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Resource Management Plan for the Rimrock Open Space

1. INTRODUCTION

1.1 Purpose and Objectives of the Plan

Rimrock Open Space was acquired in two phases. The first phase, comprising 230 acres of Spring Canyon Ranch was acquired in 1998. The second phase, Rimrock Ranch, consists of 207 acres and was acquired in November 2000. Combined, these properties comprise a 437-acre open space that was acquired with the intent to protect the native vegetation, natural rock outcrops, and abundant wildlife populations, while providing outdoor recreational opportunities.

Rimrock Open Space is an important component of Larimer County's Front Range Mountain Backdrop, particularly in the vicinity of two rapidly growing cities. In both the *Front Range Mountain Backdrop Technical Report* (1996) and the *Front Range Mountain Backdrop Phase 2 Final Report* (1998), the hogbacks stretching from the Devil's Backbone to the north end of Horsetooth Reservoir are identified as critical components of the County's Front Range Mountain Backdrop both for aesthetic and ecological values. Protection of the Rimrock Open Space is part of this larger conservation vision. In addition to the 437-acre Rimrock Open Space, a 180-acre conservation easement and a 93-acre restrictive covenant were purchased by Larimer County, and the 839-acre Coyote Ridge Natural Area purchased in partnership between the City of Ft. Collins and Larimer County comprise a 1549-acre conservation site. Coyote Ridge Natural Area is managed by the City of Ft. Collins, and while some management goals are similar, there are also some components of the management that vary.

The purpose of this document is to: 1) examine the management objectives for the Rimrock Open Space given the current ecological, social, economic, and political environment; 2) provide the formal program and policy guidelines that will direct the management and use of the Rimrock Open Space well into the future; and 3) develop specific implementation strategies for carrying out various components of the management effort. The overall objectives of the plan are to:

- Protect, manage, and enhance natural, geologic, cultural, and visual resources including maintaining and promoting healthy ecosystems and their processes;

- Provide and promote safe, enjoyable outdoor recreation opportunities while minimizing detrimental impacts upon natural, geologic, cultural, and visual resources;

- Provide educational opportunities regarding the values of the surrounding natural, geologic, cultural, and visual resources and the importance of responsible use and stewardship of the land;

- Define implementation policies, programs and responsibilities for the above goals as well as provide specific implementation steps where appropriate.

1.2 History

Rimrock Open Space has an interesting and varied history including incursions by native peoples, dryland farming, horse ranching, railroad spurs, and orchards. The general history of this area and the specific history of the Rimrock and Spring Canyon ranches follow:

Numerous lithic, surface artifacts in this area indicate a Pre-historic presence, predominantly of the Plains Woodland period. Historically the Arapaho were the most common Native American residents in these valleys with hunting and raiding incursions by Cheyenne, Lakota, Pawnee, Ute, and Shoshone. Although there are documented Arapaho winter village sites on the edge of the plains one mile to the East, it is unlikely that these ridges and valleys were permanent homes. This hogback area would have provided good hunting for deer and small game, and a source of chokecherries and wild plums. Several springs in the canyons would have provided seasonal water. The establishment of Camp Collins and Ft. Collins had little effect on this specific piece of land, except to provide the security for initiating ranching operations.

Spring Canyon Ranch

Grazing of domestic livestock began on the Spring Canyon and Rimrock ranches in the late 1800's. Growth of Fort Collins in the 1870's prompted the opening of sandstone quarries in this area for building materials. The quantity and quality of stone created the need for a railroad spur line to Ft. Collins through Bellvue, which was completed in 1882. It serviced the large stone quarry still evident on Spring Canyon Ranch. The Town of Stout sprang up in the valley where Horsetooth Reservoir now lays, as the hub for ranching and quarry operations in the foothills. Hundreds of quarry workers, many recent immigrants from Northern Europe, lived there. The ruins of a 40-room hotel, and numerous cabin foundations dot the valleys and hillsides. The quarry wound down shortly after 1900, and the last rails were pulled out of Bellvue in 1918. Quarry and railroad equipment still can be found along the very evident railroad bed extending up into the Spring Canyon Ranch quarry. At the south end of the ranch a stone and frame station, demolished in 1965, served the stagecoach connecting the stone quarry communities along the foothills. A barn, also now gone, was used as a center for community dances and rodeos. Another stone and frame house built in the 1880's still exists on Spring Canyon Ranch, north of the Rimrock Open Space.

Ben Milner, one of the original area residents, said that as he rode through the Spring Canyon Ranch in the early 1900's the grass brushed his stirrups. Cherry and apple orchards were planted in the main valley and dryland grain farming followed until 1965. Bernett "Boots" and Alice Gindler, the current owners, bought the ranch in 1959, and added part of the Butler ranch to it in 1964. Severe erosion from cultivation and previous overgrazing, prompted the Gindler's to put the ranch in the Great Plains Soil Conservation Program in 1964.

Rimrock Ranch

At it's largest, Rimrock Ranch spanned 1400 acres. The early history of the ranch is somewhat fuzzy but the earliest known homesteaders were the Dexter's who built a small stone home near the northern end of the valley. In 1905, the Dexter's daughter sent $500 from Oklahoma to have a house built on the Ranch that she could come home to be married in. The house included two

rooms up and two rooms down. In the 1920's the Ranch was used as a remount horse ranch to provide horses for the army. Some history is missing after the Dexter's ownership, but from approximately 1934-44 A.H. Houser owned the ranch and grew dryland wheat in the southern portion and ran turkeys throughout the ranch. Earthen dams were constructed around the four small ponds on the property in the 1930's as part of a CCC project. The ranch was then sold to Lorne and Maude McKiney in 1949 who ranched the property until 1958 when Lorne was killed in an accident and the ranch sold to the Knisley's. Many of the outbuildings on the ranch were built in the 1950's. Lorne and Vera Knisely planted dryland wheat and alfalfa and tried to farm the southern flat valley portion of the ranch and ran Appaloosa mares and stallions. The Knisley's didn't live in the original ranch house, preferring to live in a small camping trailer with the hopes that one day they would build a house up on a rise just north of the original house. They lived on the ranch, in the camping trailer, for 8 years before selling the ranch in 1964 and moving to Canada (White 2001). (As an aside, in Canada many of the horses froze to death in a harsh winter and the Knisley's decided to move to Jordan. They went by boat with several of their horses and the camping trailer and lived for several years in the Middle East. Some of the horses owned by King Hussein of Jordan are direct descendents of the Knisley's Appaloosa stallions (Knisley 1988)).

Vincent and Elva White purchased approximately 1050 acres of the ranch in 1964. In 1964 Vincent also bought land from W.H. Butler which was split between the White's and Gindler's adding approximately 750 acres to the Rimrock Ranch. Vincent's son Jack and his wife Beth moved on to the ranch in 1971 and in 1980 made an addition on to the original 4-room house. In 1987 the White family split up the ranch between Vincent and Elva and their two sons (Jack and Jerry). Larimer County Open Lands Program purchased 207 acres from Jack and Beth White in November 2000 and a 180-acre conservation easement in January 2001. The intent of this land protection project was to protect the important wildlife habitat, plant communities, and the ridgeline scenic backdrop, as well as to provide non-motorized outdoor recreational opportunities in southern Larimer County.

1.3 Scope and Organization of the Plan

The resource management plan for Rimrock Open Space contains three main sections: 1) a review of existing conditions, including natural, visual, cultural, and socioeconomic resources; 2) a discussion of opportunities, constraints, and planning issues related to management of the open space; and 3) a management plan addressing existing conditions, opportunities, constraints, and planning issues and outlining implementation steps and phasing.

1.4 Public and Agency Involvement

Extensive public and agency involvement will be utilized to ensure full representation of those parties interested in the Rimrock Open Space.

Two public meetings will be conducted to provide for public input. At the first meeting, the management plan process was introduced, existing conditions of the area presented, and the public's visions, issues and concerns regarding the Rimrock Open Space were identified. The second meeting was an open house where copies of the draft management plan were available for public review.

In addition to public workshops, the draft management plan was reviewed by the Open Lands Advisory Board, Open Lands Staff and a technical advisory group (listed below) comprised of various specialists to ensure resource expertise and diverse user group input.

