

Horsetooth Mountain Park

Resource Conservation and Visitor Experience Management Plan

May 2006

Larimer County Parks and Open Lands

Horsetooth Mountain Park

**Resource Conservation
And**

Visitor Experience

Management Plan

April 2006



EDAW

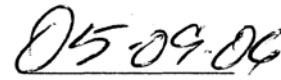
Larimer County Parks and Open Lands

**Adoption of the
Resource Management and Implementation Plan
for Horsetooth Mountain Park**

The Resource Management and Implementation Plan for Horsetooth Mountain Park was recommended for adoption by the Horsetooth Mountain Park Resource Management Plan Planning Team on April 10, 2006 and was adopted by the Director of the Larimer County Parks and Open Lands Department.



Gary Buffington, Director Parks and Open Lands



Date



Table of Contents

1. INTRODUCTION2

1.1 Purpose and Objectives of the Plan2

1.3 Scope And Organization Of The Plan.....6

1.4 Public And Agency Involvement6

2. EXISTING CONDITIONS9

2.1 Overview9

2.2 Natural Resources.....9

2.3 Cultural Resources 19

2.4 Visitor Experiences and Resources.....22

2.5 Park Administrative Resources28

3. OPPORTUNITIES, CONSTRAINTS, AND PLANNING ISSUES34

3.1 Overview34

3.2 Natural Resource Opportunities, Constraints and Planning Issues34

3.3 Cultural Resource Opportunities, Constraints and Planning Issues.....35

3.4 Visitor Experience Opportunities, Constraints and Planning Issues.....35

3.5 Park Administrative Issues and Concerns37

4. RESOURCE CONSERVATION AND VISITOR EXPERIENCE MANAGEMENT39

4.1 Management Plan Overview39

4.1.1 Park Guiding Statements39

4.1.2 Park Management Zones40

4.2 Natural Resources Management.....43

4.3 Cultural Resources Management.....49

4.4 Visitor Experience Management51

4.5 Park Administration56

4.6 Summary of Implementation Tasks and Phasing58

5. APPENDIX A: Planning Team, Public and Agency Involvement63

6. APPENDIX B: Bibliography71

7. APPENDIX C: Visitor Survey and Results (2005).....74

8. APPENDIX D: List of Wildlife and Plant Species103

9. APPENDIX E: Related Documents122





Three Dimensional Image of the Park

1. INTRODUCTION

1.1 Purpose and Objectives of the Plan

Horsetooth Mountain Park was established in 1982 as a regional park¹. The original intent behind the establishment of the Park was to protect the mountain from residential development, to conserve the Park's natural and cultural resources and to provide outdoor recreational opportunities. An original management plan was drafted in 1982, with a subsequent update in 1998, which served as tools for management and recreational development of the Park with the assumption that the Park would provide public use while maintaining aesthetics and habitat conservation. This plan builds on all the previous plans and studies (see Appendix B).

Hughey, Culver and Soderberg open spaces were added to the Park from 1998 to 2003. These properties were purchased to conserve their natural and cultural resources, buffer Horsetooth Mountain Park from changing land use and to provide public access where appropriate. Culver and Hughey open spaces are located in the SW corner of the Park. Soderberg Open Space is located on the east side of the Park. Management plans were prepared for each of these open spaces and have been incorporated into this plan to establish a unified approach to management of the area. Where this plan refers to Horsetooth Mountain Park (or the Park), this description includes both the Park itself as well as Hughey, Culver and Soderberg open spaces (see map 2.1).

The purpose of this update of the Horsetooth Mountain Park Management Plan is to: 1) reexamine the management objectives for the Park 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 Horsetooth Mountain Park well into the future; and 3) develop specific implementation strategies for carrying out various components of the management effort. The

¹ A regional Park is defined in both the *Larimer County Parks Comprehensive Parks Master Plan* (1993) and the *Larimer County Open Lands Master Plan* (2001) as a large area of 500 acres or more with natural resource values of regional significance for nature-oriented, outdoor recreation. A strong emphasis is placed on resource preservation.



overall objectives of the management plan are to:

- Protect, manage and enhance natural, cultural and visual resources, including maintaining and promoting healthy ecosystems and their processes.
- Provide and promote safe, diverse and enjoyable outdoor recreation opportunities while minimizing detrimental impacts upon natural, cultural and visual resources.
- Provide educational opportunities regarding the values of the surrounding natural, 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 of Horsetooth Mountain Park

Horsetooth Mountain

The history of Horsetooth Mountain dates back as far as 10,000 B.C. when Native Americans used the area as a hunting and gathering ground. According to Native American legend, Horsetooth Mountain is the body of a giant that was slain by a brave warrior who slashed the giant's heart - Horsetooth Rock. The death of the giant brought peace and tranquility to the Valley of Contentment (Spring Canyon).

Fur trappers and traders began to move into the area as early as 1825. Settlers soon followed with the discovery of nearby gold in 1858. By the 1870's Horsetooth Mountain became a popular place to recreate. In the 1880's, the quarrying of sandstone in Spring Canyon created a demand for lumber, which was harvested from the mountain slopes. Over time, regular land use practices on the mountain and surrounding land included cattle grazing, timber harvesting, quarrying and farming. Some early landowners were the Herringtons, Culvers and Soderbergs. By 1952, the Soderbergs owned the majority of what is now the Park land.

In the early 1980's, Horsetooth Mountain came under the threat of impending residential development. In response, two Colorado State University students began a petition to purchase the Soderberg Ranch for a county park. Funding would be provided by extending an existing one cent sales tax for six months. The issue, placed on the April 28, 1981 ballot, passed and by 1982, Larimer County became the owner of Horsetooth Mountain Park. Since that time, entrance areas with parking, picnic, restroom, trailheads and drinking water facilities have been established. The trailheads provide access to approximately 30 miles of trail and road that have been developed for the enjoyment of visitors on the approximately 2,696-acre Horsetooth Mountain Park.

Soderberg Open Space

Now partially submerged under Horsetooth Reservoir, the Town of Stout was once the main community in the Horsetooth Valley. Swan Johnson came from Sweden after his fiancée died, first living in Pennsylvania and then settling in the Horsetooth Valley area on the 700-acre Leshner



Ranch. Swan lived in a two-story stone ranch house with a white porch west of what is now Dixon Cove. Around the turn of the century, his niece Wilhelmina, her husband John Soderberg and their first of what would eventually be 11 children moved in with him. The water for the house was piped from a spring $\frac{1}{4}$ mile away and the house was heated with wood and coal.

On Swan's ranch there were two stone quarries where flagstone was removed and sent to Fort Collins and Denver for sidewalks. Stone from the quarries was also used by John Soderberg in building the old Fort Collins Library (now the Fort Collins Museum). The Soderberg children worked at the quarry, blasting and splitting the stone into smaller pieces. The quarries closed in the late 1930's or early 40's. The Horsetooth Valley also boasted gold and silver prospecting (though nothing substantial was ever found), cattle ranching and agriculture activity (alfalfa, grain, hay, wheat and corn).

Johnny Soderberg was born to John and Wilhelmina in 1912 and grew up in the Horsetooth Valley north of what was the Town of Stout.



Soderberg Open Space

(Charlie Johnson)

His first job at 15 years old was farming and ranching for neighbors (the Butlers) who lived 4 miles away, for \$30/month. As a young man, Johnny hunted deer with a 30-30 Winchester and trapped coyotes, skunks and bobcats and sold the furs. At one point, the Soderberg brothers had their own sawmill and harvested mostly ponderosa pine and some Douglas fir from Horsetooth Mountain. Later, after selling the majority of the ranch to Larimer County, Johnny and his brothers Carl, Harry and Paul, purchased a ranch in Wyoming and Johnny would spend time helping his brother's hay on the ranch for weeks at a time.

The Herringtons moved to the Horsetooth Valley in the 1880's and Mrs. Herrington was the original homesteader of the current "Soderberg Open Space" property. The original ranch was ~1,100 acres and the Herringtons both ranched and grew hay. After selling the Leshner Ranch, Wilhelmina and four of the children, Johnny, Carl, Harry and Ellen, bought the "Old Herrington Ranch." The 2,055 square foot ranch-style house on the property was built in 1889 and has been remodeled and additions made since. The homestead includes the ranch house, which features turn-of-the-century ranch architecture and several historic outbuildings. The original entrance to the house was on the north side across the stone bridge. When Johnny moved to the house in 1947, he added the front addition that includes what is now the kitchen. In 1986, the Soderbergs added a third addition, including the garage, living room and east deck. The outbuildings on the property include what was formerly a dwelling house the Herrington's and friends stayed in for short periods. This two-story plastered building came to be called the "Herringtons Chicken



House” because both the Soderbergs and Herringtons kept chickens there at one time. There is a stone garage built by Mr. Herrington for his Model T car that is located just north of the house. There is a wooden barn west of the chicken house built jointly by Mr. Herrington and Johnny in the late 1920’s and a log grainery to the west of the barn. A loafing shed built in the 1950’s is located out near Shoreline Drive. To the west of the house there is a stone well house that was also used as a cellar for storing food.

Virginia Rose Grigg, born in the Ozarks region of Arkansas, came to Pueblo, Colorado at age 18 to attend X-ray technician school. Virginia met Johnny through his sister Ellen; they were married in 1980 in Arkansas and returned to Colorado to live at the “Old Herrington House.” Johnny and Virginia had no children, but many nieces and nephews (interview, Johnny and Virginia Soderberg 1999).

In the early 1980’s, the Soderbergs tried to sell the ranch to State Parks; however, the State declined and they decided to divide the ranch into 35-acre lots. To protect the ranch from development, citizens passed an initiative for a 6-month sales tax to purchase a large portion (2,027 acres) of the Soderberg Ranch as a county park. Johnny and Virginia retained 114 acres, which included the house and outbuildings. In 1998, Larimer County Parks and Open Lands Department, through the existing Help Preserve Open Spaces Sales Tax, purchased the remaining 101.5-acre portion of the Soderberg Ranch as well as a life estate on 12.5 acres, which included the house and ranch buildings. Johnny and Virginia lived in the Soderberg house until Johnny’s death in August 2001. Virginia moved to Fort Collins in the summer of 2002.



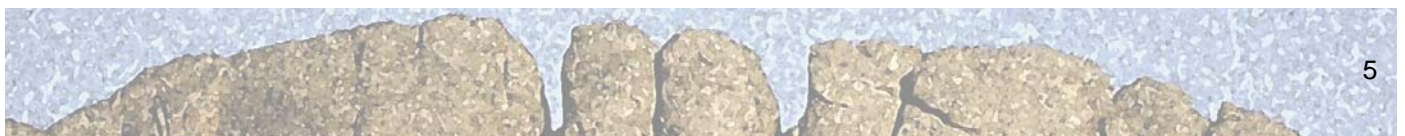
Soderberg Open Space

(Charlie Johnson)

Hughey and Culver Open Spaces

A large area of land near Horsetooth Reservoir and Milner Mountain, which included the Hughey Property, was purchased by Roland and Trean Culver over a period of years from 1918 to the 1930’s. The property was used by the Culvers for livestock grazing operations supporting approximately 20 cow/calf pairs per year. The cattle watered at the two springs on the property. One of the springs, “Mine Spring,” is so named because at its head there is an old entrance that has fallen in and is now boarded up. Roland would camp out for days at a time with his cattle, although he was never too far from his house. There was a one-room shanty on Table Mountain, with a stove and bed, where Roland would stay overnight to fix fences and work to maintain the property (Hughey 1999).

Trean Culver raised several thousand turkeys for 20-30 years on the Culver property, of which the Hughey Property was a part (Hughey 1999). Additionally, over the years, moss rock was removed



from the property by the family and others for landscaping decoration.

In 1984, Trean turned the Hughey property over to their children (Don, Jack and Audra), who divided the large parcel into three smaller parcels among themselves. In 1998, Audra Hughey sold her 282-acre parcel to the Larimer County Parks and Open Lands Department. The Hughey Property was in the Culver family for 80 years.

After Don Culver passed away in 1997, his lands were left to Betty Jo, his wife and their son, Dale Culver, was named the trustee. Since 1999, approximately 20 acres of the open space lands were owned by Dale and his wife, Jill Culver, who ran a horse boarding operation. They also had a yurt constructed just north of the ponderosa pine woodlands on the Culver Open Space that clients could ride to and stay overnight. In 2003, Dale Culver sold 292 acres to the Larimer County Parks and Open Lands Department and removed the yurt. The Culver Open Space was in the Culver family for 80 years.

1.3 Scope And Organization Of The Plan

The management plan for Horsetooth Mountain Park contains three sections: 1) a review of existing conditions, including natural, cultural and administrative resources; 2) a discussion of issues and concerns related to management of the Park; and 3) a management plan addressing both existing conditions and subsequent issues and concerns.

