a property. Mailing to the landowner or occupant as specified in Subsection (A) above, is sufficient.
- (C) No later than 10 calendar days after receipt of the Notification to Manage, the landowner or occupant shall do one of the following:
- (1) Comply with the terms of the Notification to Manage, or initiate substantial compliance if the time for compliance exceeds 10 days;
 - (2) Acknowledge the terms of the Notification to Manage and submit to the Zoning Inspector an acceptable management response and schedule for completion;
 - (3) Submit a request for an arbitration panel to determine the management response, which panel shall be constituted as required under C.R.S. 35-5.5-109(4)(b). If the landowner or occupant chooses this option, the arbitration request shall state the specific requirements of the Notification with which the landowner or occupant disagrees.
 - (a) If the landowner or occupant chooses to exercise the right to challenge any one of the proposed panel members under C.R.S. 35-5.5-109(4)(b) of the Act, the landowner or occupant shall do so by filing a written challenge with the Zoning Inspector no later than three (3) calendar days after receiving written notice from the Zoning Inspector or designee proposed panel. The landowner or occupant shall be entitled to only one such challenge. The challenge shall specify the member being challenged and the reason for the challenge, and shall provide the names, addresses, and telephone numbers of two (2) proposed panel members to substitute for the challenged member who meet the statutory requirements for that member. The Zoning Inspector or designee shall agree to one of these two proposed members unless the Zoning Inspector or designee believes that neither of the two is sufficiently qualified or objective, and shall mail written notice of the final chosen panel to the landowner or occupant.
 - (b) The Zoning Inspector or designee shall convene the arbitration panel at the soonest possible date after the challenge deadline has passed. The arbitration panel shall render its decision on the required management response no later than one (1) calendar week after the date on which the panel convenes, unless the Zoning Inspector or designee agrees to a longer time. The decision of the arbitration panel shall be final; or
 - (4) Submit a sworn (notarized) statement to the Zoning Inspector or designee stating that the landowner or occupant noticed does not have surface control over the property for noxious weed management purposes; providing the basis for this conclusion and attaching any relevant documentation (such as a deed, lease, easement, or other proof of agreement); and supplying the name and current mailing address of the landowner or occupant who does have surface control over the property for noxious weed management purposes. The Zoning Inspector or designee shall then mail the notice to the latter identified landowner or occupant, as provided above. However, in the event that the latter identified landowner, or occupant disclaims control over the surface, or a dispute arises over the identity of the responsible landowner or occupant for noxious weed management purposes, the

Zoning Inspector or designee shall have the discretion to determine, based on the information available, which landowner or occupant should reasonably be held responsible for noxious weed management under this Section 4-102.

- (D) For purposes of this Section, the date of receipt shall be the third day after the date on which the notification is mailed, excluding Postal holidays.
- (E) Once a final management response is established under Subsection (C), above, the Zoning Inspector or designee shall have the right to perform routine inspections of the property during regular County business hours, upon giving reasonable prior notice to the responsible landowner or occupant, until the level of management specified in the management response is achieved. Once the Zoning Inspector or designee determines that the required level of management has been achieved, the Zoning Inspector or designee shall notify the landowner or occupant of that fact, and that compliance with the management response is no longer required, although it may be encouraged.
- (F) If the responsible landowner or occupant does not comply with the 10-day Notification response deadline, or with any management response established under Subsection (C) above, the Zoning Inspector or designee may request that the Board take action at a regularly scheduled public meeting to authorize the Zoning Inspector or designee or any duly retained independent contractor to enter on the property, and expend County funds to manage the noxious weeds as required in the management response. The Zoning Inspector or designee shall mail or deliver notice of the meeting to the landowner or occupant, in sufficient time to allow receipt of the Notice prior to the meeting date.
 - (1) At the public meeting, the Board in its discretion may:
 - (a) order the responsible landowner or occupant to comply with the management response, or
 - (b) direct the Zoning Inspector or designee or any duly retained independent contractor to carry out the management response at the County's expense, and subject to reimbursement by the landowner or occupant.
 - (2) The Board shall not direct the Zoning Inspector or designee or any duly retained contractor to initiate implementation of the management response unless the Board determines that the County has first applied the same or greater management to any land or rights-of-way which it owns or controls directly adjacent to the property. In addition, in considering whether to authorize implementation of the management response on property adjacent to exempt municipal or federal lands, the Board shall determine whether such response will be beneficial in light of the status of noxious weed management on the exempt lands.
 - (3) If the Board directs the Zoning Inspector or designee to initiate implementation of the management response, the Zoning Inspector or designee shall request the County Finance Director to bill the responsible landowner or occupant for the County's entire incurred costs, including up to 20 percent for inspection and other incidental cost in connection with the implementation. No such request for payment shall be made until the Zoning Inspector or designee determines that the implementation undertaken by the County or its independent contractors has

successfully achieved the level of management called for in the management response.