Name	Affiliation	Expertise
Joe Andrews	Larimer County Horseman's Association	Horseback Riding Enthusiast
K-Lynn Cameron	Larimer County Parks and Open Lands	Open Lands Manager/Outdoor Recreation and Planning
Mark Caughlan	Larimer County Parks and Open Lands	N. District Manager
Jerry Craig	Colorado Division of Wildlife	Raptor Specialist
Jim Dunlap	Ft. Collins Cycling and Racing Club	Mountain Biking Enthusiast
Frank Ethridge	Colorado State University	Geologist
Meegan Flenniken	Larimer County Parks and Open Lands	Open Lands Resource Specialist/Project Manager
Charlie Gindler	Larimer County Parks and Open Lands	Open Lands Technician
Maxine Guill	Larimer County Parks and Open Lands	Weed Specialist
Sharlene Haeger	Colorado Division of Wildlife	District Wildlife Manager
Kenneth Jessen	Lifelong member Colorado Railroad Museum and the Colorado Historical Society	Historian
Rodney Ley	CSU Outdoor Adventure Program	Rock Climbing Enthusiast
Paul Opler	National Biological Service/C.S.U.	Entomology/ecology
Renee Rondeau	Colorado Natural Heritage Program	Ecology/Plant Communities
Rachel Steeves	Colorado Mountain Club	Hiking Enthusiast
Mark Sears	City of Ft. Collins Natural Areas	Natural Areas Manager
Bobby Sturgeon	Larimer County Parks and Open Lands	N. District Maintenance
Joel Wykoff	Larimer County Parks and Open Lands	Trails and Weeds

2. EXISTING CONDITIONS

2.1 Overview

Rimrock Open Space comprises 437 acres and is located southwest of the City of Ft. Collins (Figure 1). The property was acquired in two phases. Phase I includes the eastern 230 acres of the property (Spring Canyon Ranch) and phase II includes the western 207 acres (Rimrock Ranch). Rimrock Open Space was purchased by Larimer County for its natural, scenic, geologic, and outdoor recreational values.

2.2 Natural Resources

a. Climate

Rimrock Open Space has a highly variable, semi-arid climate. The climate data used to characterize Rimrock Open Space has been recorded in Ft. Collins which is approximately 200 feet lower in elevation. However, the climate data is reflective of conditions at Rimrock Open Space (Colorado Climate Center 1999).

The average maximum daily temperature (F) is approximately 70 degrees or above from May through September, with the daily average maximum reaching approximately 85 degrees in July and August. High temperatures may exceed 100 degrees, but nights are cooler with an average low during the summer of approximately 54 degrees. Winters are generally cold but are characterized by temperature swings. January is the coldest month with an average daily maximum of 41.5 degrees and minimum of 13.6 degrees.

Average annual precipitation is 14.4 inches, with the highest amount of precipitation occurring in May. Average annual snowfall is approximately 50 inches.

b. Topography/Geology/Soils

The Rimrock Open Space has highly variable topography, ranging from gently sloping rangeland (0-8% slopes) to steep cliffs (>20% slopes) and rocky hogbacks. The property includes a wide valley and three sets of hogback ridges with elevations ranging from 5560 ft. to 5840 ft. The striking rimrock outcrops that give this open space its' name are composed of (from west to east and oldest to youngest) the Ingleside Sandstone (Permian), Lyons Sandstone (Permian) and Lytle Formation (Cretaceous) (Braddock et. al 1970). The Fountain Formation, which outcrops to the west of the Ingleside rimrock extends discontinuously along the Front Range to south of Colorado Springs. It forms the distinctive flatirons at Boulder, the Red Rocks Park west of Denver and some of the spectacular hogbacks at Garden of the Gods in Colorado Springs. At Rimrock Open Space the more resistant Ingleside Sandstone forms the westernmost rimrock.

The westernmost rimrock is mainly underlain by Fountain Formation and colluvium deposited by gravity and sheet wash on the slopes. The valleys between the hogback ridgelines are comprised of (from west to east) Satanka Formations (Permian), Lykins Formation (Permian/Triassic), Entrada Sandstone and Jelm Formation undivided (Triassic), and Morrision Formation (Jurassic). In the southeast corner of the property there is a small area that includes portions of the South Platte Formation (including shales and sandstones) and the Benton Shale (shale and limestone) both from the Cretaceous Period (Braddock et. al 1970).

Based on the *Soil Survey of Larimer County Area, Colorado* by the USDA-SCS (1980), the major soil associations include:

> Haploborolls-Boyle-Ratake: Shallow to deep, nearly level to very steep, well drained to excessively drained mainly loams, sandy loams, gravelly sandy loams or channery loams formed in materials weathered from granite and schist; on mountainsides.
>
> Kirtley-Purner-Haplustolls association: Shallow to deep, nearly level to steep, well drained mainly loams, fine sandy loams and clay loams that formed in materials weathered from sandstone; on uplands and fans.

c. Hydrology

There are several small drainages that converge into Indian Creek, an ephemeral stream, that provides water for livestock as well as riparian habitat that supports wildlife and mesic vegetation (Figure 2).

d. Vegetation

Vegetation types present at Rimrock Open Space include a foothills grassland complex, mountain mahogany (*Cercocarpus montanus)* shrubland and skunkbush (*Rhus trilobata*) shrubland. Vegetation types are shown on Figure 2. See Appendix A, Table 2 for a more comprehensive plant list of species found at Rimrock Open Space.

Mountain Mahogany Shrubland. Mountain mahogany (*Cercocarpus montanus*) occur in portions of the Rimrock Open Space with moderately steep slopes and shallow soils. The dominant grass species that comprise the understory of the mountain mahogany shrublands include New Mexico feathergrass (*Stipa neomexicana*), mountain muhly (*Muhlenbergia montana*) and needle-and-thread (*Stipa comata*). These three grass species when growing in association with mountain mahogany are tracked by the Colorado Natural Heritage Program and are considered to be globally imperiled by the Heritage Network.

While this shrubland community is dominated by mountain mahogany it also includes other shrub species such as skunkbush (*Rhus trilobata*), currant (*Ribes* sp.), and rabbitbush (*Crysothamnus nauseosus*). Several individual ponderosa pine (*Pinus ponderosa*) trees can be found along the slopes of Rimrock Open Space. The herbaceous shrub understory consists of various other grass and forb species including western wheatgrass (*Agropyron smithii*), Indian

ricegrass (*Oryzopsis hymenoides*), broom snakeweed (*Gutierrezia sarothrae*), fringed sage (*Artemisia frigida*), blue grama (*Bouteloua gracilis*), yucca (*Yucca glauca*), prickly-pear cactus (*Opuntia polyacantha*), sun sedge (Carex sp.), nailwort (*Paronychia jamesii*), and side-oats grama (*Bouteloua curtipendula*), among others. Drainages on the property include more mesic species such as wild plum *(Prunus americana),* chokecherry (*Prunus virginiana*), and snowberry (*Symphoricarpos oreophilus).*

Skunkbush Shrubland. The easternmost hogback hillslope at Rimrock Open Space is dominated by skunkbush (*Rhus trilobata*), but also includes other shrub species listed above. The understory is largely the same as that of the mountain mahogany shrubland.

Foothills Grassland Complex. The foothills grassland complex consists of a variety of grass and forb species including needle-and-thread, big bluestem (*Andropogon gerardii*), Canada bluegrass *(Poa compressa),* blue grama, buffalo grass (*Buchloe dactyloides*), New Mexico feathergrass, green needlegrass (*Stipa viridula*), pussytoes (*Antennaria rosea*), sand lily (*Leucocrinum montanum*), Kentucky bluegrass (Poa pratensis), three-awn (*Aristida purpurea*), fringed sage, scurfpea (*Psoralea tenuiflora*), western wheatgrass and globemallow (*Sphaeralcea coccinea*). The grasslands in the eastern valley of the property are in some areas dominated by crested wheatgrass (*Agropyron cristatum*), bromes and kentucky bluegrass as this area was mainly reseeded in the 1960's as part of a soil conservation program.

Some parts of the valleys between the hogback ridges have been converted to agricultural use in the past including hay meadows or pastures.

Rare or Endangered Species

The majority of Rimrock Open Space is contained within a B2, or very highly significant, Colorado Natural Heritage Conservation Site, the Horsetooth Reservoir Hogbacks Site. This Conservation Site contains several globally imperiled significant natural communities, a globally imperiled plant population, and several state imperiled butterflies. The globally and statewide imperiled mountain mahogany/New Mexico feathergrass (*Cercocarpus montanus/Stipa neomexicana*) foothills shrubland (G2G3, S2S3) known only from Colorado and Wyoming, the globally unknown but statewide imperiled (GU, S2) mountain mahogany/mountain muhly shrubland (*Muhlenbergia montana*), the globally imperiled mountain mahogany/ needle-and-thread (*Stipa comata*) shrubland (G2) and a population of Bell's Twinpod (*Physaria bellii)* (G2,S2) found only on shale or sandstone hogbacks of the Front Range from Jefferson County north to the Wyoming border can be found on Rimrock Open Space. This population of Bell's Twinpod is unusual in that it has been observed to occur on red sandstone instead of the more typical Niobrora shale. Adjacent to the property on the protected Spring Canyon Ridgeline Protective Covenants is a ponderosa pine/mountain mahogany/big bluestem foothills woodland.