1.4 Public And Agency Involvement

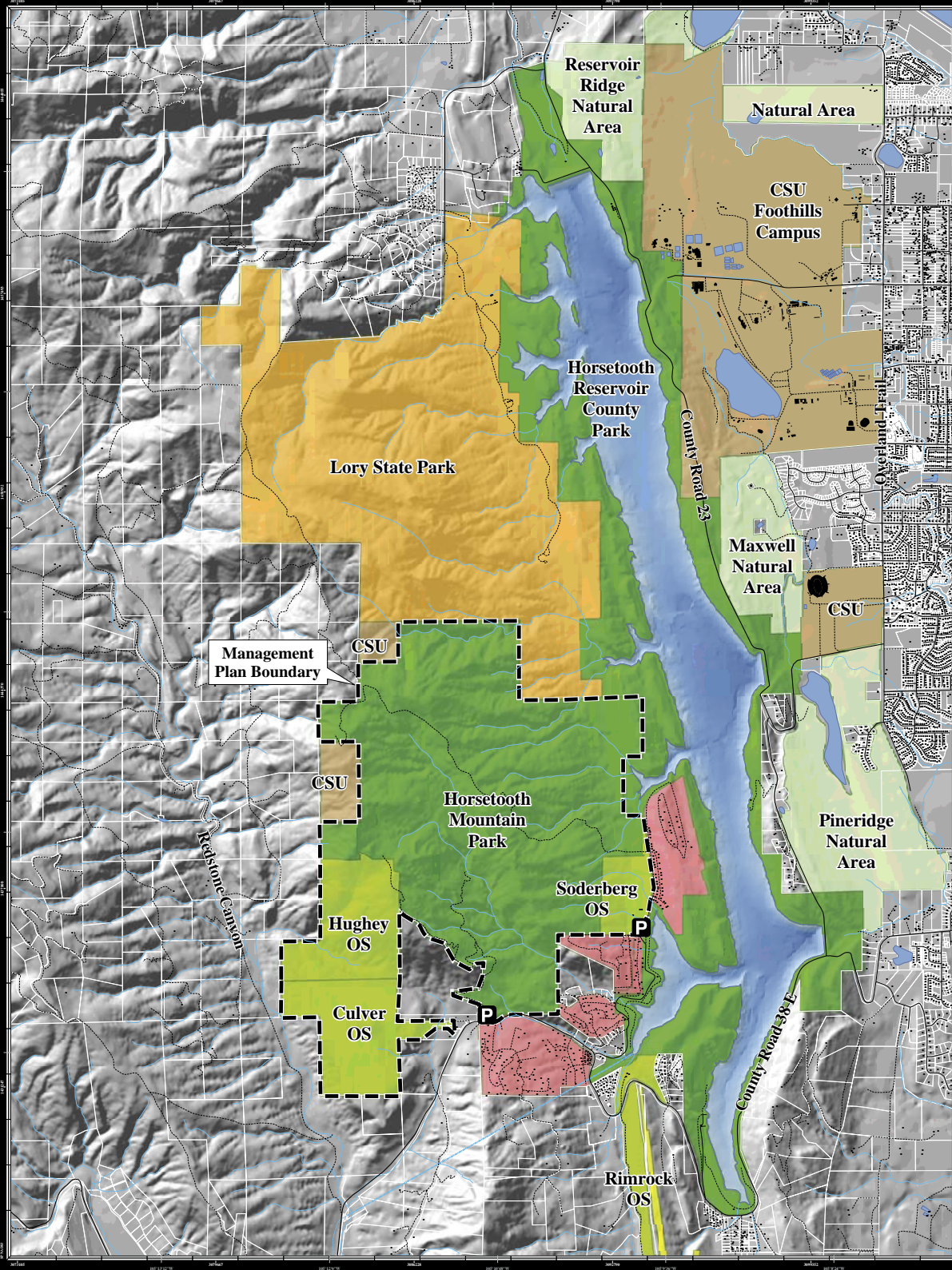
Extensive public and agency involvement was utilized to ensure full representation of those interested in the Park. A Technical Advisory Committee (TAC) was established to provide resource expertise and diverse user input into the preparation of the resource management plan. The TAC met three times during the planning process and participated in individual interviews with the planning team to establish critical information regarding the Park's condition and to assist with issues identification for the management plan. Meetings were also held with Larimer County Parks and Open Lands staff to understand issues and opportunities.

Two public workshops were conducted to provide for citizen input. The first workshop introduced the management plan process, reviewed existing conditions and identified public concerns regarding the Park. The second workshop presented preliminary alternatives for public review. Stakeholder interviews were conducted to research issues and opportunities with groups and individuals who have specific interests in the Park. A summary of the public process is included in the existing conditions under the Visitor Experience section of this plan and in Appendix A. A complete record of public input is recorded in a binder held by the Larimer County Parks and Open Lands Department.

A visitor survey was conducted in the summer of 2005. The survey was designed to provide user profile information and identify user perceptions regarding facility and trail conditions, programs, interests, user fees, management practices and user conflict or crowding. A discussion of



HORSETOOTH MOUNTAIN PARK



- Plan Boundary
- Larimer County Park
- Colorado State Park
- Subdivision
- Private Ownership
- Larimer County Open Space
- Fort Collins Natural Area
- Trailhead
- Conservation Easement
- Colorado State University

Regional Context

Larimer County Parks and Open Lands



Map 1.1

pertinent survey results is provided under the Existing Conditions: Visitor Experiences section of this document. A complete summary of survey results is found in Appendix C.

This plan incorporates the management plans that were previously prepared for Horsetooth Mountain Park, as well as the Culver, Hughey and Soderberg open spaces. Each of these plans address issues specific to these properties. This management plan has combined information and objectives related to the Park and associated open spaces. Other plans that are cited in this document and were relevant to the planning process include the 1993 Parks Master Plan for Larimer County, which identifies Horsetooth Mountain and Horsetooth Valley as a priority area for conservation and recreation. The 2001 Open Lands Master Plan identifies buffering the Park from surrounding developments and creating a land protection corridor from Horsetooth Mountain Park to the Devil's Backbone Open Space. The Colorado Natural Heritage Program (CNHP) has designated the entire Park as either high or very high biodiversity significance.



Horsetooth Mountain

(Charlie Johnson)



2. EXISTING CONDITIONS

2.1 Overview

Horsetooth Mountain Park is located west of the City of Fort Collins in the foothills along the eastern edge of the Colorado Rocky Mountains. The approximately 2,711-acre Park (including three open spaces) is home to prominent geologic features, diverse wildlife habitat, interesting historic sites and popular outdoor recreational opportunities. The Park was purchased by Larimer County for its outdoor recreational opportunities, protection of Horsetooth Rock and this important visual mountain backdrop, and the natural and cultural features present on-site. The Park is bounded by Lory State Park to the north, Horsetooth Reservoir to the east and three open space areas on the west and eastern edges, creating a large intact foothills landscape and popular recreation destination for users throughout the Northern Front Range. There are private lands on the west, east and south edges of the Park.

2.2 Natural Resources

Climate

Horsetooth Mountain Park is located along the eastern slope of the Rocky Mountains and has a highly variable climate that is prone to sudden change. In general, the climate can be characterized as semi-arid with a strong seasonal variation in temperatures, abundant sunshine and relatively low precipitation. Unless stated otherwise, the data presented below were recorded at Fort Collins, which is over 500 feet lower in elevation. The data, however, are generally reflective of conditions at Horsetooth Mountain Park.

The average maximum daily temperature (F) is approximately 70 degrees or above during five months of the year (May through September), with the daily average maximum reaching approximately 85 degrees in July and August. High temperatures occasionally exceed 100 degrees, but nights are generally cool, with an average low during the summer months of approximately 54 degrees. The average frost-free period at the Park is 118 days, extending from May 22 to September 16. Winters are generally cold but are characterized by substantial swings in temperature. January is the coldest month, with an average daily maximum of 41.5 degrees and an average daily minimum of 13.6 degrees. The lowest temperature during the period of record is minus 41 degrees. However, high temperatures in the 50's are not uncommon even in the winter months, which encourage trail use, picnicking and other outdoor activities on a year-round basis.

Average annual precipitation is 14.4 inches, with the highest amount occurring in May. Average annual snowfall is approximately 50 inches. Snow melts quickly in the Park due to warm winter temperatures, especially on south-facing slopes. Severe thunderstorms usually occur in July and August, which can cause erosion problems in the Park.

Prevailing winds are from the north-northwest during the winter months and from the south-southeast in the summer. Late winter and early spring are usually the period of strongest winds



and velocities in excess of 100 miles per hour have been recorded. Strong winds resulting from thunderstorms are also fairly common in summer and wind direction associated with these storms is often from the north-northwest. Wind direction, however, can be highly variable (EDAW 1993).

Topography

The primary topographic features of the Park include Horsetooth Mountain (which contains the Horsetooth Rock formation), a series of intermittent drainageways and a large open valley to the east. The maximum elevation change in the Park is 1,815 feet, with the lowest point at 5,440 feet near Dixon Cove of Horsetooth Reservoir and the highest point on Horsetooth Rock at 7,255 feet.

The majority of the Park contains steep slopes (over 15%). A few areas of gentler slopes occur near the Horsetooth Mountain Trailhead, along the east and south boundaries of the Park and along the tops of ridgelines. Most areas contain slopes of 30% or greater with some localized areas exceeding 50%, which limits development of trails and makes fire control difficult (See Map 2.2). The vertical elevation change from the south Park entrance to the base of Horsetooth Rock is 1,400 feet, which makes the Park a challenging area for trail use.

Geology/Soils

Horsetooth Mountain Park and surrounding lands lie in a complex geologic setting that forms the transition zone between the Great Plains to the east and the Rocky Mountains to the west. The Park is a geologic showcase including the three major rock classes: igneous, metamorphic and sedimentary. Horsetooth Mountain, containing the Horsetooth Rock formation, is described as:

“An anticlinal structure strongly elevated above sedimentary rocks on the south and west and grading into sedimentary rocks on the east. Hogbacks of resistant sandstone flank the east side of the mountain while a syncline borders the southwest side. Horsetooth Mountain is a rugged mountain due to its history of metamorphism, igneous intrusions, folding, faulting and erosion. Milner Mountain to the south of this area would be a continuation of Horsetooth Mountain, but was separated by the Buckhorn Creek Fault, Horsetooth Fault and erosion” (Hendon 1984, pp.17-19).

Soil associations have been developed and mapped in Larimer County by the U.S.D.A. Natural Resource Conservation Service (NRCS) (formerly the Soil Conservation Service). These soil associations are illustrated on Map 2.3. According to the survey, there are two main soil associations within the Park: the Wetmore-Boyle-Rock outcrop complex and the Ratake-Rock outcrop complex.

Wetmore-Boyle-Rock outcrop soils complex. The Wetmore-Boyle-Rock outcrop soils complex occurs throughout the entire west and central portions of the Park. The NRCS describes the complex as follows:

“These soils are shallow, strongly sloping to very steep, well-drained soils that formed in material weathered from granite. They are found on mountainsides and ridges and are underlain by granite bedrock at a depth of less than 20 inches. Wetmore gravelly sandy loam is in the forested areas, Boyle gravelly sandy loam is in the open grassy areas and





Map 2.2

Rock outcrop occurs throughout, but is most common near ridge tops. These soils have rapid runoff and hazard for erosion is severe.”

These soils are rated as having severe limitation in all categories of recreational development, indicating that costly soil reclamation, special design, or intensive maintenance, or a combination of these is required.

Ratake-Rock outcrop complex. The Ratake-Rock outcrop complex is the most prominent soil association on the eastern portion of the Park. The NRCS describes the complex as follows:

“The series consists of shallow, well drained to excessively drained soils that formed in material weathered from granite, schist, or phyllite. They are found on upland ridges and mountainsides and are underlain by weathered phyllite, schist, or weathered granite at a depth of 10 to 20 inches. The soils have rapid runoff and hazard for erosion is severe.”

The Ratake-Rock outcrop complex is also rated as having severe limitation in all categories of recreational development.

Nearly all of the remaining soils in the Park are also characterized as having moderate to severe erosion potential and severe limitations for recreational development. In most cases, these sensitive soils reflect some combination of steep slopes and shallow depth to bedrock/rock outcrops. The Satanta and Harlan fine sandy loam are the most suitable for recreational development with moderate to good ratings. These occur in limited areas on the eastern edge of the Park.

Hydrology

The steep slopes and folding landforms within Horsetooth Mountain Park act to quickly drain surface runoff to the east toward Horsetooth Reservoir. Given the semi-arid climate, these drainageways generally carry intermittent flows most common during the spring snowmelt period and after heavy rain events. Spring Creek has the most water flow of all the streams in the park. This stream follows the step topography of the park which has formed a few small and one 20 foot waterfall called Horsetooth Falls. Wetland areas are limited to areas along Spring Creek and on portions of the Culver and Hughey open spaces.