- (4) If the County bills the responsible landowner or occupant and the bill is not paid in full within 90 days, the Board may certify any unpaid amount to the County Treasurer, by action taken at a regularly scheduled public meeting of which the landowner or occupant need not receive prior notice. Upon such certification, this amount shall be a lien against the lot or tract of land on which noxious weeds are found until paid, and shall have priority over all other liens except general taxes and prior special assessments. Any funds collected pursuant to this section shall be deposited in the County's weed fund or any similar fund.
- (G) If the Zoning Inspector or designee determines that a landowner or occupant has not complied with an IMP approved under Section 3-102, above, the Zoning Inspector or designee shall send a written notice of the violation to the landowner or occupant by regular U.S. Mail. This notice shall specify:
- (1) the nature of the violation;
 - (2) the required measures to correct the violation;
 - (3) a reasonable time period within which corrective measures must be commenced or achieved; and
 - (4) the consequences for failure to comply with the notice.
- If the landowner or occupant does not comply with the notice, the Zoning Inspector or designee may proceed with corrective action by the County pursuant to the procedures set forth in Subsection (F), above.

4-103 Management and Enforcement--State Owned Lands

- (A) It is the duty of each state board, department, or agency which controls or supervises state lands in the unincorporated County to manage noxious weeds on any such lands under its jurisdiction in accordance with the Colorado Noxious Weed Act. In addition, it is the duty of each state board, department, or agency to assure that all public roads, public highways, public rights-of-way, and any easements appurtenant thereto, which are under their jurisdiction in the unincorporated County, are in compliance with the Act and this Plan.
- (B) The Zoning Inspector or designee may send a written Notification to Manage, by regular U.S. Mail, to any such state board, department, or agency:
 - (1) advising of the presence of noxious weeds;
 - (2) naming such weeds; and
 - (3) specifying the best available methods of integrated management which do not conflict with federal law or contractual restrictions included in federal land conveyances to the state.
 - (4) Wherever possible the Weed Coordinator or Land Use Department shall consult with the noticed state board, department, or agency in determining the appropriate methods for the management of noxious weeds on such lands.
- (C) No later than 10 calendar days after receipt of the Notification to Manage, the noticed board, department, or agency shall exercise one of the four options as set forth under Subsection 4-

102(D) of this Plan, above. Once a final management response is established through one of those options or under Section 3-102(B), above, the Zoning Inspector or designee shall have the right to perform routine inspections of the property during regular County business hours, without prior notice to the responsible state board, department, or agency, until the level of control specified in the management response is achieved. Once the Zoning Inspector or designee determines that the required level of management has been achieved, the Zoning Inspector or designee shall notify the responsible state board, department, or agency of that fact, and that compliance with the management response is no longer required, although it may be encouraged.

- (D) If the responsible state board, department, or agency does not comply with the requirements of Subsection 4-103 (C) or with any management response established thereunder, the Zoning Inspector or designee may request that the Board authorize the Zoning Inspector, Weed Coordinator or designee or any duly retained independent contractor to enter upon the affected property and implement the management response at the County's expense. Any such expense incurred shall be a proper charge against the responsible state board, department, or agency. An agreement for payment shall be reached within two weeks after the date an expense is submitted, with respect to the amount of reimbursement to be paid. Such agreement shall be in writing. If no agreement has been reached, and, if the charge is not immediately paid, such charge shall be submitted to the controller who shall treat such amount as an encumbrance on the budget of the responsible state board, department, or agency, or the County may recover such charge in any court with jurisdiction over the property.
- (E) If the Zoning Inspector or designee determines that any responsible state board, department, or agency has not complied with an IMP approved under Section 3-102, above, the process set forth in Section 4-102 (G), above, shall be followed, with any unpaid charges being subject to Subsection 4-103 (C) above.

5-100 County Management Plan (CMP); Goals; Control on County Properties; and County Agency Responsibilities

5-101 County Wide Goals

- (A) Any person may request public information concerning the status of noxious weed management on County owned properties.
- (B) Short Term (1-3 years):
 - (1) Educate landowners and occupants on identification and appropriate integrated weed management methods.
 - (2) Concentrate on early detection and control of noxious weed infestations in the trace to light stages.
 - (3) Contain infestations in the moderate to severe stages and reduce noxious weed population in the trace to light infested areas by 10% on subject lands.
 - (4) Create and maintain a current noxious weed map showing populations of noxious weeds and integrated management methods used to control the weeds.