Exotic Plants and Noxious Weeds. Some exotic plants have become established as a result of historic land use including grazing and natural introductions from surrounding areas. Known exotics at Rimrock Open Space include cheatgrass (*Bromus tectorum*), two bromes (*Bromus japonicus* and *Bromus inermis*), crested wheatgrass (*Agropyron cristatum*), ragweed (*Ambrosia trifida*), field bindweed (*Convolvulus arvensis*), mullein (*Verbascum thapsus),* Canada thistle

(*Cirsium arvense*), and musk thistle (*Carduus nutans*). While all of these exotics are actively monitored and controlled by the Open Lands Program, Canada thistle and musk thistle are regulated by Larimer County. Both thistle species are found near the drainage on the southwestern portion of the property.

e. Wildlife

Rimrock Open Space supports a variety of wildlife including mountain lions, coyotes, mule deer, white-tail deer, black bear, occasional elk, rabbits, skunks, rattlesnakes, prairie dogs, lizards, etc. For a list of common foothills mammals see Appendix A, Table 1. The area is included in a large regional mule deer winter concentration area that extends from Wyoming down into Boulder County. Prairie dogs inhabit an approximately 4-acre portion of the Rimrock Open Space. In the past, prairie dogs in this area were controlled by the former landowner due to ranching and farming practices.

Rimrock Open Space protects over 3 miles of red rock cliffs that are potential nest sites and certain winter foraging locations for hunting and perching raptors including prairie falcons, ferruginous hawks, red-tailed hawks, great-horned owls, bald eagles and golden eagles. The red-rock cliffs are particularly suitable for bats such as the Pale Townsend's big-eared bat, the long-eared myotis, the long-legged myotis, the Western small-footed myotis, and the fringed myotis. Several small drainages on the property provide a rich riparian habitat for a variety of birds and mammals. Some of the bird species found at Rimrock Open Space include canyon wren, cliff swallow, towhee, meadowlark, pigeon, lesser goldfinch, chipping sparrow, oriole, yellow warbler, killdeer, house sparrow, mountain chickadee and other migrant species common to the foothills. There is an active red-tailed hawk nest located in a cottonwood tree in the riparian area of the westernmost valley (Figure 2).

Immediately east of the Rimrock Ranch is a considerable swath of protected land that preserves agricultural, plains, and hogback/foothills open space between the cities of Fort Collins and Loveland. To the north is another large expanse of open space, the Horsetooth Reservoir/Horsetooth Mountain Park/Lory State Park complex. Rimrock Open Space will extend this open space corridor further to the west to the foot of Milner Mountain, enabling east/west mountain to plains movement capability for wildlife, and provide a north/south wildlife movement corridor along the foothills.

Rare or Endangered Wildlife

Rimrock Open Space is located within the Colorado Natural Heritage Program Conservation Site that supports three rare butterfly populations including the Ottoe skipper butterfly (*Hesperia ottoe*) (G3 G4, S2), the mottled duskywing butterfly (*Erynnis maritalis*) (G4,S2 S3), and the dusted skipper butterfly (*Atrytonopsis hianna*) (G4 G5, S2). While none of the butterflies listed have been observed on Rimrock Open Space, the property acts as a buffer to existing habitat as well as provides potential future habitat for colonizing butterflies. This buffering capability is critical in the event that existing habitat or metapopulations of butterflies experience a catastrophic event**.** The primary larval host plants and nectar sources for these butterfly species include: For the Ottoe Skipper little bluestem, big bluestem and side oats grama as larval host

plants and milkweeds, prickly pear, vetch, alfalfa, purple coneflower, sunflower, and wavy-leafed thistle as food sources. Dusted skipper butterflies commonly use little bluestem and big bluestem as hosts and get their nectar from flowers of wild strawberry, blackberry, wild hyacinth and red clover. Mottled duskywing butterflies rely on wild lilacs including Fendler's buckbrush (*Ceanothus fendleri*) and redroot (*Ceanothus herbaceus*) for their host plants and as a nectar source when flowering.

2.3 Visual Resources

This property is adjacent to and provides a viewshed to several existing open space properties including Horsetooth Reservoir and Horsetooth Mountain Park to the north and Coyote Ridge Natural Area to the east. As a part of the Reservoir's visual corridor to the south, the property offers views of the long valley framed by hogback walls and the 3-mile long dramatic red rock cliff. Visually, this area is also important in providing a scenic corridor from County Road 38E, the main access to Horsetooth Reservoir and Horsetooth Mountain Park, as well as foothills towns such as Masonville. The property is viewed by residents of the area as well as the many tourists and recreationists who come annually for the outdoor recreation opportunities as well as the sense of place created by the dramatic geology and natural features.

The unmarred view of imposing red rock cliffs rising against a mottled background of mountain mahogany shrubland is a striking western landscape that is rapidly disappearing as residential development creeps into the Larimer County foothills. The red rock cliffs are a beautiful landform characteristic in their color, texture and geologic form of the foothills hogbacks of this area. As described in the *Larimer County Parks Comprehensive Parks Master Plan* (1993):

> "The Hogbacks, at the edge of the High Plains, are a strong visual feature that punctuates the base of the mountains. They mark the transition from the horizontal plane of the eastern plains to the steep terrain of the Rocky Mountains. The Hogbacks are layers of red and buff-colored sandstone that have been dramatically uplifted, forming impressive cliffs and revealing interesting geologic formations."

2.4 Cultural Resources

There is a rich cultural history in the vicinity and on the Rimrock Open Space (See History section 1.2). From incursions by native peoples to settlement by homesteaders to the influence of quarries and an encroaching community, this area has seen a great deal of change through time. The uninterrupted landscape protected at Rimrock Open Space is a reminder of the past and the historic character of this area.

2.5 Socioeconomic Resources

a. Rimrock Open Space Land Status

Rimrock Open Space was purchased by the Larimer County Open Lands Program, in partnership with the City of Ft. Collins. Larimer County Open Lands Program purchased the Phase I portion of Rimrock Open Space for $565,880, and phase II for $935,100 with a $100,000 contribution from the City of Ft. Collins making the total purchase price for the 437-acre open space $1,600,980.

Easements and Encumberances
There are no known encumbrances on the property. Based upon a title insurance commitment dated May 5, 2000, easements across the property include the following: road right-of-way for adjoining landowners along the existing entrance driveway; electric transmission line easements granted to the United States of America and the Poudre Valley Rural Electric Association (locations unspecified); a road and general utility easement to Jerry Vann White and Geraldine E. White; and a domestic water line easement along the existing Poudre Valley REA easement to Bernard E. Goehring.

Trails
Currently there are no established or designated trails.

Roadways and parking
The phase II portion of Rimrock Open Space has motorized access via an unpaved access road from County Road 38E. This road runs along the west property boundary. While this is a private road (Rim Rock Trail), Larimer County has access rights on this road for purposes of open space maintenance and management. A second roadway enters the phase I portion of the Open Space from the north across Spring Canyon Ranch. While the seller of the property retained ownership of this roadway, Larimer County has been granted a use right-of-way along this roadway in order to provide access for maintenance and ranger vehicles. A road cut crosses Rimrock Open Space from the southwest to northeast remaining from installation of overhead electric lines.

Fences
Existing fencelines include barbed wire fences along the easternmost and southern most boundaries of the property. An electric fence borders the northern boundary of the open space and was installed by Larimer County following purchase of the Phase I portion. Two interior barbed wire fences run along either side of the central valley at the base of both slopes. There are no fences along the westernmost border or at the top of the westernmost rimrock cliff. As part of the negotiations for purchase of the Phase II portion of Rimrock Open Space, a 5-strand, high tensile, solar powered electric fence with three gates along the length of the western boundary was agreed upon.

Water and Mineral Rights
Water rights. There are no water rights associated with Rimrock Open Space.