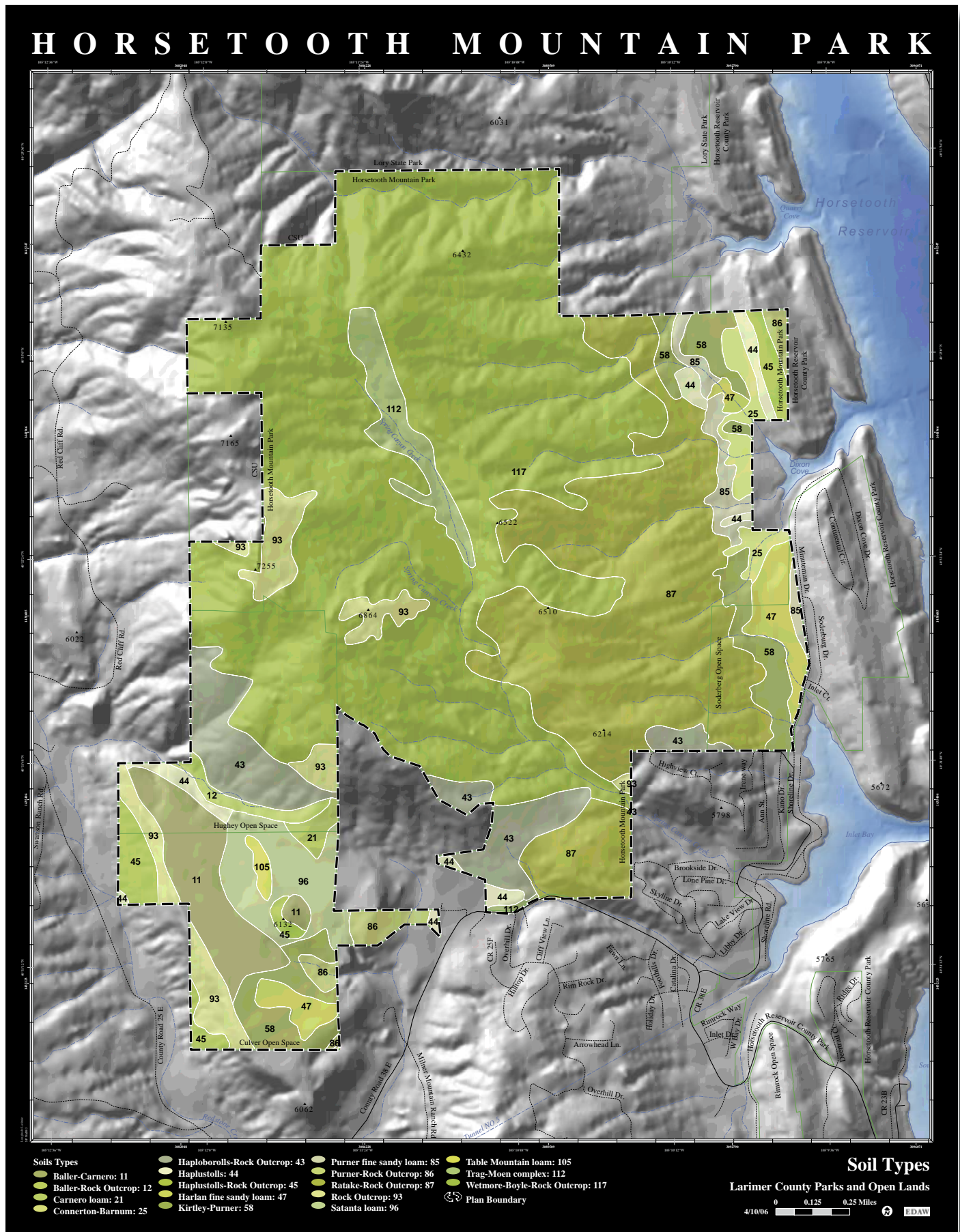
There are a number of small springs within Horsetooth Mountain Park and associated open spaces. The location of some of these springs can be found on Map 2.4. Since most of these springs have been piped or improved in some manner, they require regular maintenance to ensure continuous flow, primarily for wildlife water sources.

Vegetation²

Vegetation types present within Horsetooth Mountain Park include open ponderosa pine (*Pinus ponderosa*) woodlands, mixed ponderosa pine/Douglas-fir (*Pseudotsuga menziesii*) woodlands, mountain mahogany (*Cercocarpus montanus*) shrublands, meadow grasslands, riparian areas and rock outcrops. Major vegetation types are shown in Map 2.4.

² In general, plant scientific names follow Harrington (1964).





Map 2.3



Open Ponderosa Pine Woodlands. The forest communities within Horsetooth Mountain Park are dominated by ponderosa pine woodlands. This community occurs throughout the Park along ridge tops characterized by steep slopes and rocky, shallow soils. Some understory shrub species occur within this vegetation type, although the majority of the forested community remains as open woodland. Understory species common to these areas include mountain mahogany, Rocky Mountain juniper (*Juniperus scopulorum*), common juniper (*Juniperus communis*), chokecherry (*Prunus virginiana*), bitterbrush (*Purshia tridentata*) and kinnikinnik (*Arctostaphylos uva-ursi*), among others.

Ponderosa Pine/Douglas-fir Woodlands. The ponderosa pine/Douglas-fir woodlands occur in abundance within the Park along north-facing slopes and along sheltered drainages. The areas are characterized by moderate to steep slopes and rocky, shallow soils. Understory shrub and forb species are common within the community, including common juniper and scattered grasses.

Mountain Mahogany Shrublands. The mountain mahogany shrublands occur in openings within forested communities and extend along drainages into the meadow grassland community. The mountain mahogany shrublands also occur in the south and eastern portions of the Park in areas of moderately steep slopes and shallow soils. This shrubland community is dominated by mountain mahogany but also includes other shrubs such as currant (*Ribes sp.*) and skunkbush (*Rhus trilobata*). A herbaceous understory to the shrubs consists of various grass and forb species, including fringed sage (*Artemisia frigida*), needle-and-thread grass (*Stipa comata*) and blue grama (*Bouteloua gracilis*).

Meadow Grasslands. The meadow grasslands occur along the eastern edge of the Park. They are predominant in valley bottoms and gentle side slopes with relatively deeper soils. This vegetation type is dominated by an herbaceous layer and infrequently includes shrub species, which are a minor vegetative component. Dominant grass species include big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), needle-and-thread grass (*Stipa comata*), New Mexico feathergrass (*Stipa neomexicana*), Indian ricegrass (*Stipa hymenoides*),





Map 2.4

purple three-awn (*Aristida purpurea*) and blue grama (*Bouteloua gracilis*). Common forb species include sand lily (*Leucocrinum montanum*), three-fingered milk vetch (*Astragalus tridactylieus*), prickly-pear cactus (*Opuntia polyacantha*), milkweed (*Asclepias sp.*), sunflowers (*Helianthus sp.*) and goldenrod (*Solidago sp.*).

Riparian Areas. The dominant riparian area within Horsetooth Mountain Park is limited to the primary drainage channel created by Spring Creek. Spring Creek is fed by seasonal runoff increased by the shallow soils within the Park. It is dominated by woody and herbaceous species such as chokecherry, currant, cottonwood (*Populus sp.*), willow (*Salix sp.*), sedge (*Carex sp.*), rush (*Juncus sp.*) and various grass and forb species.

Rare, Threatened or Imperiled Plants

A series of Colorado Natural Heritage Program (CNHP) inventories conducted in 1999, 2003 and 2004 verified that the Park includes portions of both the Horsetooth Reservoir Hogbacks and the Milner Mountain Northwest Conservation Sites (as described in Kettler et al. 1996). The Horsetooth Reservoir Hogbacks site is of very high biodiversity significance (B2) and contains imperiled foothills plant communities and butterfly species. The Milner Mountain Northwest site is considered of high biodiversity significance (B3) and was mapped primarily to include portions of the Culver Open Space where scattered populations of Bells's twinpod (*Physaria bellii*) are present on the western red sandstone cliffs.



Grassland Vegetation

(Drew Stoll)

Other rare plant species documented from the area include: prairie goldenrod (*Solidago ptarmicoides-Unamia alba*) and the forktip three-awn grass (*Aristida basiramea*). In addition, a watchlisted³ disjunct relic species, the grassfern (*Asplenium septentrionale*), is located on Horsetooth Rock (CNHP 2004). Additional uncommon or protected species found within the Park include blue toadflax (*Linaria canadensis*) (Hendon 1984) identified as infrequent by Weber (1996) and Colorado blue columbine (*Aquilega coerulea*), a state protected flower.

There are several imperiled plant communities documented within the Culver Open Space and include Rocky Mountain juniper/mountain mahogany (*Juniperus scopulorum/Cercocarpus montanus*) woodlands (G2 S2), big bluestem/little bluestem (*Andropogon gerardii/Schizachyrium scoparium*) grasslands (G2 S2) and mountain mahogany/three-leaf sumac/big bluestem (*Cercocarpus montanus/Rhus trilobata/Andropogon gerardii*) shrublands (G2G3 S2S3). Both the big bluestem/little bluestem and mountain mahogany/three-leaf sumac/big bluestem

³ Watchlisted species include those species that are not classified as rare but are infrequent enough to merit ongoing occurrence data collection and analysis by the Colorado Natural Heritage Program to determine if more active tracking is warranted.



communities are considered too small to include as element occurrences in the CNHP database, but are considered important as part of the matrix these communities form with nearby larger occurrences. The Rocky Mountain juniper/mountain mahogany woodland occurs within the most southeast drainage on the property. This community is regionally endemic, occurring on granitic outcrops and on Fountain Formation exposures in the Front Range of north-central Colorado and probably extending into Wyoming and possibly Montana (NatureServe 2003). Very few documented sites exist for this association.

Exotic Plants and Noxious Weeds

Some exotic plants and noxious weeds have become established as a result of historic land use, including grazing and current recreation use of the Park, as well as natural introductions from surrounding areas. The species of greatest concern and in large populations in the Park are Canada thistle (*Cirsium arvense*), dalmatian toadflax (*Linaria dalmatica*) and musk thistle (*Carduus nutans*). Several small populations of bull thistle (*Cirsium vulgare*), dame's rocket (*Hesperis matronalis*), diffuse knapweed (*Centaurea diffusa*), houndstoung (*Cynoglossum officinale*), leafy spurge (*Euphorbia esula*) and puncture vine (*Tribulus terrestris*) have also been identified in the Park and are capable of becoming serious problems. Other known exotics in the Park include the ubiquitous cheatgrass (*Bromus tectorum*) and several other bromes (*B. japonicus*, *B. inermis*).

Other plants in the Park are known to be poisonous to humans. These include poison ivy (*Toxicodendron radicans*), geyer larkspur (*Delphinium geyeri*), Nelson larkspur (*Delphinium nelsonii*), silver lupine (*Lupinus argenteus*), spotted hemlock and death camas (*Zigadenus paniculatus*). None of these plants pose a significant threat to Park users. A list of known plant species located in the Horsetooth Mountain Park area is found in Appendix D.

Fire Hazard

Horsetooth Mountain Park is located in a fire prone and fire driven ecosystem. With the advent of fire suppression and the lack of grazing in the Park, a significant fire load has accumulated. In addition, the absence of fire has allowed understory growth and forest tree density to reach a level in many locations as to pose a serious fire hazard. Based upon fire hazard mapping provided by the Colorado State Forest Service as part of the Horsetooth Mountain Park Forest Stewardship Plan (1998), approximately 1/3-1/2 of the Park is rated as a severe fire hazard, with the rest of the Park rated as a medium fire hazard.

Forest Disease and Insect Infestations

In any forest, there are always endemic levels of forest diseases and insect infestations. Horsetooth Mountain Park is no exception. Existing diseases affecting trees include dwarf mistletoe, elythroderma needlecast, western gall rust and blister rust. Observed insect pests include mountain pine beetle, Douglas fir beetle and western spruce budworm. These forest pests occur irregularly throughout the Park. Some forest stands have a very low presence of insects and disease, while others appear to be severely impacted.





Mountain Lion

(Charlie Johnson)

Wildlife

Horsetooth Mountain Park is located within an ecotone, or ecological transition area, containing characteristics of the Montane Zone to the west and the Grassland Zone to the east. The blending of these two ecological zones in this transition area provides a variety of habitat types for both resident and migratory wildlife species. The mosaic of habitat types within the area is able to support a greater abundance and diversity of wildlife species than either of the contributing zones alone (EDAW 1993).

A diverse mammal population can be observed within the Park's boundaries. Large vertebrate species that inhabit the Park include mule deer (*Odocoileus hemionus*), mountain lion (*Felis concolor*), coyote (*Canis latrans*) and black bear (*Ursus americanus*). Elk (*Cervus canadensis*) and white-tailed deer (*Odocoileus virginianus*) have occasionally been observed within the Park. The entire Park is a winter concentration area for mule deer (CDOW). Other mammals reported in the Park include the least chipmunk (*Eutamias minimus*), uinta chipmunk (*Eutamias umbrinus*), rock squirrel (*Citellus variegatus*), golden-mantled ground squirrel (*Citellus lateralis*), Abert's squirrel (*Sciurus aberti*), 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*), striped skunk (*Mephitis mephitis*), mountain cottontail rabbit (*Sylvilagus nuttalli*) and bobcat (*Lynx rufus*) (Hendon 1984). See Appendix D for a list of common mammal species located in the Park

At least ten species of reptiles and amphibians are found in the Park including the prairie rattlesnake (*Crotalus viridis viridis*), bullsnake (*Pituophis melanoleucus*), milk snake (*Lampropeltis triangulum*), garter snake (*Thamnopsis sp.*), plains hognose snake (*Heterodon nasicus nasicus*), eastern yellowbelly racer (*Coluber constrictor flaviventris*), prairie-lined racerunner (*Cnemidophorus sexlineatus viridis*), red-lipped plateau lizard (*Sceloporus undulatus erythrocheilus*), Woodhouse's toad (*Bufo woodhousei*) and the boreal chorus frog (*Pseudacris triseriata maculata*) (Hendon 1984).

Birds are especially abundant with 126 bird species identified within Horsetooth Mountain Park and neighboring Lory State Park combined. In particular there is a pair of nesting golden



Mule Deer

(Charlie Johnson)



eagles (*Aquila chrysaetos*) and a communal winter bald eagle (*Haliaeetus leucocephalus*) night roost in Horsetooth Mountain Park. Appendix D lists observed bird species and their frequency within the two parks. A list of butterfly species found within the Horsetooth Mountain Park area is documented in Appendix D.

Rare, Threatened or Imperiled Animals

There are six rare and imperiled butterfly species present in the Park, including the hop-feeding azure (*Celastrina humulus*), the mottled dusky wing butterfly (*Erynnis martialis*), Schryver's elfin butterfly (*Callophrys mossii schryveri*), Simius roadside skipper (*Amblyscirtes simius*), Ottoo skipper (*Hesperia ottoe*) and snow skipper (*Paratrytone snowi*). These butterfly species each have a limited lifecycle period that span the months of April through July.

The potential habitat for the federally threatened Preble's meadow jumping mouse (*Zapus hudsonius preblei*) (PMJM) is typically along the Front Range foothills of Colorado in areas with relatively undisturbed riparian vegetation and a water source in close proximity. In 2003, the lower portion of Spring Creek drainage, where it leaves the Park boundary (to allow construction of the Inlet Bay Trail), and the drainage west of the historic Soderberg Open Space buildings (to allow construction of the Soderberg Trailhead) were evaluated by Jan Peterson, a PMJM consultant. These areas were cleared by the U.S. Fish and Wildlife Service (USFWS), stating that the mouse was not present and the drainages not likely habitat. In both locations, the drainages were cleared for a 1-year period to allow construction of the Soderberg Trailhead and the Inlet Bay Trail crossing. In addition, the easternmost drainage on the Hughey Open Space was reviewed by Jan Peterson and deemed not likely habitat. Future management actions such as forestry will not require clearance. Any additional management activities such as vegetation management, trail construction or re-routes, etc., within 300 feet of either side of Spring Creek drainage, or drainages with springs as a continuous water source, are required to be surveyed for PMJM prior to management actions.