- (5) Work with municipalities and state and federal agencies and other local governments to develop and coordinate integrated management efforts preferably through the use of intergovernmental agreements.
- (C) Long Term (1-10 years):
- (1) Implement more cultural, mechanical and biological management methods.
 - (2) Reduce the use of herbicides ~~with a goal of eliminating chemical use~~, as weed densities decrease through integrated weed management. As in the case of Parks and Open Space, where thousands of acres are being monitored for new noxious weed infestations, an herbicide application to a very small noxious weed infestation can be the most judicious use of herbicides in that a larger infestation is prevented.
 - (3) Focus educational programs on prevention of new weed infestations, escaping ornamental plants and appropriate integrated weed management.

5-102 Management of County Rights-of-way

- (A) Functions and Responsibilities of County Agencies and Weed Coordinator:
- (1) The noxious weeds along County Rights-of-way will be managed by the Weed Coordinator or designee. Integrated methods of weed management will be utilized as much as possible.
 - (2) The County shall confirm that all public roads, highways, rights-of-way, and any appurtenant easements comply with the Act, with any violations being the financial responsibility of the County.
 - (3) The basic plan would be as follows:
 - (a) Areas where noxious weeds are known not to exist will not be treated with herbicides. Preventative treatments such as mowing and cultural controls will be implemented.
 - (b) Depending upon the size of the infestation along all County rights-of-way, infestations will be spot treated or treated by broadcast application with a herbicide that is selective for the noxious weed species.
 - (c) Right-of-way herbicide applications made by Boulder County west of Highways 36 & 93 or within 200 feet of a county owned trail must be approved by the Boulder County Commissioners prior to the application.
- (B) The mowing of County rights-of-way will begin in late May and finish when all paved roadsides have been mowed. Whenever feasible, mowing activities will target the most vulnerable phenological stage of the noxious weeds' life cycle. This will accomplish the following:
- (1) Stop noxious weeds from propagating-
 - (2) Impose stress on perennial noxious weeds so they may be better impacted by herbicide treatments to follow.
 - (3) Allow more herbicide to contact target noxious weeds.
 - (4) Maintain and reduce infested area.

- (C) By February 1 of each year the Weed Coordinator will order or obtain updated information from the U. S. Department of Interior, Fish and Wildlife Service, affecting the list of Federal endangered, threatened and candidate plant and animal species that have been identified within unincorporated Boulder County. The Weed Coordinator will also contact the Colorado State Division of Wildlife and the Heritage Program for Colorado's list of plant and animal species of special concern. From these lists the Weed Coordinator will map any new locations of these species found along County or State rights-of-way.
- (D) When species from one of the above lists is located in unincorporated Boulder County, a protective area will be established around that population. The size of the protective area will be determined by the listing agency.
- (E) In the event that a herbicide should be necessary to manage noxious weeds within these protected zones, spot treatments will be made using backpack sprayers or "wick" applicators. Herbicides used in these cases should be those that the rare plant species family can tolerate and also be virtually non-toxic to wildlife species when used by labeled instructions.
- (F) Where possible, potential habitat for Federal threatened and endangered and State species' of special concern will be identified and afforded the same precautionary treatment measures as known habitat.

5-103 Management of Parks and Open Space Department Properties

- (A) The Parks and Open Space Department will manage noxious weeds on all County owned lands.
- (B) The Parks and Open Space Department (POS) will continue with ~~their~~ its current Integrated Weed Management Program. In early spring, POS will update their noxious weed maps and evaluate regrowth densities. This inventory will include environmental and physical constraints associated with each population, e.g.: riparian areas and domestic water supplies. Based on this inventory, priorities, control methods, and scheduling will be established for the growing season. POS will continue to monitor the success of its programs and make changes when necessary.
- (C) Because of their extent and aggressive nature, diffuse knapweed, Mediterranean sage, Dalmatian toadflax, Canada thistle, musk thistle and yellow toadflax are the most serious noxious weeds on POS lands. Light to severe concentrations of the species are found on trails, roads, parking lots, meadows, riparian areas, agricultural fields and native grasslands throughout the park system. POS will continue to concentrate management efforts on these species as well as any other noxious weeds so designated by the Board.
- (D) In keeping with the long range goals of Subsection 5-101(B)(1), above, County intends to continue the biological management program with the Colorado Department of Agriculture.