Mineral rights. The fee simple acquisition of the land includes all mineral rights owned by the seller. Based upon a title policy dated May 5, 2000, there does not appear to be any severed mineral rights other than the standard language of "reservation of right of proprietor of any penetrating vein or lode to extract his ore." Although not reflected in the title commitment, the accessor's office indicates that there are severed mineral rights on the E1/2 of the NE1/4 of Sec. 18, T6N R69W owned by the Hughes Moore Company. This potentially affects approximately 10 acres of the fee simple acquisition property. No further detail is available at this time. Given the terrain and the lack of valuable mineral resources on surrounding properties, however, Larimer County is not concerned about these severed mineral rights.

Environmental hazards. Based upon a visual inspection of the property, there appear to be no environmental hazards associated with Rimrock Open Space. Historically, this property has been used as rangeland for cattle or horses and shows no signs of dumping or other hazardous waste activity.

Agriculture

The previous landowners predominantly used the lands on Rimrock Open Space for grazing cattle and horses. The Natural Resource Conservation Service (NRCS) conducted a site visit to Rimrock Open Space in April 2001 to determine the range condition and capacity. Once the NRCS report is completed, it will be attached to this plan as an addendum.

b. Adjacent Land Use

Surrounding lands are a combination of private property, mainly consisting of low-density rural and residential, and publicly-owned open space (Figure 1). County Road 38E serves as the northern boundary of Rimrock Open Space. Immediately north of CR 38E is the Inlet Knolls subdivision on small lots that border Horsetooth Reservoir and Bureau of Reclamation lands. To the west, the property is bordered by land that has been divided into 35-acre or smaller lots but has not been fully developed. To the south, lies Indian Creek Estates, a former ranch that has been divided into 35-acre lots and is currently being marketed as an exclusive community. To the east, the ranch is bordered by Spring Canyon Ranch and additional protected open space.

Protected Open Space

Coyote Ridge Natural Area, purchased in partnership between Larimer County and the City of Ft. Collins consists of 839 acres of prairie and foothills landscape that protects native plant communities and wildlife habitat while providing outdoor recreational opportunities. A 3-mile trail leads hikers, bicyclists and horseback riders to the top of the hogback that comprises the eastern boundary of Rimrock Open Space.

Rimrock Conservation Easement and First Right of Refusal

A 180-acre conservation easement was purchased in January 2001 from Jack and Beth White on the southwestern portion of the Rimrock Ranch. This conservation easement buffers Rimrock Open Space from potential development in the valley as well as protects the riparian area. Larimer County holds a right-of-first-refusal on the remaining 150 acres of the ranch which

contains the home-site and corrals. The conservation easement component of the Rimrock Ranch Open Space Protection Project will protect the most valuable agricultural areas of the ranch, the hogback valley. This conservation easement, in conjunction with the right-of-first-refusal, will ensure that this section of the hogback valley will continue in agricultural uses rather than converted to 35-acre residential homes.

Spring Canyon Ridgeline Protective Covenants
In addition to owning a significant portion of the land that comprises the rimrock ridge at the north end of the valley, Larimer County Open Lands Program also holds a protective covenant on the top of two of the Spring Canyon ridgelines. From the western edge of each ridgeline there is a 100' setback (Covenant A) and a 100' buffer (Covenant B) to the east, for a total 200' protective covenant. These ridgelines are owned by Boots Gindler and the protective covenants were purchased at the same time the County purchased the original 230 acres (phase I) of Rimrock Open Space. The conservation easement provides protection to a population of Bell's Twinpod (*Physaria bellii*). Specifically, within Covenant A, structures, disturbance of natural features, quarrying, storage, parking, etc. are prohibited. Within Covenant B, structures greater than 20' in height are prohibited and roads and site development should occur in a manner which is least visible and least disturbs the natural features of the property. Prior to any construction or erection of any structure on Covenant B, the owner shall provide plans to the agency holding the covenant. See Figure 2 for protective covenant boundaries.

c. Access, Circulation and Traffic.

County road 38E provides access to the northern end of the Rimrock valley. An unpaved access road can be used for maintenance or management purposes by Larimer County. A second access for management and maintenance purposes is through the Spring Canyon Ranch road. The property can also be accessed by foot, bicycle or on horseback through Coyote Ridge Natural Area to the east, which lies west off of County Road 19 (Taft Hill/Wilson Rd.) in the corridor between Ft. Collins and Loveland.

d. Public Facilities, Utilities and Services

Currently, in its undeveloped state, there are no public facilities or utilities available. Fire protection and public safety services are available however.

Fire protection. Fire protection is ultimately the responsibility of the Larimer County Sheriff's Department. Rimrock Open Space, however, is also served by the Poudre Valley Fire Protection District.

Public safety. The Larimer County Sheriff's Department is responsible for law enforcement at Rimrock Open Space. However, Larimer County Parks and Open Lands staff are responsible for the education and enforcement of open space regulations and assist the Sheriff's Department and other law enforcement agencies in responding to emergencies and preventing criminal activity. The Parks and Open Lands staff also provide visitor assistance and emergency and medical needs. The Poudre Valley Hospital ambulance service responds to more serious medical

emergencies while rescues and searches are conducted by the Larimer County Search and Rescue team of the Sheriff's Department.

e. Recreational Use and Demand

With increasing population along the Front Range, the demand for close, convenient recreational opportunities is also increasing. The current population of Larimer County is approximately 248,987 (2000 census data), with 118,720 living in Fort Collins. With existing foothills, regional, and local parks and open spaces experiencing heavy use, there is a need for additional foothills trails and open spaces. Rimrock Open Space is a key component of protecting an open space and trail corridor along the foothills between Loveland and Fort Collins as identified in the *Larimer County Parks Comprehensive Parks Master Plan* (1993*),* the *Front Range Mountain Backdrop Technical Report* (1998) , and the *Front Range Mountain Backdrop Phase 2 Final Report* (1998).

f. Operations Budget and Funding

The Rimrock Open Space operations and capital improvement projects will be funded through Help Preserve Open Space sales tax dollars. Based on a long-term management cost study conducted in 2000 by the Larimer County Open Lands Program, annual management costs for this area are projected to be $8740 prior to development of a trailhead and trail. Once there is a trail and trailhead developed, annual maintenance costs are projected to be $43,700. Maintenance dollars will cover the cost of rangers and regulation enforcement, weed management, fence repair, trash removal, outdoor education, trail maintenance, and vegetation restoration as needed. It is possible that in the future, with development of a trail and trailhead, there may be a user fee assessed for use of the Rimrock Open Space to help offset maintenance and management costs.

3. OPPORTUNITIES, CONSTRAINTS, AND PLANNING ISSUES

3.1 Overview

During the management plan development process, input will be received from the general public, a voluntary and informal Advisory Task Group, the Open Lands Advisory Board and Parks and Open Lands Staff concerning opportunities, constraints, and planning issues in regards to the current existing conditions and management of Rimrock Open Space **[In Process]**. These issues may be divided into three key components: 1) natural resources, 2) outdoor recreation, and 3) environmental education.

3.2 Natural Resource Opportunities, Constraints, and Planning Issues

- *Protect, manage, and enhance natural, cultural, and visual resources including maintaining and promoting healthy ecosystems and their processes.*

Natural resource opportunities include:

- Protecting a significant portion of the Rimrock valley from impeding development pressure which will preserve the integrity of this important landscape.
- Maintaining the natural communities and habitat which will enable the continued use of the area by wildlife such as raptors, mountain lion, coyote, deer, fox, etc.

Constraints and planning issues associated with the natural resources of the property include the following:

- Rattlesnake habitat may be disturbed and conversely rattlesnake/visitor interactions may be a safety concern.
- Open space users may disturb wildlife, in particular mule deer and raptors.
- Rocks may be damaged or eroded by rock climbing.
- Rock climbing may disturb raptors and other bird species on the rock cliff
- Large numbers of visitors may have the effect of introducing additional exotic weed species.
- Prairie dog populations on the property will need to managed to avoid conflicts with adjacent property owners.
- Off-trail use may cause soil erosion.
- Additional fencing in the area may prove detrimental to raptors and other wildlife utilizing the area (i.e. mule deer adults and young to cross).
- Dogs off leash may disturb wildlife.
- Imperiled butterfly populations might be impacted by loss of larval host plants and/or nectar sources.

3.3 Outdoor Recreation Opportunities, Constraints, and Planning Issues

- *Provide, promote and enhance safe, enjoyable outdoor recreation opportunities while minimizing detrimental impacts upon natural, cultural, and visual resources.*

Outdoor recreation opportunities include:

- Constructing a trail to provide outdoor recreation, environmental education, and wildlife viewing opportunities along this hogback formation.
- Initiating the northern link of a *proposed* north-south trail corridor linking Horsetooth Reservoir to Coyote Ridge Natural Area and eventually to the Devil's Backbone to provide an extended recreational corridor.
- Providing additional recreational opportunities near communities in Larimer County to meet an increasing public demand for such amenities.
- Providing the opportunity for visitors to see a unique landscape and experience a foothills hogback environment.