Imperiled Mottled Duskywing Butterfly
(Herschel Raney)

2.3 Cultural Resources

While Horsetooth Mountain has seen considerable human activity through time, (Native American hunting and camping and more recently farming, ranching, mining and timber harvesting) there are only a few remnants of these activities in the Park. The most lasting impact of past activity seen in the Park today is the effect of timber harvesting and the establishment of the Herrington Homestead on the Soderberg Open Space (see the following description). Many of the trails used for recreational activity were originally established as logging roads. The remnants of old sawmill slash piles may be seen along the Wathen Trail, Spring Creek Trail and adjacent to a Logger's Cabin that still stands near the juncture of Loggers and Saw Mill trails.



In addition to the timber harvesting activity, there is evidence of prospecting efforts in the Park. An old mine is located near the Soderberg Trail. The partially constructed mine would suggest that the prospector was unsuccessful in locating any valuable ore. A cellar for storage of dynamite is present along the Swan Johnson Trail on the Soderberg Open Space as a remnant from the Soderberg family's quarrying days.

The Hughey Open Space provides some intriguing cultural values. Crossing the open space is an old road bed that may have been part of the early stage road to Estes Park. Parallel to the road, and in other locations, are remains of short rock walls. Lichen patterns on the rocks indicate the walls have been there for a considerable time. It is suspected that the walls are a relict of post-European settlement of the area, although their exact purpose is unknown. Similar to the rest of Horsetooth Mountain Park, the Hughey Open Space was heavily used for timber harvesting in the past, as evidenced by sawmill lumber piles that are still present on the site.



Soderberg House

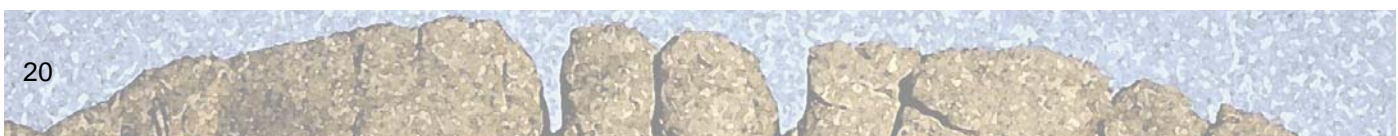
(Charlie Johnson)

There are few remaining artifacts or historic resources on the Culver Open Space. There are very small pieces of metal marking the remains of a small plane crash site on the cliffs at the northwest corner of the open space in the late 1990's.

The Soderberg Open Space has a colorful history. The buildings on the property each hold individual historical interest. A large number of ranching implements, including a pair of mounted antlers, a tractor mower stool seat, wine jug, horse bits, two draft horse work harness, oxen shoes, coyote

traps, wooden fur stretchers, castrators, miscellaneous horseshoes, cow bell, horseshoes with cleats, weaning ring, hobbles for milk cows, branding irons, glass bottles, miscellaneous medicinal powders, a child's sled, manual corn planter, brass bed frame, large hay rack wheel, orthopedic horseshoes, hay hooks, cream separator, dishes, a hoof trimmer, grain shovel, a de-horning tool for cattle and a potato digger machine, among other items, have been generously donated by the Soderbergs to be used for educational purposes.

While past historical activity tickles the imagination, it is important to consider and honor current human activity as well. At the junction of the South Ridge and Horsetooth Rock trails, one may observe the John Blake memorial. This plaque was placed here in loving memory of John Blake by his father and grandfather. In 1987, John Blake, a Colorado State University doctoral student, was visiting Horsetooth Mountain Park when he fell to his death off Horsetooth Rock. The plaque serves to not only memorialize John Blake, but to remind visitors to the Park that care should be taken when climbing the Rock.



Structures

The 2,018 square foot Soderberg house (with a 1,260 s.f. basement), built in 1889 is a ranch-style home, which features turn-of-the-century ranch architecture. The address is 3909 Shoreline Road, Fort Collins, Colorado. When Johnny Soderberg moved to the house in 1947, he added the front addition that includes what is now the kitchen. In 1986, the Soderbergs added a third addition including the garage, living room and east deck. The Soderberg home is equipped with such amenities as running water (via a well and not on a tap), electricity, sewer (from Spring Canyon Water and Sanitation District), phone and propane gas. The home is partially wheelchair accessible including an elevator that connects the garage with the living room. The house consists of a kitchen, two full baths and two half baths (one that is partially a laundry room), a large outside deck on the east side, three bedrooms, a large living room, an office space, a mud room at the west entrance and a two-car garage. Based on a public planning efforts in 2003, and the high cost of bringing the house up to code for any public use, the preferred option for management of the Soderberg house is to lease it as a private residence through a property management company. The house is currently leased for approximately \$950/month, which goes back into the long-term management fund for the Soderberg Open Space and upkeep on the buildings.

There are several historic ranch buildings, including a two-story plastered building (the "Herrington Chicken House"), a stone garage built by Mr. Herrington for his Model T car, a log granary building, a small stone well house, wooden corrals, a cattle chute and two wooden loafing sheds on the site. These buildings were all inspected by the Larimer County Building Inspection Department in April 2003 and with the exception of the Model T garage and granary, all appear to be stable and sound. The Model T garage has settlement cracks on three walls and is not structurally sound. The granary buildings' stone foundation has suffered a partial collapse in the northwest corner. The Larimer County Building Department's recommendation is that public access to these two ranch buildings should be prohibited until further evaluation by an architect or professional engineer.



Old Logging Road

(Greg Oakes)

Gravesites

Johnny Soderberg passed away in August 2001 and his ashes were buried on the property. There are also four pets buried in this location. The County, per a memorandum of agreement, will also allow Virginia Soderberg's ashes to be buried in this location after her death; and immediate siblings of Johnny and their spouses' ashes may also be buried at this same site. There is also a gravesite on the Culver Open Space where a Don Culver was buried.





Historic Fencing

(Charlie Johnson)

delineate the Park boundary and a fenceline that runs north to south through the Soderberg Open Space separating the valley from the uplands. Similarly, there is an old boundary fence still in place between the Hughey and Culver open spaces.

2.4 Visitor Experiences and Resources

Recreational Demand

Outdoor recreation at Horsetooth Mountain Park consists of non-motorized, land-based activities such as hiking, mountain biking, picnicking, horseback riding and wildlife viewing.

The Park is located 4 miles west of the City of Fort Collins. With increasing population along the Front Range, the demand for close, convenient recreational opportunities is 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, recreational amenities and open spaces. Similarly, with Larimer County projected to grow 26% in population, Horsetooth Mountain Park's importance to nearby urban areas will become greater and the demand for outdoor recreational opportunities is expected to increase proportionally.

In a 1991 survey, Horsetooth Mountain Park, with its approximately 30 miles of trails and roads, was the second most frequently used park for hiking and mountain biking in Larimer County. The Park was a favorite destination for survey respondents primarily because of the hiking opportunities and scenery/beauty. In the *Resource Management Plan for Horsetooth Mountain Park (1998)*, it was recognized that heavy use necessitated additional buffers to the Park to protect wildlife habitat, provide additional educational resources and provide expanded recreational opportunities. The Hughey, Culver and Soderberg open spaces were acquired with the primary goal to buffer the Park from adjacent development and recreation and to protect important wildlife habitat. The Soderberg Open Space was also acquired to provide a second trailhead access and expanded recreational opportunities.



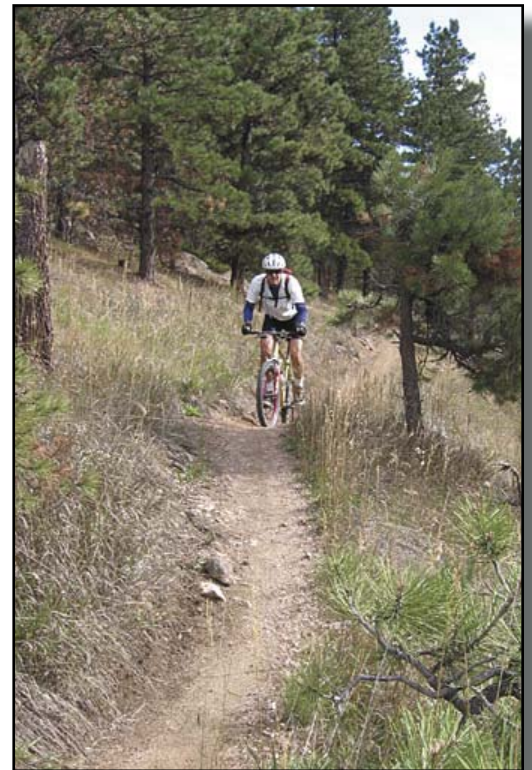
Visitor Activities and Distribution

From May to June 2005, a contact survey was conducted with 350 visitors. Of 350 surveys⁴ completed, 18% of the respondents came from outside of Larimer County, including 10% from outside the state.

In the 1997 survey, 94% of the respondents rated the overall quality of the Park as “good” while 6% of the respondents rated the overall quality of the Park as “fair or poor.” This favorable rating was reconfirmed in a 2005 contact survey in which 98% of the respondents rated their experience at the Park as “excellent or good,” with only 6% stating “fair or poor”.

These visitors in 2005 rated hiking as the most important reason for their visit (81%), with time with family and friends (46%), mountain biking (17%) and wildlife/scenic viewing (37%) also being strong reasons for the visit. These percentages add up to more than 100% because visitors selected more than one answer. When asked why they chose to visit Horsetooth Mountain Park, 49% of the respondents indicated that it was because it was close to home.

The majority of the people visiting the Park (82%) are in small groups, with 1-4 people being the most common group size. However, 12% of the respondents came in groups of 5 or more. The groups contained individuals of all ages with the largest percentage in the 20-29 year old age group. While the majority of the users were repeat users visiting the Park from 1-10 times a year, 24% were first time users and 33% visited the Park more than once a week or month. Most individuals visit the Park for a period of 2-4 hours (85%), while 7% visited for less than 2 hours and 9% visited for more than 4 hours. The emphasis on spending 2-4 hours at the Park is consistent with the spatial distribution of Park use. Over 85% of the trail use occurred in the southern part of the Park going towards Horsetooth Rock or Horsetooth Falls.



Bicyclist

In the 2005 survey, visitors were asked to rate the quality of several attributes of the Park including: natural environment, trails, parking facilities, picnicking facilities, visitor information and the brochure. In all cases, a majority of the respondents rated the Park attributes as excellent.

The 2005 visitor survey showed that the majority of Park visitors like to hike to Horsetooth Rock with their family and friends. The length and difficulty of trails makes the Park a very desirable place for mountain biking. The creation of a new trailhead and second entrance point to the Park on the Soderberg Open Space has moved some trail use to the east side of the Park. The new

⁴Surveys were filled out by an individual representing a visiting party to the Park. The party may consist of one individual or many individuals.





Hikers

(Scott Fraser)

to high elevation gains and trail difficulty. Trail running is becoming a more popular activity in the Park.

There is limited rock climbing in the Park on Horsetooth Rock and other rock outcrops. Some visitors use the trails for exercise for themselves and their dogs. Primitive backcountry, no-fire camping is currently allowed in the Park. There are very few people that actually camp in the Park. This is due to difficulty of access (topography and hiking) lack of water, no-fire rule and limited knowledge that camping is allowed in the Park.

Interpretive walks are provided in the Park by rangers and volunteer naturalists and cover topics such as birds, plants and geology. Some school and other educational groups use the Park as an outdoor classroom. Other visitors explore the Park to appreciate and understand nature and natural processes. Colorado State University and Front Range Community College often use the Park as an outdoor classroom for class projects.



Horseback Riders

(Rick Price)

Traffic counts during 2005 show that Horsetooth Trailhead (on CR 38E) had 3.5 times more visitors than the Soderberg Trailhead. The largest numbers of visitors at each trailhead are during the months of May to August. The average monthly visitation at Horsetooth Mountain Trailhead was 7,694 with 2,282 visits at Soderberg Trailhead. Over 125,000 people visited the Park in 2005.

Adjacent Recreational Use
Recreation activities in the vicinity of the Park have an important influence





Map 2.5

on the Park itself. Bicyclists, horses, trail runners and hikers are able to move between the Park, Lory State Park and Horsetooth Reservoir. The new “Blue Sky Trail,” to be completed by the Parks and Open Lands Department in June 2006, will connect the Soderberg Trailhead south through Rimrock Open Space and terminate at the Devil’s Backbone Open Space Trailhead. The trail will also continue east of the Park and terminate at the Coyote Ridge Trailhead. Lengthening the trail network in the area has the potential to introduce more recreational use and visitation to the area due to longer routes and more variety of experiences.

Trails

The Park has approximately 19.5 miles of natural surface multi-use trail and 5.7 miles of dirt roads that are designated as trails. Many trails in the Park were created from old paths and logging roads that were established before the Park was created. The two newest trails are the Swan Johnson Trail connecting the Soderberg Trailhead to Towers Road; and the Audra Culver Trail on the Hughey Open Space, which was built to improve access to Horsetooth Rock.

Many of the trails have erosion and design problems. Visitors value the diversity and length of trails provided. For the most part, the visitors have stated that there is little trail conflict. However, different types of trail users have also requested the establishment of some trails with exclusive use (i.e., hiking only trails).