There are established "insectary sites" for a number of biological control insect releases on Parks and Open Space lands as a result of this program.

5-104 County Extension Office

- (A) Will develop and coordinate all educational programs for the general public.
 - (1) Will provide information on biology and management of targeted noxious weeds.
 - (2) Will develop educational materials, displays, slides, etc. for targeted audiences.
 - (3) Will develop and coordinate educational programs in cooperation with municipalities and adjacent counties.
- (B) Will provide input to and assistance regarding development of individual management plans.

5-105 Sheriff's Department

- (A) To the extent crews are available and consistent with current Jail Operational Practices, the Sheriff's Department will provide working crews to Parks & Open Space Department to assist in pulling/cutting weeds in environmentally sensitive areas or where other management methods are impossible or unacceptable.

5-106 Community Services Department

- (A) To the extent available and consistent with Community Corrections Program policies, will provide community service personnel to assist Parks & Open Space Department in pulling/cutting noxious weeds in environmentally sensitive areas or where other management methods are impossible or unacceptable.

5-107 Notification

- (A) The County shall publish in the newspapers of general circulation, an area of rights-of-way and Parks and Open Space lands open to the public that will be treated for the following month. Because herbicide application is weather and terrain dependent, a telephone number will be provided for residents to call each working day for a recorded message regarding more specific details of the days' application. In addition, signs will be placed in the area where chemical application is being conducted.

6-100 Approval, Amendment, and General Administration of County Management Plan

6-101 Local Advisory Board

- (A) The Board shall appoint a Noxious Weed Management Advisory Board which, at the sole option of the Board, may be either the Board, or a board of landowners as specified in C.R.S. 35-5.5-107 of the Act. The Advisory Board shall have the following duties and authorities:

- (1) Develop a recommended plan for the integrated management of noxious weeds, including but not limited to recommended management criteria for noxious weeds within the County.
- (2) Review the CMP at regular intervals which occur not less than once every three years.
- (3) Consider amendments to the Plan and transmit recommendations to the Board for approval.
- (4) Declare noxious weeds and any state noxious weeds designated by rule to be subject to integrated management under the CMP.
- (5) Recommend to the Board that identified landowners be required to submit an individual integrated management plan on their property to manage noxious weeds.
- (6) The State Weed Coordinator shall review any recommendations of a local advisory board appointed pursuant to Article 5 of Title 35, C.R.S., and note any inconsistencies between the recommendations of the State Weed Coordinator or the State Commissioner of Agriculture and any such board.

6-102 Board of County Commissioners

- (A) The Board shall have the following duties and authorities, in addition to those set forth in other Sections of this Plan and the Act:
 - (1) Serve as the Local Advisory Board, if in its sole discretion it appoints itself to fulfill this role.
 - (2) Review and approve, modify, or reject, as appropriate, any proposed amendments to the CMP, at a public hearing of which at least 15 days prior notice shall be given in a newspaper of general circulation in Boulder County, unless the Board determines that a shorter notice period is reasonable based upon the circumstances of the proposed review.
 - (3) Designate noxious weeds to be managed under this Plan following a public hearing of which at least 30 days prior notice shall be given in a newspaper of general circulation in Boulder County.
 - (4) Pursuant to C.R.S. 35-5.5-113, declare any noxious weed, at any stage thereof; any noxious weed carrier; or any premise, plant, or thing infested or exposed to infestation with any noxious weed, as a public nuisance, and take such action, including removal or destruction, with reference to such nuisance as the Board in its discretion determines necessary, in a summary action or otherwise.
 - (5) Provide for the administration of this Plan through the use of agents, delegates, or employees. The Board may hire additional staff or provide for the performance of all or part of the CMP through outside contract. Any agent, delegate, employee, staff, or contractor applying or recommending the use of chemical management methods shall be certified by the State Department of Agriculture for such application or recommendation.
 - (6) Pay the costs associated with the CMP from the noxious weed management fund of the County, which may be the County General Fund.

7-100 Effective Date

6-102 Board of County Commissioners

(A) May 4, 1999

Appendix C
Conservation Easement for the Mayhoffer/Singletree Property

NOTE:

This Permit is conditional on a signed and finalized Conservation Easement being placed upon the subject property, as described in Appendix C of the EA/HCP, within 30 days of Permit Issuance. If the Conservation Easement is not signed within that time frame, the Permit will become temporarily inactive until such time as the Conservation Easement is finalized.

The Final Conservation Easement will be inserted here.