Constraints and planning issues regarding outdoor recreation include the following:

- Multiple use of the trail may result in user conflicts.
- A trail design addressing user needs and interests may conflict with a trail design protecting sensitive wildlife.
- Social trails created by users traveling off-trail and multiple access trails could be destructive to the natural resource values of the site.
- Use of the area by large groups (e.g., commercial horseback riding trips, commercial tours, etc.) may overwhelm the capacity of the area.
- On-going financing of maintenance and patrol expenses may require a user fee at some time in the future.
- People using "nature's restroom" may damage the natural environment and create a public health issue.
- Dogs off leash may impact other user's experiences.
- Animal waste can be a health issue or a menace if left on the trail.
- Excess trails and trail links may highly fragment a relative small area.
- Trespassing may occur onto adjacent private property.
- A permanent trailhead and trail access needs to be identified and acquired north of the property.
- Interior fences and oversignage may be a hazard or a visual eyesore.
- Overflow parking on County Road 38E may cause traffic difficulties, safety issues and concerns with neighbors.
- Noise and voices echoing off the rock may disturb adjacent landowners.
- Use of the trail after dark may be a safety and noise issue to adjacent landowners.
- Dogs are currently not allowed at Coyote Ridge Natural Area.
- Hunting may be an important tool to help control disease and numbers of elk and deer on the property.
- Hunting or shooting on the site may disturb sensitive wildlife and be a safety issue for adjacent landowners and the public.

3.4 Environmental Education Opportunities, Constraints and Planning Issues

- *Provide and enhance educational opportunities regarding the area's natural and cultural history and visual resources and the importance of responsible land use and stewardship.*

Environmental education opportunities include:

- Providing information regarding raptor and wildlife habitat sensitivities and needs in order to minimize negative user/wildlife interactions.
- Developing a historic map and educational program that would tie into educational programs already in place at Coyote Ridge Natural Area and the Devil's Backbone.
- Creating and implementing a volunteer ranger program.
- Engaging volunteer assistance with trail building.

Constraints and planning issues regarding environmental education are:

- Over-signage of the trailhead and trail may reduce the natural character of the site and create eyesores.

4. MANAGEMENT PLAN

4.1 Overview

To meet the purpose and objectives of the Rimrock Open Space Management Plan and to address the opportunities, constraints and planning issues brought forth by the public and staff, the plan is divided into four main components: 1) natural resource management; 2) outdoor recreation management; 3) education opportunities; and 4) cultural resource management. These four components, while addressed separately, are interrelated and will likely impact and influence each other. In addition, the plan briefly addresses the potential for future land acquisition adjacent to Rimrock Open Space. Finally, a summary of implementation steps and recommended timing is presented, followed by a set of regulations for the Rimrock Open Space.

Overall Vision.
The protection of Rimrock Open Space has been part of an 8-year planning effort. Larimer County's 1993 Master Plan identified land protection and a regional trail along the foothills between the Devil's Backbone and Horsetooth Reservoir. Based on this long standing citizen planning effort, the Board of County Commissioners, Parks and Open Lands Department and the Open Lands Advisory Board identified Rimrock Open Space as a property that fits this vision.

Rimrock Open Space, located south of County Road 38E and Horsetooth Reservoir, was acquired in two phases. The first phase, comprising 230 acres of Spring Canyon Ranch was acquired in 1998. The second phase, Rimrock Ranch, consists of 207 acres and was acquired in November 2000. Combined, these properties comprise the 437-acre Rimrock Open Space. Surrounding Rimrock Open Space are a 180-acre conservation easement and a 93-acre restrictive covenant purchased by Larimer County, and the 839-acre Coyote Ridge Natural Area purchased in partnership between the City of Ft. Collins and Larimer County. These properties connect to form a 1,549-acre foothills conservation site.

As a natural area and a buffer to existing open space, Rimrock Ranch has outstanding ecological value. First, it contains several significant natural communities and a rare and imperiled plant population, and is included in a very highly significant (B2) Colorado Natural Heritage Program Conservation Site. Second, the property contains over 3 miles of striking red-rock cliffs that serve as premier nesting and perching sites for raptors, including golden eagles. Third, the property adds to existing open space that stretches from the foothills hogbacks to the open wheat fields between Fort Collins and Loveland.

The Larimer County Parks and Open Lands vision for Rimrock Open Space is to protect the native vegetation, natural rock outcrops, and native wildlife, while providing outdoor recreational opportunities and connection of a multi-use regional trail to Coyote Ridge Natural Area. The proposed trail design would focus on minimizing impacts to sensitive wildlife and rare plant communities while enabling visitors to enjoy this magnificent area. Recreation opportunities

would include hiking, running, mountain biking, horseback riding, and wildlife viewing on a natural surface trail.

Visitors and the local community passing along CR 38E can enjoy the protected view of the unusual and striking beauty of the hogbacks and the natural surroundings. Educational opportunities will allow visitors to learn about the native flora, abundant fauna, remarkable geology and colorful history of the area. Additionally, visitors could learn how to protect this valuable natural resource area and actively participate in such programs as volunteer rangers, nature hike leaders, trail maintenance and construction.

4.2 Natural Resources Management

Natural resources management addresses the health and dynamics of the plant and animal communities and the preservation of natural and geologic features and scenic vistas of the Rimrock Open Space. For purposes of this plan, natural resources management is grouped into three categories: a) grassland and shrubland health and management; b) wildlife management; and c) hydrology and erosion management.

a. Grassland and shrubland health and management.

The management of vegetation health is important for ensuring sustainability of the landscape. Since plant communities are dynamic and changes in vegetation composition occur over time, vegetation at Rimrock Open Space will be managed to allow for natural plant community changes to take place. Therefore, this plan outlines basic guidelines and alternatives for managing the natural communities at Rimrock Open Space.

This section on vegetation health and management identifies practical management alternatives and strategies for maintaining the native plant communities and system functions and reducing the impact of non-native species at the Rimrock Open Space. Sustainability of native plant communities is highly dependent on natural processes that have established these communities. Therefore, potential management tools include the use of grazing or prescribed burning in these communities to maintain community health. Proper management depends on grazing and burning plans remaining flexible and changes made based on current conditions rather than pre-determined programs. Pre-determined programs do not account for changes in conditions such as drought, fire, etc. This plan will also address issues related to rare species on the site, sensitive wildlife, non-native plant species, and other features. The management of non-native plant species is closely intertwined with maintaining native plant health and will be addressed in depth in the Integrated Pest Management Plan for the Larimer County Open Lands Program (Larimer County 1999). Additionally, visitor education for protecting and managing vegetation communities will be an important component to long-term sustainability of ecosystem health.

1. Stewardship History

Rimrock Open Space was used for cattle and horse grazing over the past 100 years. Currently, populations of grazing mule deer frequent the property. While the specific fire

history is unknown at this site, in general, fires were frequent components in the natural disturbance regimen of most grasslands.

2. Goal

To preserve and maintain native plant communities, protect rare species, and restore native vegetation in suitable areas.

3. Objectives and Implementation Steps

3.1 *Objective*: Evaluate baseline conditions and future potential impacts and effectiveness of land management techniques.

Implementation Steps:

- Inventory and monitor native vegetation.

3.2 *Objective:* Preserve and maintain native plant health using or simulating natural processes when necessary and where possible.

Both grazing and prescribed fire are management alternatives that may be carried out singularly or in combination. Timing, weather conditions, the political climate, and logistics will determine the feasibility of implementing these alternatives. Limitations do exist to both grazing and prescribed burning. In particular, grazing and fire management techniques should minimize impacts to imperiled or rare plants, plant communities and butterfly habitat at Rimrock Open Space.

POTENTIAL MANAGEMENT TECHNIQUES

Grazing Management

Purpose: To promote vegetative health and vigor (i.e. control of non-native species, increase vegetation yields, improve wildlife habitat, increase forage availability) and reduce fire danger.