Interpretation

Interpretive exhibits, signs and materials are limited in the Park. There is an old interpretive sign at the Horsetooth Mountain Trailhead, as well as a Park map for trail use and an interpretive brochure that corresponds to designated interpretive stops along the Horsetooth Falls Trail. The Soderberg Trailhead kiosk has a map of the Park with interpretation about the adjacent historic Herrington Homestead site and historic buildings. An interpretive sign is also planned for installation along the Swan Johnson Trail as it passes the historic buildings at the Soderberg Open Space.

Impacts from Visitation

Visitation in the Park causes some impacts to environment and cultural resources. Since the great majority of visitor activity relates to trail use, most of these impacts are associated with trail use. The largest environmental impact in the Park is erosion and sedimentation along the service roads. There is also some erosion along trails. Accelerated erosion can cover over vegetation and increase sediment loading in streams. Horses introduce weed species through seeds in the manure they leave behind.



Visitors on Trails

(Mike Strunk)



Horsetooth Rock Trail brings visitors close to the rock, but does not define a destination or end to the trail. This has caused vegetation trampling where visitors look for a route to climb or approach the Rock. There are several social trails (i.e. Shoreline Trail) in the Park that have also caused vegetation loss and habitat fragmentation. The presence of people causes some impacts to wildlife and the combination and extensive number of trails and roads has led to some wildlife habitat segregation.



New Kiosk at Soderberg Entrance

(Greg Oakes)

Another potential visitation impact is reduced visitor satisfaction. Visitor related impacts can come in many forms, but most often arises as a conflict with other users and perceived crowding in the Park. Conflict with other visitors often results from two or more visitor groups utilizing the same trail with different objectives. An example might be both bikers and horseback riders using the same trails. Horseback riders often feel that bikers travel too fast on shared trails and are inconsiderate of their safety. Bikers on the other hand often feel that horseback riders monopolize trails, slow them down and pose a health hazard from manure left behind. Hikers have potential conflicts with both groups for similar reasons when they are sharing the same trails. Visitor conflicts can also arise from other behavior such as dogs being off-leash, which might scare other dogs, people and wildlife.

Perceived crowding within the Park may create an impact on visitor satisfaction and the quality of visitor experience. People typically feel crowded when the number of other people present begins to interfere with their goals, or simply when they are overwhelmed by the presence of others. There is no set standard on what constitutes crowded conditions in the Park, or at what level an impact on visitor experience occurs, but rather it is a subjective interpretation by the visitor themselves. If a visitor has the expectation to hike or bicycle in the Park without seeing any or few other people, their experience be adversely affected when they encounter more users than anticipated. It will be important to continue survey efforts as visitation to the Park increases. The 2005 visitor survey showed that crowding is not an issue at this time.

Visual Resources

The prominent landform and visual landmark of Horsetooth Mountain Park is the rock outcrop for which the Park is named, Horsetooth Rock. It is a familiar landmark and icon in the greater Fort Collins area and those who hike to its peak are rewarded with impressive views across the eastern plains and over much of the Northern Front Range. From Horsetooth Rock, one can see southern landmarks such as Round Mountain, Indian Peaks, Mount Meeker and Longs Peak in Rocky Mountain National Park, among others. A northern view reveals the rolling and unique landscape of the Laramie Foothills. Other less elevated viewpoints exist within the Park offering exceptional views of the surrounding foothills. These dramatic views dominate the overall setting of the Park. Views to Horsetooth Rock dominate the viewshed of the greater Fort Collins



area; and for this reason, Horsetooth Rock is commonly used as an icon or logo for government organizations and private groups.

In contrast, many areas within the steep and rocky landforms offer more enclosed, quiet settings such as those areas near Horsetooth Falls. Many unique rock outcroppings are scattered throughout the Park, providing additional visual interest for visitors. The diverse natural surroundings of woodlands, shrublands and meadows provide a mosaic of settings from the dramatic to the intimate.

The anvil shaped bench that comprises the Culver Open Space is highly visible from CR 38E between Fort Collins and Masonville and from the Redstone Canyon. The property comprises the foreground of views to the south and southwest from Horsetooth Rock and various trails within Horsetooth Mountain Park and Hughey Open Space.



View of Horsetooth Rock

(Charlie Johnson)

2.5 Park Administrative Resources

Horsetooth Mountain Park Land Status
Horsetooth Mountain Park consists of 2,711 acres (including 684 acres of open space) purchased by Larimer County for the purposes of protecting the Mountain and its resources and for recreational use. The open space lands were purchased with open space sales tax funds. The Larimer County Parks and Open Lands Department manages the Park for a balance of both outdoor recreation, and natural and cultural resource protection purposes. Most of the Park is open to

the public for non-motorized, passive outdoor recreational use. Most of the open space lands however, are managed as an intact block without developed trails. These lands have important resource values and serve as a buffer and wildlife habitat protection area adjacent to the Park (Culver and portions of Hughey open spaces).

Radio Towers. Contained within the Park is a five-acre inholding owned by George Kinnison for the duration of his life, after which the inholding will be deeded to the Park. This property, located at the top of the mountain on the north side of the Park, is restricted in its use to the operation of communications towers and related structures and equipment. Currently the property is leased by George Kinnison to Universal Tower Services. In addition, the Colorado State Board of Agriculture owns property adjacent to the Park on the crest of the mountain to the south of the Kinnison property. Radio tower operators also lease the CSU property. Both the Colorado State Board of Agriculture and George Kinnison have the right to use the Towers Trail to access their property. The access road/trail is maintained by the County, in partnership via agreement with these two entities (see Appendix E) to a level considered passable by authorized 4-wheel drive vehicles.



Fuelwood Agreement. In 1983, Larimer County acquired property from the Carey Culver family (not the same lands as now comprise the Culver Open Space) through a land exchange that realigned the western boundary of the Park and provided better access to Horsetooth Rock. As a part of that transaction, the Carey Culver family retained the right to cut and remove dead timber from the transferred property. This right will continue with the Carey Culver family as long as they own the property adjacent to the transferred property⁵. For the purpose of collecting firewood, the family has the right to use the South Ridge Trail access road for entering and exiting the Park. Timing restrictions for firewood collection state that firewood may not be collected on holidays and weekends during the summer season and may not be collected during times of “very high” or “extreme” fire hazard conditions.

Encumbrances and Easements. There are no mortgages, agricultural leases, or liens on the Park. There are a few rights-of-way and reservations including: a right-of-way for an electric transmission or distribution line to Poudre Valley Electric Association; reservation of right-of-way for any ditches or canals constructed by authority of the U.S.; reservation of a right-of-way to Stephen A. Wathen; provision for the U.S. Bureau of Reclamation to locate a system of ditches, tunnels, reservoirs, conduits, pipelines and dams in water districts, including Larimer County; and a reservation for right-of-way between Jack Culver, Donald Culver, Trean Culver and Audra Hughey.

Larimer County granted an easement at the time of purchase of the Culver Open Space to Betty Jo Culver and her immediate family for purposes of visitation to the Culver gravesites and also providing for the internment of Betty Jo Culver upon her passing. However, Betty Jo passed away in 2005 and was subsequently buried in Wakefield, Kansas.

Larimer County has a permanent easement on the existing road that crosses private lands off CR 38E and leads into the Culver Open Space. This easement was granted to the County at the time of acquisition of the Culver Property by Betty Jo and Dale Culver and allows access for maintenance, education, scientific, patrol, emergency and management activities as described in the approved management plan. Use of the easement may be by any means of access including, but not limited to, foot, horse or motorized vehicles and is limited to the County, its agents, employees, volunteers, licensees and invitees only. It is not a dedicated right-of-way to the general public or for general public access.

Restrictive Hunting Covenant. Under the terms of the deed transferred from the Soderberg family to Larimer County, hunting is prohibited in Horsetooth Mountain Park as long as the property is owned by a public entity.

Mineral Rights. The acquisition of Horsetooth Mountain Park from the Soderberg family included the transfer of all associated mineral rights with the exception of the mineral rights on Section 36-7-70, which are owned by the State of Colorado.

Agriculture. No agricultural or grazing leases currently exist on the parklands, although four-month grazing operations were allowed until 1994. The grazing lease was terminated in 1994

⁵ These lands are currently owned by Carey Culver and are private and surrounded on three sides by parklands.



due to overgrazed range conditions, conflicts between Park visitors and cattle and problems associated with ineffective cattle movement. These past grazing operations provided some revenue for the Park and somewhat reduced the fire hazard associated with the build-up of fuels.

Adjacent Land Use

Colorado State Board of Agriculture property. The Colorado State Board of Agriculture owns 80 acres to the west of the Park currently leased for radio towers and another 40 acres to the northwest of the Park. Since 1984, Larimer County has been granted a recreation easement allowing the Westridge Trail and such other facilities considered necessary to utilize these properties for recreational purposes. The easement will continue in effect until such time that the Board chooses to terminate the license.

Lory State Park. Lory State Park is situated to the north of Horsetooth Mountain Park and encompasses 2,492 acres. This Park, owned and managed by Colorado State Parks, provides passive outdoor recreational opportunities and natural resources management, similar to Horsetooth Mountain Park. Together these two parks cover over 5,200 acres of contiguous natural landscape. Lory State Park and Larimer County have an agreement to allow visitors to travel between the parks as long as they have a valid pass for the Park they entered that day.

Horsetooth Reservoir. Horsetooth Reservoir and its surrounding lands are owned by the Bureau of Reclamation and managed by Larimer County Parks and Open Lands. The reservoir area consists of approximately 2,040 acres of water surface area and 2,000 acres of adjoining land. The area abuts Horsetooth Mountain Park on portions of the Park's western edge. Residential development partially separates the reservoir from the Park along the reservoir's southwest border.

Private Residential and Grazing. To the west and east of the Park are significant areas of rural residential development and to the west, also private grazing lands. To the south and southeast of the Park, residential development is significantly greater with urban-level densities.

Access, Circulation and Traffic

The road systems in the region provide good access to Horsetooth Mountain Park. Interstate 25, the primary north-south artery through eastern Colorado and Wyoming, is located approximately 10 miles east of the Park. Several major roads link Interstate 25 west to the City of Fort Collins. Horsetooth Mountain Park is located in the foothills approximately four miles west of Fort Collins. County Road 38E provides access to the Park from Fort Collins and from Loveland and Estes Park to the south via the Masonville Road (County Road 27). The Horsetooth Mountain trailhead is located off of County Road 38E. Access to the Soderberg Trailhead is provided off of County Road 38E along Shoreline Drive.

Trailhead Facilities

The Park's Horsetooth Mountain trailhead entrance includes such public amenities as parking, a potable drinking water fountain, 1 potable water spigot, 3 covered picnic shelters, a group use shelter/outdoor classroom, a vaulted toilet, information kiosk, entrance sign, self-service pay station, fencing, service road access and trail access. The paved parking lot contains a total



of 59 parking spaces (including one handicapped parking space, 8 spaces to accommodate horse trailers and an authorized ranger/maintenance vehicle parking space). This public entrance is staffed during high use periods for the purposes of fee collection and to provide public information. A self-service fee collection station is also available at the parking lot for unstaffed after hours or off season use.



View to Horsetooth Reservoir

(Drew Stoll)

The Soderberg Trailhead on the east side of the Park has a total of 29 parking spaces (1 of which is designated for handicap use only and 9 spaces for horse trailer parking). The entrance provides such amenities as 3 picnic tables, a potable drinking water fountain (Spring Canyon water tap), a separate potable water spigot, a vaulted toilet restroom, information kiosk, self service pay station, a ranch style entrance sign, fencing, views of the historic buildings/corrals on-site, a dumpster and trail access both into the Park and to the south into the Inlet Bay Trail (and future Blue Sky Trail system). To the north of the entrance, about 1 ½ miles down Minuteman Road, there is a pedestrian/bicycle-only entrance onto Towers Trail that is used by the local neighborhood.

Table 1 Conservation Lands

Conservation Lands In Vicinity	Acres
Larimer County – Land (including HTMP)	3183
Bureau of Reclamation - Water (managed by Larimer County)	2,040
Bureau of Reclamation - Land (managed by Larimer County)	2,000
Fort Collins	1,379
Conservation Easements	210
Colorado State University	120
Colorado State Parks	2,519
Total	11,451

Public Facilities, Utilities and Services

Fire Protection. Horsetooth Mountain Park is served by the Poudre Valley Fire Protection District Poudre Valley Volunteer Fire Station No. 9 is located close by at the junction of County Road 38E and Shoreline Drive.

Public Safety. The Larimer County Parks and Open Lands Department is responsible for law enforcement. Rangers also provide education and enforcement of regulations. The Sheriff’s Department assists in responding to and preventing criminal activity in the Park. Rangers and staff are also available to provide visitor assistance and emergency and medical needs. Upon request,



the Poudre Valley Hospital Ambulance Service responds to more serious medical emergencies. Rescues and searches are conducted by the Larimer County Parks and Open Lands Department, Larimer County Search and Rescue Team and the Larimer County Sheriff's Department.

Service Roads. The three service roads within the Park (Towers Trail, South Ridge Trail and Culver Access Road) are closed to motorized vehicles except for Park personnel maintenance, management and patrol uses and allowable uses as specified in previous contractual agreements. While able to accommodate vehicular traffic, both Towers and South Ridge trails also serve as trails for non-motorized use within the Park.

Potable Water. Drinking water fountains are located at both the Horsetooth Mountain and Soderberg trailheads. Water is provided by the Spring Canyon Water & Sanitation District. At this time, the County has purchased one water tap from the District. In addition to providing drinking water, this tap also provides water for an irrigation system for landscaping and watering facilities for horses. The Soderberg house has water that is piped in from a well above the house and is not deemed allowable for designation as a public water source.

Sewage. Vault toilets are located at both the Horsetooth Mountain and Soderberg trailhead entrances to the Park. The Soderberg house is on Spring Canyon Water and Sewer District sewer service.