Large ungulates and other herbivores were once present at the Rimrock Open Space. Currently, mule deer and prairie dogs are present on the property and grazing plans should take into account that enough forage be left to support these species on the property. Plant communities have evolved with and adapted to grazing, and proper grazing management of domestic livestock may be used to mimic native herbivores. This property lies in the NRCS determined loamy, shallow and rocky foothill range sites. The presence of mountain mahogany, junegrass, big bluestem, little bluestem, Griffith wheatgrass, western wheatgrass, blue grama, needle-and-thread, and side-oats grama as dominant species in these two range sites at Rimrock Open Space is considered an indication of good vegetation condition (USDA-SCS 1980). At the time of this plan, Griffith wheatgrass was not identified on-site. Limitations to grazing might include: water availability, rare species, public sentiment, leasee availability, and fencing.

Rotationally graze management areas at a moderate stocking rate

during the spring (warm season) or fall (cool season). Grazing during the cool season would be effective in reducing non-native, cool-season species (bromes) but may impact native cool-season grasses and therefore shouldn't be done exclusively (Table 3). Grazing can also reduce fuel build-up in the grassland and shrublands and thereby reduce fire risks.

For the purposes of grazing management, the following ratios will be used (Heady and Child 1994) unless otherwise recommended by the NRCS.
1 cow and calf pair = 1 AU (animal unit)
1 replacement heifer = .6 AU
1 horse or bull = 1.25 AU

Implementation Steps:

- Develop a specific grazing plan as needed in cooperation with NRCS.
- Arrange for a lease contract to graze animals on the property.
- Work with leasee on issues such as fencing, salting, water, visitor management, access and wildlife (i.e. rattlesnakes, prairie dogs, etc.).

Prescribed Fire
Purpose: To promote vegetative health and vigor and to reduce the danger of catastrophic fire from natural ignition due to fuel build-up.

In general, fires were frequent components in the natural disturbance regimen of most grasslands. Fire can be used to stimulate browse, create openings in dense, inaccessible plant communities, as well as increase nutrient content of forage for wildlife and livestock.

Small-scale patches (40-60 acres) should be burned if needed on a rotational schedule between management areas and based on intensity of management need. Patches should be burned at a ground level, moderate to high intensity fire every 5-10 years (Wright and Bailey 1980). A specific burn plan will be developed if needed in conjunction with Larimer County Emergency Services Department and will take into account plant and wildlife adaptations to fire. Limitations to prescribed burning might include water availability, community education, budget, rare species, public sentiment, political climate, air quality, and weather.

Implementation Steps:

- Develop a burn plan as needed in cooperation with the Larimer County Emergency Services Department.

3.3 Objective: Protect rare species and communities of special concern.

While herbicides are necessary for some noxious weed control, biological controls, hand pulling, and mowing should be used in areas near water and rare species communities.

Implementation Steps:

- Educate visitors on the sensitivity of rare or imperiled plant communities and the Bell's twinpod and their importance by incorporating information into interpretive materials.
- Educate Parks and Open Lands staff as to the sensitivity and importance of Bell's twinpod, and other rare or imperiled plant and animal species.
- Regularly monitor rare and imperiled plant and animal species through volunteer and staff efforts.
- Revegetate old roads and disturbed areas on the property using native grass seed mix.

3.4 Objective: Encourage agency and public awareness of native plant ecology using educational materials and programs and by including staff and volunteers in grassland and shrubland management activities.

Implementation Steps:

- When conducting large vegetation management and/or revegetation/restoration projects, incorporate efforts as part of interpretive talks, printed materials, etc. information on foothills ecosystems and the importance of restoration.

Monitoring

Purpose: Stewardship monitoring will be implemented to insure that management objectives are being met.

The vegetation health at Rimrock Open Space should be reassessed to determine changes in plant species and community health. Monitoring will be performed by Parks and Open Lands Staff and volunteers. Photo monitoring points will be established summer of 2002. Photos will be taken each year in Spring (preferably June). Photos will also be taken following implementation of a management practice (i.e. grazing, prescribed burn, etc.). Other simple but effective monitoring protocols (i.e. line or step-point vegetative transects) may also be utilized.

Photo monitoring points will also be established for trails and fences. These features should be photographed every 5 years to help assess their condition.

b. Wildlife management.

There are several important wildlife species, including nesting and hunting raptors currently present at Rimrock Open Space. Additionally, the property is part of a mule deer winter concentration area. Consequently, the trail at the Rimrock Open Space will be carefully located to minimize impacting nesting raptors and other wildlife species. It is possible, however, that the trail alignment will not be sufficient to prevent disturbance to nesting birds and seasonal closures may be necessary. It is imperative that the behavior and presence of nesting raptors be closely monitored commencing opening of Rimrock Open Space to public access to determine if negative impacts are occurring and if seasonal closures are necessary. On-going monitoring of wildlife and user behavior will determine the appropriateness of additional wildlife protection measures. In addition, to help control disease of and prevent user conflicts with elk, deer or other wildlife on the property, Larimer County reserves the capability to allow game management through hunting on a limited basis in conjunction with the Division of Wildlife.

Implementation steps:

- Engage staff or volunteer groups such as wildlife biology or management students, etc. to inventory and regularly monitor the locations and behavior of wildlife species, specifically including prairie dog colonies.
- Work with the Division of Wildlife to enhance wildlife habitat as needed.
- Install barriers or other appropriate controls to prevent prairie dogs from inhabiting adjacent private property.

c. Hydrology and erosion management.

There are no springs, streams or standing water on the Rimrock Open Space. A gully has developed from north to south across the eastern edge of the valley and monitoring this gully will be important for determining management actions. Several intermittent drainages do exist on the property and support mesic vegetation.

Soil erosion is a major threat to land productivity and subsequently may impact wildlife values and water quality. A combination of the soils and geology of the Rimrock Open Space make the site susceptible to high runoff during precipitation events with potential soil erosion and gully formation. The site will be managed for grassland and shrubland health (maintenance of adequate vegetative cover), a factor of utmost importance for erosion prevention. Erosion of the rock formations is of concern as well for reasons of aesthetics and maintaining the geologic integrity of the site.

To minimize the potential for erosion, the proposed trail at Rimrock Open Space will be located to follow the land's natural topographic contours. The trail will be monitored regularly in order to immediately detect any significant sign of soil erosion. In addition, trail users will be encouraged to remain on designated trails to prevent the development of social trails and, thus, subsequent erosion and gullying. In addition to minimizing disruption to nesting and perching

raptors, rock climbing will not be allowed at Rimrock Open Space to also minimize erosion of the rock faces.

Implementation steps:

- Fill and revegetate the gully that runs north to south through the phase I property. Use stone or other natural materials if possible to help control the gully erosion.
- Work with the landowner upstream of the gully to help minimize future erosion occurring.
- Monitor trail condition on a regular basis to check for erosion and trail deterioration.
- Encourage users to remain on designated trails.
- Educate users on reasons for no rock climbing regulations and of other nearby climbing access locations (i.e. Horsetooth Reservoir).
- Use Parks and Open Lands Department and volunteer rangers to monitor and encourage proper trail use.

4.3 Outdoor Recreation Management

Recreation management generally refers to the management of people and outdoor recreational facilities. For purposes of this plan, recreation management is grouped into three categories: a) multiple use and user interaction, b) trail maintenance and construction and c) parking facilities maintenance.

a. Multiple use and user interaction.

The trail at Rimrock Open Space will be natural surface and open to such recreational uses as hiking, mountain biking, horseback riding, running and wildlife viewing. This non-motorized outdoor recreation is appropriate given the length of the trail and the sensitive nature of the wildlife habitat and plant communities. Rimrock Open Space will only be open for day use from dawn to dusk, with the exception of ranger-led hikes or supervised environmental programs in the evening. The emphasis of public use at Rimrock Open Space will be on environmental education and low-impact recreation. Due to the presence of the local, native wildlife and to reduce erosion, the public will be required to stay on trails. Visitor courtesy and trail etiquette should be promoted through education programs and by staff and volunteer rangers.

Dogs will not be allowed at Rimrock Open Space, primarily because dogs are not allowed at Coyote Ridge Natural Area, directly connecting to the Rimrock Open Space trail.

Implementation steps:

- Promote trail and multi-use etiquette through clearly marked information signage and/or brochures.
- Incorporate into volunteer ranger program that emphasizes user education and outreach.

- Provide signs indicating no dogs allowed.
- Explore possibility of a "ranger hotline" to allow users and neighbors to reach an open lands ranger for emergency or conflict situations.

b. Trail maintenance and construction.

The Rimrock Open Space trail will connect with the trail at Coyote Ridge Natural Area and extend north to eventually connect with a future trailhead north of Rimrock Open Space. Until an appropriate northern trailhead is established, the trail may be designed as a shortened loop south of County Road 38E. The location of the proposed Rimrock Open Space trail is shown on Figure 3. Two options (A or B) will be explored. Option A includes constructing a short loop in the middle valley above the westernmost valley and Rimrock Ranch. Option B involves creating a short loop into the westernmost valley. The trail will be natural surface and aligned to minimize conflicts between users and wildlife, provide a safe and scenic trail and minimize erosion potential.

An electric fence will be constructed along the western boundary of the property to prevent trespass onto private lands and cattle grazing on public lands. The design of the fencing should blend with the natural area aspect of the property and be environmentally friendly for perching raptors and movement of ungulates while at the same time meet the agreed standards set at the time of acquisition with the seller. Larimer County will work with adjacent landowners regarding trespassing issues.

Implementation steps:

- Construct the Rimrock Open Space trail using the trail crew and volunteers.
- Perform on-going trail maintenance as needed.
- Develop appropriate signage to clearly mark open space boundaries and to prohibit trespassing onto private property.
- Install electric fencing along the western boundary of the open space and install signs to indicate fence is electric.

c. Parking facility acquisition and maintenance.

Parking for the Rimrock Open Space will be at the Coyote Ridge trailhead, located off of Taft Hill Rd./Wilson Ave. Coyote Ridge Natural Area provides a restroom facility at the cabin (1 mile from the trailhead) and a trailhead informational kiosk. Also located at the trailhead is an emergency call box. Currently, the existing lot accommodates 12 vehicles plus 2 horse trailers. This parking area will be expanded to the north to provide for additional visitation. The development and maintenance of any additional parking facilities will be performed by the Larimer County Parks and Open Lands Department. A secondary parking area/trailhead is being examined for north of Rimrock Open Space, potentially providing a second access point into Horsetooth Mountain Park. If a common trailhead is developed, a parks permit will be required for users crossing into Bureau of Reclamation lands. No user fee will be assessed at the Coyote Ridge entrance.

Implementation steps:

- Expand the Coyote Ridge parking area to the north.
- Explore options for a second parking area/trailhead located north of Rimrock Open Space
- Install appropriate signage along CR 38E to prevent parking along the road.

4.4 Environmental Education Opportunities

Numerous educational opportunities exist at Rimrock Open Space and allow for the development of an integrated environmental education project. Because this property will connect to a larger trail system at Coyote Ridge Natural Area and potentially in the future to the Devil's Backbone, an interpretive program that integrates with existing environmental education programs at both sites would be ideal. Potential environmental education subjects include watchable wildlife, foothills natural communities, geology, hydrology local history, vision of the Open Lands Program, among others.

Implementation steps:

- Work with the City of Ft. Collins to incorporate Rimrock Open Space into the existing kiosk and Coyote Ridge Natural Area trailhead
- Include Rimrock Open Space in the volunteer naturalist program for Larimer County Parks and Open Lands Department with programs that can be used in conjunction with Coyote Ridge Natural Area.
- Include Rimrock Open Space trail as a potential "Adopt-a-Trail" location.
- Explore possibility of a suggestion box at the trailhead.

4.5 Cultural Resource Management

There is a rich cultural history of the Rimrock Open Space. Incursions by native peoples, homesteading and quarry operations all mark a significant cultural history in this area. Piled stones and other debris on a small section of the property should be examined for any cultural value and removed. If any artifacts of significant value are found, these will be preserved in some fashion.

Implementation step:

- Create a cultural history map that delineates important cultural features on the property.
- Incorporate cultural history of the site into interpretative materials and programs.
- Remove stone piles from property, retaining any artifacts of value for preservation.

4.6 Land Acquisitions

Expansion of the Rimrock Open Space to the south/southeast is important for linking the north/south foothills regional trail system recommended in *the Larimer County Comprehensive Parks Master Plan* (1993). Additionally, land acquisition to the north is important for the establishment of a secondary parking area/trailhead. Finally, expansion of the Rimrock Open Space is desirable in order to buffer it from becoming an island in a sea of development. Any lands added to the Rimrock Open Space will be on a willing seller basis and fall under the guidelines of this Resource Management Plan for Rimrock Open Space. Additionally, because of the close-in nature of surrounding developments, it will be important to identify central neighborhood access points that are appropriate both environmentally and from a safety standpoint.

Implementation steps:

- Continue to work with adjacent property owners to further possibilities for a north/south trail linkage, provide for a secondary parking area/trailhead, and to protect additional lands as a buffer to Rimrock Open Space.
- Explore appropriate neighborhood access points to the trail.

4.7 Summary of Implementation Steps and Phasing

A tabular summary of implementation steps and proposed timelines are provided below. These steps will be prioritized and implemented in a timely manner.

Summary of Implementation steps for Rimrock Open Space

Rimrock Open Space Implementation Steps	Cost Estimate	2002	2003	2004 and beyond	Responsible program*
Grassland and shrubland health					
Monitor grassland and shrubland health	Minimal		Summer	Biannual	Open Land Program/N. District
Educate visitors and staff on rare plants and animals	Minimal			Continual	Open Lands Program/Volunteer Program
Revegetate disturbed areas with native seed mix				Continual	Open Lands Program/N. District
Wildlife management					
Inventory and monitor the locations of sensitive and non-sensitive wildlife species	Minimal	Spring		Annual	Open Lands Program/N. District
Work with DOW to enhance wildlife habitat as needed	Minimal			As Needed	Open Lands Program/N. District
Install prairie dog management barriers	$3000	Spring		As needed	Open Lands Program/N. District
Hydrology and erosion management					
Fill and revegetate gully		Fall		Continual	Open Lands Program/N. District
Encourage users to remain on designated trails	Minimal			Continual	N. District
Monitor trail condition to check for erosion	Minimal			Continual	Open Lands Program/N. District
Educate users on no climbing regulation	Minimal			Continual	N. District
User interaction					
Install trail etiquette and multi use signage	$80.00 ea.		Summer		Open Lands Program/N. District
Incorporate Rimrock into volunteer ranger program	Minimal			Continual	Volunteer Program
Educate users on no dogs regulation	Minimal			Continual	N. District
Explore possibility of “ranger hotline”	Minimal	Winter			Open Lands Program/N. District
Trail maintenance and construction					
Construct trail with staff and volunteers	$5.00/ft.	All Year			Open Lands Program
Perform trail maintenance as needed	$400.00/yr.			Biannual	Open Lands Program
Install signs that indicate open space boundary	$80.00 ea.	Fall			Open Lands Program/N. District
Install electric fencing along western boundary	$500.00	Spring			Open Lands Program
Parking facility acquisition and maintenance					
Expand Coyote Ridge Parking Area	$5.00/sq. ft.	Winter			Open Lands Program/ N. District/Ft. Collins
Explore options for second trailhead north of Rimrock	Minimal				Open Lands Program
Install signs to prevent parking along CR 38E	$100.00 ea.	Winter			N. District/Road and Bridge
Education/recreation opportunities					

Rimrock Open Space Implementation Steps	Cost Estimate	2002	2003	2004 and beyond	Responsible program*
Include Rimrock in information kiosk at Coyote Ridge trailhead	Minimal	Fall			Open Lands Program/Volunteer Program
Incorporate into volunteer naturalist program	Minimal		Summer	Continual	Volunteer Program
Include as a potential "adopt-a-trail" location	Minimal		Summer	Continual	Open Lands Program/Volunteer Program
Cultural resource management					
Develop cultural history map	Volunteer		Summer		Open Lands Program/Volunteer Program
Incorporate cultural history into interpretive materials	Volunteer		Summer		Open Lands Program/Volunteer Program
Remove stone piles	$500.00	Winter			Open Lands Program/N. District
Land acquisitions					
Explore land acquisition possibilities	Minimal			Continual	Open Lands Program
Explore appropriate neighborhood access points to the trail	Minimal	Winter		Continual	Open Lands Program

Note that while various programs may be responsible for a particular task, the implementation of the task may involve cross-program cooperation and participation as well as the use of volunteers. All volunteer activity will be organized by the Volunteer Coordinator.