Solid Waste. Trash is collected from dumpsters and trash receptacles by Larimer County Parks and Open Lands staff and hauled to the Larimer County Landfill.



Soderberg Trailhead

(Greg Oakes)

Operations Budget and Funding

Horsetooth Mountain Park operations are funded through several sources including lottery funds, Larimer County general funds, user fees and other miscellaneous sources with most of the operating funds deriving from user fees. Dollars have also been allocated from the Help Preserve Open Spaces Sales Tax fund to go towards planning and improvements to the Park over the years, including paying for the development of the 1998 HTMP Management Plan, the 1998 Forest Stewardship Plan (CSFS 1998) and the 1999 Management Alternatives for Natural Communities and Imperiled Invertebrates (CNHP 1999). The contract to write this current plan is also being funded through Help Preserve Open Spaces sales tax dollars.

Adjacent open spaces (Culver, Hughey and Soderberg) have been acquired and managed exclusively with Help Preserve Open Spaces Sales Tax dollars. Development of facilities on open spaces (the Soderberg Trailhead, Swan Johnson Trail and Audra Culver Trail) are also funded via the open space sales tax and to a lesser extent the user fees collected at the Soderberg Trailhead. Management costs vary depending on the amenities available at each of the open space areas. The Soderberg Open Space, due primarily to the higher cost of a trailhead, the Swan Johnson Trail and historic buildings on site, costs approximately \$401/ac/year to manage. Hughey Open Space, which includes the Audra Culver Trail for public access, costs \$186/ac/year to manage. Culver Open Space, which is managed for its high quality wildlife habitat as a buffer to the Park without facilities, costs \$11/acre/year to manage. These management dollars cover the cost of building maintenance, rangers and regulation enforcement, weed management, fence repair, trash removal, outdoor education, trail maintenance, forestry and revegetation as needed. Additional budget and expenditure information on the Park can be found on the County's webpage.



Horsetooth Mountain Trailhead

(Greg Oakes)



3. OPPORTUNITIES, CONSTRAINTS, AND PLANNING ISSUES

3.1 Overview

During the management plan development process, input was received from Parks and Open Lands staff, the Technical Advisory Committee (TAC) and the general public regarding opportunities, constraints and/or planning issues. These issues may be divided into four key components: 1) natural resources, 2) cultural resources, 3) visitor experience and 4) park administration.

3.2 Natural Resource Opportunities, Constraints and Planning Issues

The natural resource objective of the Horsetooth Mountain Park Management Plan is to:

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

Natural Resource Opportunities include a variety of options such as:

- Maintenance of the continuity of vegetation communities is important for protecting species within the larger CNHP-designated Horsetooth Reservoir Hogbacks Regional Conservation Site (see section 4.2e Conservation Site).

Constraints and Planning Issues related to natural resource management include:

- There is a significant fire hazard in the Park due to fuel build-up.
- There are several areas in the Park where there is a significant presence of forest disease.
- Grassland and shrubland health is impaired due to the extensive existence of undesirable weeds, non-native species and fuel build-up.
- Rare butterfly habitat is currently threatened by non-native species and habitat fragmentation due to trails and loss of larval host plants/nectar sources.
- Potential Preble's meadow jumping mouse habitat may be impacted by multiple trails that bisect drainages and future management activities within 300 feet of these drainages will require clearance.
- Wildlife, nesting raptors and other sensitive species may be disturbed by recreation.
- Some trails are close to riparian areas and bisect the Spring Creek drainage. These are sensitive areas that are easily impacted by recreational use.
- Noxious weed species have the potential to impair grassland and shrubland health.
- Horse manure can spread weed seeds along trail corridors.
- Off-trail use causes some vegetation disturbance and soil erosion.
- Dogs off leash may disturb wildlife or other users.
- Existing or additional fencing in the area may prove detrimental to raptors and impede movement of other wildlife utilizing the area (i.e. mule deer adults and young).
- Rattlesnake habitat may be disturbed and conversely rattlesnake/visitor interactions



may be a safety concern.

- Additional trails will further fragment the larger intact landscapes of the Park, which serve to provide unregimented wildlife corridors/habitats such as on the Culver and Hughey open spaces as well as along the eastern valley and western and northern portions of the Park.

3.3 Cultural Resource Opportunities, Constraints and Planning Issues

The cultural resource objective of the Horsetooth Mountain Park Management Plan is to:

- ***Protect, manage and enhance cultural resources including preserving historic architecture, landscapes, gravesites and ancient artifacts.***

Cultural Resource Opportunities include a variety of options such as:

- Continue to lease the Soderberg house as a private residence
- In the future if dollars are available, it could be considered to use the Soderberg house for a variety of purposes, including: a limited use facility that can be leased for small events appropriate to natural or cultural resource programs (i.e. similar to the Coyote Ridge Cabin); a public visitor center; a combined visitor center/office space; a living history or working ranch; leasing the space to a non-profit or other appropriate group that would provide in-kind educational or other benefits to the community; a caretaker's home or employee housing; or selling the house separately from the open space lands.
- Creating a self-guided historical walk around the house and ranch buildings with interpretive materials would allow visitors to have a more intimate experience with these historic structures.
- Stabilizing the ranch buildings and allowing visitors to enjoy them from a distance will both protect and allow visitation of these historic buildings.

Constraints and Planning Issues related to cultural resource management include:

- Leaving the Soderberg house vacant may increase incidents of vandalism and lead to dilapidation of the house and ranch buildings.
- Native American artifacts may be disturbed or taken because their location is known and unprotected
- Leasing the Soderberg house as a private residence provides dollars to maintain the house in good condition and a set of eyes and ears to help protect the historic structures on-site.
- Preserve the Logger's Cabin.

3.4 Visitor Experience Opportunities, Constraints and Planning Issues

The visitor experience objectives of the Horsetooth Mountain Park Management Plan are to:

- ***Provide and promote safe, enjoyable outdoor recreation opportunities while***



minimizing detrimental impacts upon natural, cultural and visual resources.

- ***Provide educational opportunities regarding the values of the natural, cultural and visual resources and the importance of responsible use and stewardship of the land.***

Visitor Experience Opportunities include a variety of options such as:

- Provide trails that are user friendly and well maintained.
- Improve visitor experience by providing a clearly marked trail system and naming nomenclature.
- Update the existing Horsetooth Mountain Trailhead to provide better circulation, facilities and parking to match the Park's carrying capacity.
- Develop an education plan for the Park.

Constraints and Planning Issues related to visitor experience management include:

- Trail designs should be user-friendly and include both trails with lower grades and structures that are horse and bike-friendly when possible.
- Trail location and maintenance needs to be coordinated between Lory State Park and Horsetooth Mountain Park.
- Trail users should be made aware of opportunities that exist to allow for volunteer participation in trail and Park maintenance.
- Visitor education is needed to mitigate user impact and conflict, as well as protect users from potential risks (i.e., lion, bear, snake and user interaction).
- There is a strong desire for education programs such as classes, nature and cultural hikes and tours, etc.
- There is a desire for brochures that provide educational material such as a bird list, plant list, etc.
- Multi-user conflict and lack of trail etiquette among some users of the Park exist. User conflict concerns focus primarily on biker/hiker and biker/horseback rider interaction.
- Due to user conflict, there is a fear that separate use trails or specific use exclusion will occur in the Park. While there is a recognized need for separate trails for various uses *in a few locations*, in general the users, TAC and management staff prefer to allow multiple uses of the trails and to avoid segregating trail users except where appropriate.
- Social trails are a problem in the Park. Social trails fragment viable wildlife habitat in the Park increasing user impact on the natural system.
- Trail damage occurs during wet seasons.
- Some trails (Horsetooth Rock Trail, Soderberg Trail, Horsetooth Falls Trail) in the Park are heavily used and there is a need improve these trails to prevent erosion and vegetation trampling.
- Excessive use of the Park will eliminate the primitive feel of the Park, particularly in the northern and southwestern portions.
- The current trail brochure is outdated and unclear.
- Trail signage is missing or inaccurate and does not match the brochures.
- Some trespassing occurs on private land.



- Dog and horse excrement on the trails pose a health concern as well as a safety issue for other users.
- Dogs off leash are a threat to wildlife and a nuisance for other users. (Note this is in violation of current Park regulations.)
- Use by large groups (e.g., commercial horseback riding trips, large group events, commercial tours, etc.) may overwhelm the capacity of the area.
- People using “nature’s restroom” may damage the natural environment and create a public health issue.
- Artificial lighting at the trailhead areas may be a visual eyesore.
- Interior fences and over-signage may be a hazard or a visual eyesore.
- Highlighting sensitive natural and/or cultural resources may result in their destruction or additional impacts.
- There is a need for updating the Horsetooth Mountain Trailhead kiosk information and providing improved educational materials and maps.
- Unauthorized bike races occurring in the Park could have impacts to natural resources, trail conditions and other visitors’ experiences.

3.5 Park Administrative Issues and Concerns

The administration objective of the Horsetooth Mountain Park Management Plan is to:

- ***Manage the Park to provide the best possible visitor experiences while conserving the Park’s resources through cost effective administration and visitor participation.***

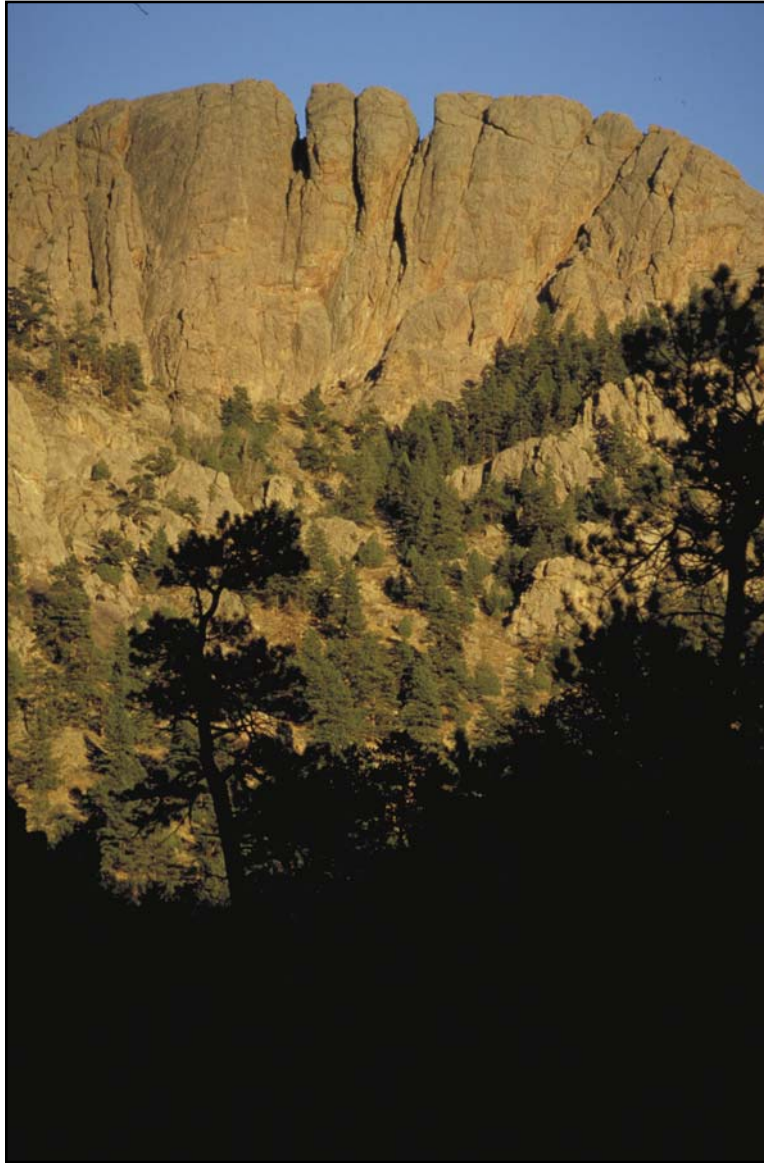
Park Administration Opportunities include a variety of options such as:

- In order to prevent future adjacent residential development from negatively impacting the Park, where feasible, additional buffers to the Park should continue to be acquired.
- Increase backcountry ranger patrols to improve safety and reduce impacts.
- Create an entrance station as the south entrance area to provide information and issue entrance permits
- Use diversity and a repetition of important information to improve visitor experiences and reduce visitor impacts on other visitors and Park resources.

Constraints and Planning Issues related to Park administration include:

- The Park does not generate enough revenue from entrance fees to cover management costs.
- The Park trailheads are occasionally used for illegal parties after hours.
- The Park has not been able to adequately engage user groups and neighbors in the management of the Park, perhaps due to lack of interest or lack of information about opportunities for involvement.
- Much of the surrounding lands adjacent to the Park is already developed for residential use.





Horsetooth Rock

(Charlie Johnson)



4. RESOURCE CONSERVATION AND VISITOR EXPERIENCE MANAGEMENT

4.1 Management Plan Overview

To meet the purpose and objectives of the Horsetooth Mountain Park Resource Conservation and Visitor Experience Management Plan and to address the issues and opportunities brought forth by the public, TAC and staff, the plan is divided into four main components: 1) natural resources management; 2) cultural resources management; 3) visitor experience management; and 4) park administration. These four components, while addressed separately, are interrelated and will impact and influence each other.

Both the 1993 Comprehensive Parks Master Plan and the 2001 Larimer County Open Lands Master Plan identify the Devil's Backbone to Horsetooth Mountain corridor as a priority for open space protection and a regional trail connection. This region has high natural, cultural, agricultural, visual and open space values. Based on these two master plans, which were developed with extensive citizen planning efforts; Horsetooth Mountain Park (including Culver, Hughey and Soderberg open spaces) fits both the goal of protecting these conservation values and serving as a part of the regional foothills trail system.

4.1.1 Park Guiding Statements

Park purpose and significance statements clarify the most basic assumptions about park use and management and provide context for how the Park should be managed or used. These foundation elements form the boundaries that frame decisions concerning the Park (VERP:NPS).

HTMP Park Purpose Statement

- Horsetooth Mountain Park was established to provide nature-based recreation and to protect the area's biodiversity, while adding habitat to a regional complex of conservation lands.

HTMP Park Significance Statements

- Horsetooth Rock and Horsetooth Falls are important recreation destinations for the community.
- Horsetooth Rock is a community icon and important historic scenic landmark in Northern Colorado.
- The Park provides one of the most diverse and extensive multiuse trail networks in Northern Colorado.
- The Colorado Natural Heritage Program has designated the area as "very high biodiversity significance" due to the presence of rare plant communities and butterfly species.
- The Park, combined with adjacent conservation lands, is an extensive natural landscape close to the City of Fort Collins.



HTMP Primary Recreation and Interpretive Themes for the Park

- The Park provides one of the most diverse and extensive multiuse trail networks in Northern Colorado.
- The Park provides visitors an opportunity to explore nature, enjoy scenic views and escape from the nearby urban landscape.
- The Park has diverse natural resources that are part of our community's character.
- The Park's rock formations are unique and have interesting historical significance.

HTMP Park Planning Constraints

- There is an existing access easement to 5 acres owned by George Kinnison (radio towers).
- There is an existing access easement to CSU property.
- There are existing easements for Poudre Valley Rural Electric Association (PVREA) power lines.
- The purchase agreement between the Board of County Commissioners and Soderberg brothers contains a provision to prohibit hunting in the Park.
- Carey Culver has an existing right to cut firewood.
- Dale and Donna Culver have a right to access the gravesites.
- There are existing deed restrictions as a result of Great Outdoors Colorado Grant funding on the Culver and Hughey open spaces.
- There is an easement for the Colorado Big Thompson Project in the Park.

4.1.2 Park Management Zones

Management zones have been defined and delimited for the Park. Each management zone defines the physical and social setting. This process of management zoning is a key planning tool for making decisions about what is appropriate and not appropriate in the Park and what can and cannot occur in different areas of the Park in terms of resources management, visitor use and development. Table 2 outlines the parameters of each zone in detail.

The management zones defined for the Park are the following:

The **Sensitive Resource Protection Zone** contains important sensitive resources that could easily be disturbed. With only a few exceptions, the public is not allowed in this zone. Trails in this zone are well defined to limit public access to the trail corridor only.

The **Primitive Zone** offers experiences of an "untrammelled," "pristine" environment, devoid of the works of people. No facilities are present in this zone. With only a few exceptions, the public is not allowed in this zone. Part of this zone could be reclassified as Backcountry if additional land is someday acquired at the south end of the Park and if the proposed uses are appropriate within the context of sensitive resources, which would allow for a potential trail access.

The **Backcountry Zone** provides a sense of being immersed in a natural landscape, but feels further away from comforts and conveniences. Visitors generally must commit a relatively high



level of time and energy within this zone. Vehicle access for maintenance purposes is limited as much as possible. The only other facilities present in this zone are unpaved low-maintenance trails, small signs, and primitive campsites (camp stoves only).

The **Frontcountry Zone** is in an area that is predominantly natural, but with much evidence of the sights and sounds of people. Most park visitation occurs in this zone. In this zone, people can see, smell, and touch park resources as they walk along a well-defined, wider trail, but not feel like they are too far from their cars or park facilities. The only facilities present in this zone are unpaved but well-maintained trails, signs, interpretation, benches, scenic overlooks, and service roads.

The **Developed Zone** is an area with major visitor facilities, where experiences are facility dependent (parking, trailhead, signs, restroom, etc.). The sights and sounds of people and vehicles may be prominent.

The **Historic Preservation Zone** is an area where the preservation of historic structures and landscapes has the highest priority over other management actions. The sights and sounds of people may be prominent.

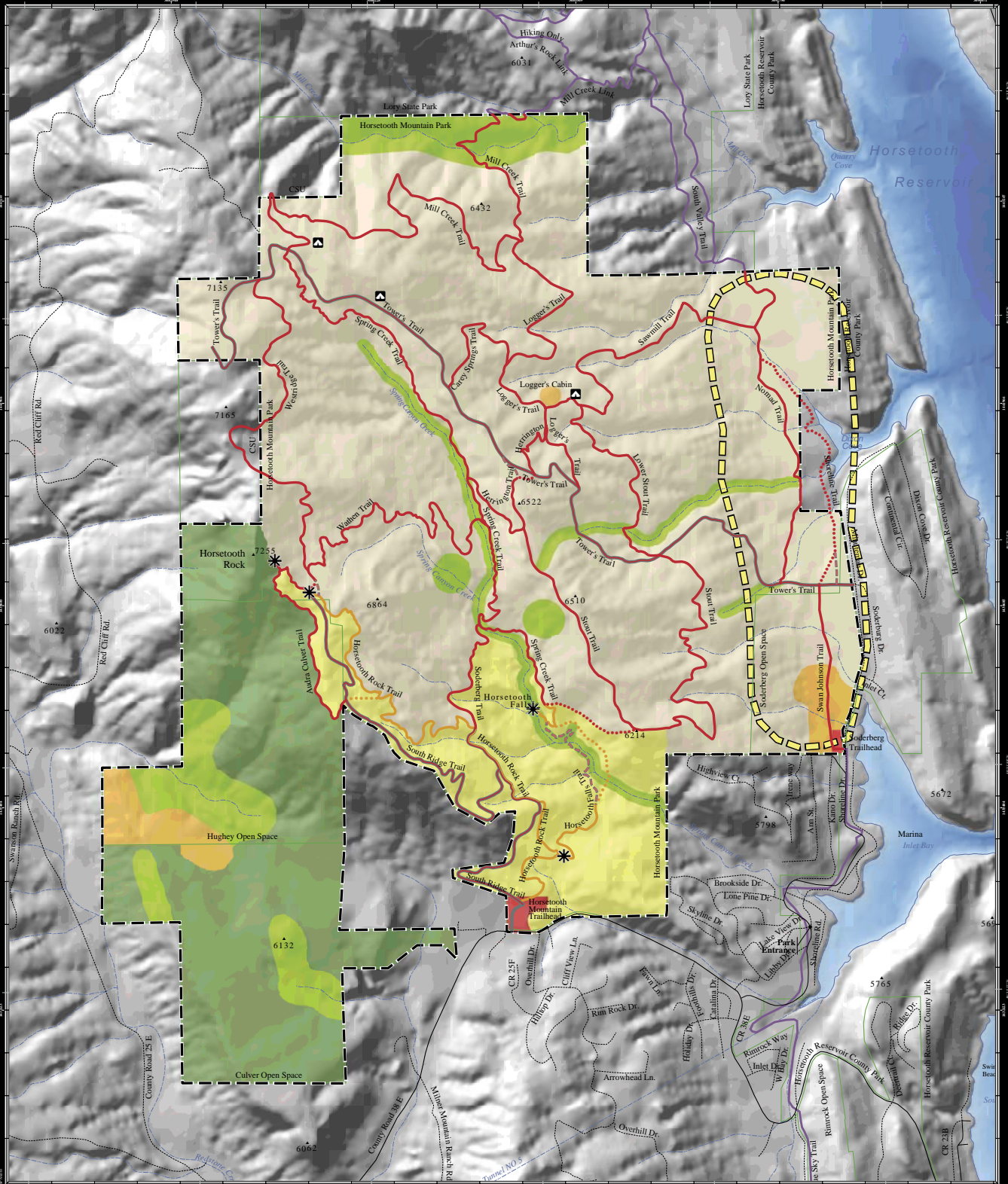


Horsetooth Mountain

(Meegan Flenniken)



HORSETOOTH MOUNTAIN PARK



- | | | | |
|----------------------------------|-------------------------------|---------------------------------|-------------------------|
| Plan Boundary | Potential Management Zones | Front Country | Multiuse Trail |
| Prairie Restoration Area | Sensitive Resource Protection | Developed | New Multiuse Trail |
| Designated Backcountry Campsites | Primitive | Hiking Only Trail | Multiuse Trail and Road |
| Interpretation/ Overlook | Backcountry | New Hiking Only Trail | Potential Trail Closure |
| Adjacent Trails | Historic Preservation | Road, Multiuse and Hiking Trail | Road |

MANAGEMENT PLAN
Larimer County Parks and Open Lands

4/10/06 0 0.125 0.25 Miles EDAN

Table 2: Management Zones

Zone/ Descriptors	Sensitive Resource Protection	Primitive	Backcountry	Frontcountry	Developed	Historic Preservation
Challenge and Adventure of Experience	NA	NA	Moderate-High	Low	Very Low	Low
Dependence on Roads, Trails and other Facilities	NA	NA	Low	Moderate	High	Moderate
Visitor Encounter Expectations	NA	NA	Low	High	Very High	High
Park Staff Encounter Expectations	NA	NA	Very Low	High	Very High	High
Identified Corridors - Highest Standards for Roads/ Trails	NA	NA	NA	Dirt/ Rock	Asphalt/ Rock	Stone/ Rock
Management Action for Resource Protection and Safety	Very High	High	Low	Moderate	Very High	Very High
Tolerance for Resource Damage	None	Very Low	Low	Moderate	High	Very Low
Opportunities for Solitude	NA	NA	High	Low	Very Low	Low
Noise Level	NA	NA	Low	Moderate	High	Moderate
Appropriateness of Onsite Interpretation	NA	NA	Low	High	Very High	Very High
Appropriateness of Offsite Interpretation	High	High	High	Moderate	Low	Low
Diversity of Trail Experience	NA	NA	High	High	Low	Low
Acres	248	458	1650	286	8	61

4.2 Natural Resources Management

Natural resources management addresses the health and dynamics of the plant and wildlife communities found in Horsetooth Mountain Park and the preservation of natural geologic features, including natural springs. For purposes of this plan, natural resources management is grouped into six categories: a) forest health management; b) grassland and shrubland health and management; c) noxious weed management; d) wildlife management; e) rare, threatened and endangered species management; and f) water management.



a) Forest Health Management

Nearly half of Horsetooth Mountain Park contains forests, shrublands and grasslands that are classified as a severe fire hazard. The bulk of the remaining Park is classified as a moderate fire risk. This fire risk is due to a gradual fuel buildup in the Park in the absence of a natural fire regime and the absence of grazing since 1994. In addition to significant fuel buildup, the forest lands in the Park are also showing signs of disease, such as dwarf mistletoe, elythroderma needlecast, western gall rust and blister rust. The forest also contains several insect pests that weaken and kill trees, including mountain pine beetle, Douglas fir beetle and western spruce budworm.



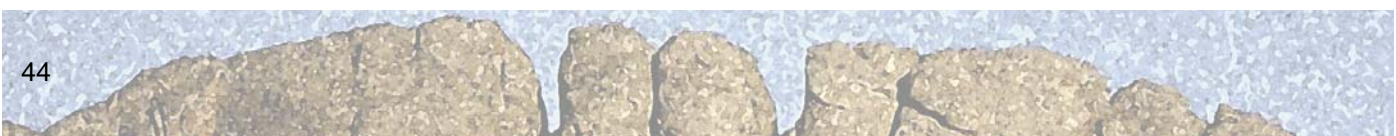
Bald Eagles Nest in the Park

objectives may include specific wildlife habitat enhancements.

In light of these existing conditions, the two most critical aspects of forest health that need immediate attention are: 1) insect/disease control and 2) fire hazard mitigation. Addressing these needs may include various techniques such as forest thinning and prescribed burning, among others. In 1998, the Colorado State Forest Service developed in partnership with Larimer County, the Horsetooth Mountain Park Forest Health and Fire Hazard Mitigation Stewardship Plan (CSFS 1998) that identifies strategies and implementation steps for addressing the forest health needs. This plan has been implemented over the past 8 years as dollars have been allocated or grant funding received. While the Forest Stewardship Plan focuses on insect/disease control and fire hazard mitigation as its primary objectives, other forest management objectives may be explored in the future as overall forest health improves and fire risk is lowered. Additional

Implementation steps:

- Continue to implement the Forest Stewardship Plan for HTMP, securing or allocating funding to annually phase management actions including:
 - Control mountain pine beetle through reduction of timber stand density and improved individual tree growth.
 - Continue to control dwarf mistletoe by isolating affected tree stands or removal of all affected trees.



- Reduce wildland fire hazard by continuing to create breaks along trails and roads and removing understory ladder fuels.
- Continue to use prescribed burns to reduce fuel on the forest floor.
- Work in conjunction with Lory State Park, when appropriate, in the implementation of the Forest Stewardship Plan in order to achieve economies of scale with contractors.
- Continue to monitor forest health and fire risk on an ongoing basis as outlined in the Forest Stewardship Plan.

b) Grassland and Shrubland Health and Management

The natural processes that have established the grassland and shrubland communities, whether it is fire, grazing, or general soil and moisture conditions, are not clearly known. Over time, the grasslands and shrublands have been heavily invaded by non-native grass species, such as cheatgrass and other brome grasses that are extremely difficult to manage and control.

In addition to the presence of non-native species in the grasslands and shrublands, a significant fuel build-up has occurred due to the absence of grazing and fire. The majority of Horsetooth Mountain Park's grasslands and shrublands are classified as a severe fire hazard.

To address these issues, a grassland and shrubland management plan was developed in 1999 by the Colorado Natural Heritage Program in partnership with Larimer County (Kettler and Pindea 1999). This plan identifies practical management tools for reducing the impact of invasive exotics and reducing the fuel load in the grasslands and shrublands. Potential management tools include the use of grazing or controlled burns, among others, to reduce the fire hazard in these communities as well as to maintain community health. This management plan will coordinate with the Forest Stewardship Plan as well as address issues related to rare species dependent upon the grassland and shrubland communities (see **Rare, Threatened and Endangered Species** section).