Rimrock Open Space Regulations*
Due to the sensitivity of the Rimrock Open Space, it is requested that visitors observe the following:
A. Camping is prohibited.
B. Fires and smoking are prohibited.
C. Motorized vehicular traffic is only allowed in the event of an emergency or maintenance.
D. Dogs are prohibited
E. Use hours are from dawn until dusk.
F. Rock climbing and/or scrambling is prohibited due to the fragility of the rock outcrops and sensitive wildlife.
G. Property should not be left unattended longer than 8 hours.
H. Commercial uses and special events require a permit.
I. Use of glass containers is prohibited.
J. Consumption of alcohol greater than 3.2% alcohol or possession of a keg is prohibited.
K. Possession of marijuana or other drug paraphernalia is prohibited.
L. Possession or use of any firearms, fireworks, sparklers or explosive is prohibited.
M. Hunting or trapping activities are not allowed unless under special provision with the Division of Wildlife for wildlife management purposes at Rimrock Open Space.
N. Hiking, mountain biking and horseback riding should be done only on designated trails.
O. Please do not disturb wildlife in any manner.
P. Please treat public property with respect.
Q. Disorderly conduct and public indecency are prohibited.
* See Larimer County Parks and Open Lands Department Regulations (1998)

5. APPENDIX A: Species Lists

Table 1
Potential mammal species located at the Rimrock Open Space

Common name	Scientific name
Mule deer	*(Odocoileus hemionus)*
Mountain lion	*(Felis concolor)*
Coyote	*(Canis latrans)*
Elk	*(Cervus canadensis)*
White-tailed deer	*(Odocoileus virginianus)*
Least chipmunk	*(Eutamias minimus)*
Uinta chipmunk	*(Eutamias umbrinus)*
Rock squirrel	*(Citellus variegatus)*
Golden-mantled squirrel	*(Citellus lateralis)*
Hispid pocket mouse	*(Perognathus hispidus)*
Deer mouse	*(Peromyscus maniculatus)*
Rock mouse	*(Peromyscus difficilis)*
Mexican woodrat	*(Neotoma mexicana)*
Prairie vole	*(Microtus ochrogaster)*
Porcupine	*(Erethizon dorsatum)*
Red fox	*(Vulpes fulva)*
Raccoon	*(Procyon lotor)*
Black-tailed prairie dog	*(Cynomys ludovicianus)*
Striped skunk	*(Mephitis mephitis)*
Mountain cottontail rabbit	*(Sylvilagus nuttalli)*

Table 2
Plant species identified at Rimrock Open Space

Grasses	
Crested Wheatgrass	*Agropyron cristatum*
Needle-and-Thread	*Stipa comata*
Green Needlegrass	*Stipa viridula*
Blue Grama	*Bouteloua gracilis*
Buffalo Grass	*Buchloe dactyloides*
Mountain Muhly	*Muhlenbergia montana*
New Mexico Feathergrass	*Stipa neomexicana*
Foxtail	*Alopecurus pratensis*
Little Bluestem	*Schizachyrium scoparium*
Side-oats Grama	*Bouteloua curtipendula*
Indian Ricegrass	*Oryzopsis hymenoides*
Three-awn	*Aristida purpurea*
Junegrass	*Koeleria macrantha*
Western Wheatgrass	*Agropyron smithii*
Kentucky Bluegrass	*Poa pratensis*
Canada Bluegrass	*Poa compressa*
Big Bluestem	*Andropogon gerardii*
Sedges	
Sun Sedge	*Carex stenophylla*
Shrubs	
Mountain Mahogany	*Cercocapus montanus*
Skunkbush	*Rhus trilobata*
Hawthorn	*Crataegus macranthra*
Wax Currant	*Ribes cereum*
Rabbitbush	*Crysothamnus nauseosus*
Wild Plum	*Prunus americana*
Chokecherry	*Prunus virginiana*
Snowberry	*Symphoricarpos oreophilus*
Snakeweed	*Gutierrezia sarothrae*
Trees	
Ponderosa Pine	*Pinus ponderosa*
Plains Cottonwood	*Populus sargentii*
Succulents	
Prickley Pear Cactus	*Opuntia maccorhiza*
Nipple Cactus	*Coryphantha missouriensis*
Cactus sp.	*Opuntia polyacantha*
Forbs	
Violet	*Viola purpurea*
Violet	*Viola nuttalli*
Salsify	*Tragopogon dubius*
Silver Sage	*Artemisia frigida*

Yucca	*Yucca glauca*
Sunflower spp.	*Helianathus spp.*
Globemallow	*Sphaeralcea coccinea*
Locoweed	*Astragalus sp.*
Prairie Sage	*Artemesia ludoviciana*
Scurfpea	*Psoralea tenuiflora*
Bell's Twinpod	*Physaria bellii*
Mountain Bladderpod	*Lesquerella montana*
Nailwort	*Paronychia jamesii*
Shorts Milkvetch	*Astragalus shortianus*
Drummond Milkvetch	*Astragalus drummondii*
Geyer Larkspur	*Delphinium geyeri*
Nuttall Larkspur	*Delphinium nutallsanum*
Salt and Pepper	Lornatium orientale
Sand Lily	*Leucocrinum montanum*
Wild Blue Flax	*Adenolinum lewisii*
Wild Onion	*Allium textile*
Western Wallflower	*Erysimum asperum*
Skull Cap	*Scutellaria sp.*
Blue Mustard	*Brassica elongata*
Woods Rose	*Rosa woodsii*
Pinnate Tansymustard	*Descurainia pinnata*
Alyssum	*Alyssum parviflorum*
Fringed Sage	*Artemesia frigida*
False Dandelion	*Nothocalais undulata*
Golden Smoke	*Corydalis aurea*
Mouse Ear	*Cerastium strictum*
Groundsel	*Senecio fendleri*
Rocky Mountain Spurge	*Euphorbia robusta*
Wild Geranium	*Geranium caespitosum*
Carolina Whitlowgrass	*Draba reptans*
Wormwood	*Artemesia filifolia*
Bluebells	*Mertensia lanceolata*
Puccoon	*Lithospermum incisum*
Western Wallflower	*Erysimum asperum*
Evening Primrose	*Oenothera brachycarpa*
Poison Ivy	*Toxicodendron rydbergii*
Alumroot	*Heuchera parviflora*
Death Camas	*Toxicoscordion venenosum*
Bahia	*Bahia dissecta*
Prickly Poppy	*Argemone sp.*
Pussytoes	*Antennaria rosea*
Yarrow	*Achillea lanulosa*
Non-natives	
Mullein	*Verbascum thapsus*
Dandelion	*Taraxacum officinale*
Ragweed	*Ambrosia trifida*

Redstem Filaree	*Erodium cicutarium*
Whitlow Wart	*Draba nemerosa*
Gumweed	*Grindelia squarrosa*
Bindweed	*Fallopia convolvulus*
Blue Mustard	*Chorisposa tenella*
Jim Hill Mustard	*Sisymbrium altissimum*
Cheatgrass	*Bromus tectorum*
Smooth Brome	*Bromus inermis*
Japanese Brome	*Bromus japonicus*

APPENDIX B: PRAIRIE DOG MANAGEMENT GUIDELINES

Black-tailed prairie dogs are present at Rimrock Open Space. Prairie dogs are important components of the grassland ecosystem. Prairie dogs provide an important food source for fox, coyotes, badger, and several raptor species. In addition, their colonies provide critical habitat for many other species including burrowing owls and the black-footed ferret. The species is in significant decline nationally.

At the time of writing this plan, Larimer County Parks and Open Lands Department has no formal policy on prairie dog management. To effectively manage prairie dog colonies and native vegetation at Rimrock Open Space, Larimer County will consult with the Colorado Division of Wildlife to determine best management practices for managing prairie dogs and prairie dog habitat. General statements to consider include:

- Capture and relocation as a primary alternative to fumigation
- Work with DOW and the Rocky Mountain Raptor Program regarding the potential for native wildlife species, associated with prairie dogs, reintroduction at Rimrock Open Space.
- Work with the Rocky Mountain Raptor Rehabilitation Program to feed prairie dogs to feed to captive birds, or the National Biological Service to use captured prairie dogs to feed to black-footed ferrets in their breeding program.
- Use of only EPA registered rodenticides may be used, and should be used in a manner such as to least impact non-target wildlife. Poisons will not be used in burrows thought to be occupied by cottontail rabbit or that show signs or sightings of burrowing owl (rare and declining), badger, black-footed ferret (federally endangered) or other species of special concern without special review and to make certain that all Federal, State, and County regulations are met.
- Manage prairie dogs so as not to allow them to expand onto adjacent private lands.
- Cooperate with the Larimer County Health Department in regards to control and public information dissemination in the event of any plague outbreaks.
- Consider habitat modification including shaping the growth of the colony (planting shrubs, putting out hay/straw bales, using barrier fencing, etc.) or for restoring habitat to a condition suitable for prairie dogs (mowing grass, removing brush, etc.).
- Map suitable prairie dog habitat
- Determine the size and extent of the prairie dog management zone.

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