Implementation steps:

- Implement recommendations from the "Management Alternatives for Natural Communities and Imperiled Invertebrates at Horsetooth Mountain Park" (Ketter and Pindea 1999) to optimize the health of the Park's significant ecological resources (these recommendations are summarized in the



Pasque Flower

(Meegan Flenniken)



- threatened species section of this chapter)
- Engage staff and volunteers in implementing the management steps and monitoring outlined in the grassland and shrubland management plan.
 - Begin grassland restoration in degraded areas, particularly the valley on the east side of the Park.

c) Noxious Weed Management

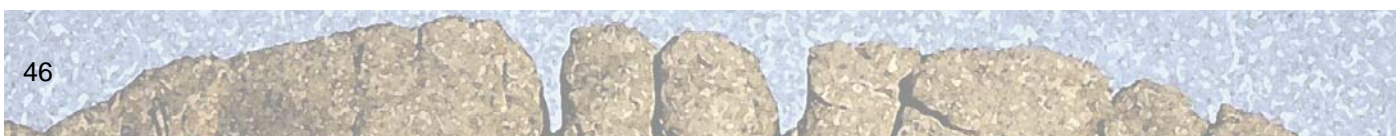
There are several noxious weeds as defined by the Colorado Department of Agriculture present in the Park. These include bull thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), dalmatian toadflax (*Linaria dalmatica*), dame's rocket (*Hesperis matronalis*), diffuse knapweed (*Centaurea diffusa*), houndstoung (*Cynoglossum officinale*), leafy spurge (*Euphorbia esula*), musk thistle (*Carduus nutans*) and puncture vine (*Tribulus terrestris*). The Integrated Weed Management Plan for Larimer County Parks and Open Lands Department outlines specific weed species and locations within the Park as well as specific management and monitoring strategies. Weed control measures should include mechanical, chemical, biological and cultural methods. A partial inventory in recreational areas, easy access areas and known areas with high weed populations was conducted in 2003 for all noxious weeds. However, a comprehensive inventory in the more remote areas for all of the noxious weeds should be conducted in order to develop a full strategy of control. Special care should be taken to control only the noxious weeds with minimal impact to surrounding native vegetation. For example, control efforts should recognize the existence of desirable native species of thistle in the Park which, from a distance, may be mistaken for Canada or musk thistle. These native thistle species are important hosts for the rare butterfly species located in the Park and should be protected.

Implementation steps:

- Continue to annually map and monitor noxious weed species within the Park and update the Integrated Pest Management Plan.
- Continue to implement the Integrated Pest Management Plan for noxious weed control and restoration. This plan should coordinate with existing vegetation management plans where appropriate in order to insure no impact to rare species populations.

d) Wildlife Management

Wildlife in Horsetooth Mountain Park is protected from harassment or injury by Park regulations that are enforced by ranger staff. Active wildlife management, however, is not currently practiced. There may be a time in the future where active wildlife management may be desirable in order to meet the needs of a specific wildlife species. For example, if it is determined that a particular area of the Park is an important deer fawning area, trails may be seasonally closed. Another possibility would be to modify the Forest Stewardship Plan to further enhance specific wildlife habitats as the need arises.



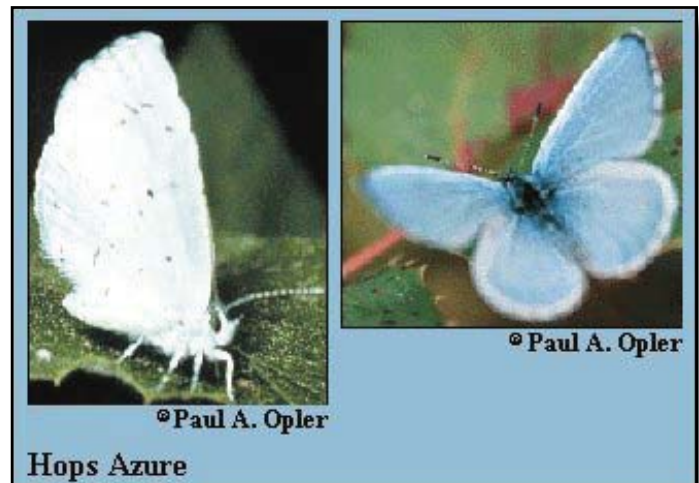
There are several wildlife species within the Park for which additional information would be useful in future wildlife management decisions. Efforts to study and monitor these species should be encouraged to begin to build a scientific baseline of information. In addition, a mechanism for facilitating the reporting of sightings by the public should be fostered.

Implementation steps:

- Engage staff or volunteers to inventory and monitor locations of sensitive species (nesting raptors, etc.) and wildlife populations to determine any necessary steps to minimize disturbance.
- Establish a system for visitors to report wildlife sightings.
- Encourage research of existing wildlife populations and corridors.
- Riparian areas should remain largely undisturbed by visitor use.
- Maintain existing large undisturbed areas in and adjacent to the Park as a refuge for wildlife.

e) Rare, Threatened and Endangered Species Management

The juxtaposition of Horsetooth Mountain Park at the interface between the mountains and plains creates a unique environment where biodiversity that would otherwise be separated comes together. The intricate mosaic of foothill grasslands and shrublands, interspersed with the ponderosa pine savanna and woodlands, and riparian areas provides habitat for a wide array of biodiversity elements including many butterflies, relict prairie plants, mammals and natural communities. The relict prairie patches found within the Park have host plants for butterflies whose ranges are declining with the declining prairie. Specifically, the eastern valley in the Park has the largest intact grassland meadow, providing a high value and sensitive habitat for rare butterfly species and prairie relict plants. Non-native, invasive plant species are a primary threat to biodiversity within Horsetooth Mountain Park. Recreational impacts such as social trails that contribute to soil erosion and the spread of non-native plant species, need to be managed to minimize or avoid disturbance of the habitat;



There are several rare and globally imperiled butterfly and plant species located in Horsetooth Mountain Park. The rare grassfern, (*Asplenium septentrionale*), is generally found on rock outcroppings in difficult to reach and generally undisturbed locations. Management of the grassfern populations found in Horsetooth Mountain Park should include tracking locations of the fern and periodically monitoring the populations to assure that the locations continue to be undisturbed.



Six rare butterfly species inhabit Horsetooth Mountain Park. The Colorado Natural Heritage Program (CNHP) has delineated a conservation site (Horsetooth Reservoir Hogbacks Conservation Site) that contains known populations of these butterflies, their habitat and a buffer for the habitat. CNHP has recommended that the site be managed for the reduction of non-native or weedy native species such as brome grasses (*Bromus tectorum*, *B. japonicus*, *B. inermis*) and dalmation toadflax (*Linaria dalmatica*) since these species compete with the native host plants of the butterflies. Management, monitoring and additional inventorying for rare or imperiled species is necessary to ensure the continued existence of these special natural resources.

The USFWS requires issuance of a permit for any “take” of threatened species including the federally listed Preble’s meadow jumping mouse. Larimer County will continue to work with the USFWS to ensure that all legal requirements are met before any new trail construction or other activities within 300 feet of potential habitat begins.

Implementation steps:

- Implement the Colorado Natural Heritage Program “Management Alternatives for Natural Communities and Imperiled Invertebrates” for the Park focusing on the preservation of the rare and imperiled butterflies while also considering the impact of habitat management on other species.
 - Use prescribed burning and grazing to reduce the abundance of non-native species and fuel loads in the grassland and shrublands.
 - Use application of herbicides or physical removal to reduce the abundance of non-native species in gulches and ravines.
 - Use prescribed burning and/or cutting to reduce the invasion of grasslands by ponderosa pine and mountain mahogany and shrublands by ponderosa pine.
 - Consult with knowledgeable butterfly experts before doing management prescriptions to insure that significant numbers of nectar and host plants and additional butterfly habitat is available outside of the area to be treated.
 - Minimize new trail construction and reduce the extent of social trails.
 - Consider options for revegetating treated areas, including planting or seeding with a native species mixture approved for the area.
 - Recruit volunteers and encourage researchers (especially at Colorado State University) to assist with and establish monitoring programs to assess the effectiveness of various management activities.
 - Engage staff or volunteers to monitor populations of rare and imperiled butterflies to determine the effectiveness of habitat management efforts and to ensure the continued health and viability of the existing populations.
- Close the Nomad Trail seasonally (April 1st thru July corresponding with butterfly lifecycle periods) to protect rare butterfly species. Annually evaluate the effectiveness of the closure. More lengthy or permanent closures may occur if seasonal closures are ineffective.
- Work with the USFWS to comply with regulations on the PMJM.



f) Hydrology and Erosion Management

Some of the springs in Horsetooth Mountain Park have historically been used for watering cattle. While cattle grazing currently does not occur in Horsetooth Mountain Park, the springs should be maintained in top operable condition as important wildlife watering areas. The springs also support small wetland communities that contribute to the biodiversity of plant and animal life in the Park.

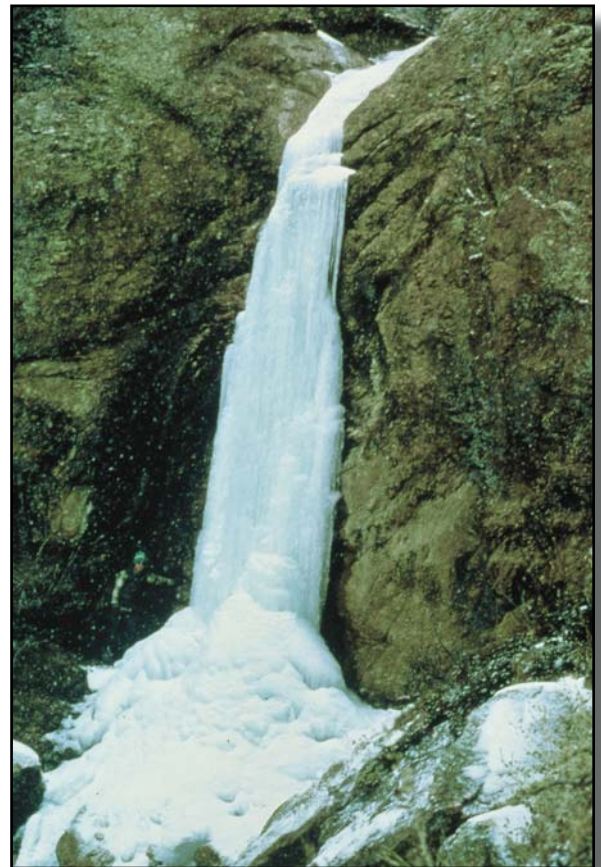
Implementation steps:

- Annually inspect and maintain all spring structures and conditions to insure that they are still in good operating condition.
- Keep springs cleaned out and flowing for wildlife use and habitat.
- Develop a spring rotation plan that enables one to two springs to “rest” each year to allow surrounding soils and plant life to recover periodically from trampling by wildlife.

Soil erosion is a major threat to land productivity and subsequently may impact wildlife habitat, native plant species and water quality. A combination of the soils and geology make the Park susceptible to high runoff during precipitation events and potentially soil erosion and gully formation. The Park will be managed for grassland and shrubland health (maintenance of adequate vegetative cover), a factor of utmost importance for erosion prevention.

Implementation steps:

- As trails are maintained or re-routed, design them to minimize erosion.
- Educate users to remain on designated trails so shortcuts or social trails are not created.



Horsetooth Falls in Winter

4.3 Cultural Resources Management

There is a rich cultural history of Horsetooth Mountain and valley. The focus of cultural management at Horsetooth Mountain Park and associated open spaces will be to keep visitors out of contact with the historic buildings and other cultural resources, while allowing for views of them from the trails and use of educational signs to explain their historic significance.



Cultural resource management, for purposes of this plan, is grouped into three categories: a) historic architecture, b) historic landscapes and c) dispersed sensitive sites.

a) Historic Architecture

The Soderberg Open Space has multiple buildings that preserve the history of the Soderberg and Herrington families. There is also a Logger's Cabin near Spring Creek that was used as temporary lodging and to store equipment during the period of logging activities. These buildings will be preserved to protect the history of the area and serve as educational resources.

b) Historic Landscapes

The Park has both natural and human made landscapes. The rugged terrain of the Park has limited alterations of the landscape; however, the Soderberg Open Space has remnants of irrigated agricultural activity. The alteration of hydrology and organization of agricultural facilities are part of the area's history. These landscapes need more research to understand their extent and organizations. The developed landscape will be preserved as a historic and cultural resource.



Soderberg Open Space Building

(Charlie Johnson)

c) Dispersed Sensitive Sites

The Park has two gravesites that are an important part of the Park's history and are important to the families of the people buried there. Family members have the right to visit the gravesites. Native Americans used the area for hunting and other activities. There are multiple sites in the Park that have remnants of Native American use. There has been no extensive research in the Park to determine the location and significance of Native American artifacts. Where sensitive sites are known, visitor access will be limited near these sites.

Implementation steps:

- Protect and stabilize as needed the ranch buildings and continue to maintain the house appropriately.
- Protect, store and use, when appropriate for educational purposes, the donated ranch implements and items from the Soderberg Family.
- Develop a cultural resource inventory for the Park.



4.4 Visitor Experience Management

Visitor experience management for the purposes of this plan is grouped into four categories: a) recreation experience; b) trail maintenance and construction; c) educational opportunities; and d) Horsetooth Mountain Trailhead redevelopment. Priorities for visitor experiences should be drawn from the primary recreation and education themes found in section 4.1 of this chapter. The Parks and Open Lands Department cannot provide all kinds of recreation and education, so the primary themes highlight the priorities.

a) Recreation Experience

It is the desire of the Larimer County Parks and Open Lands Department to maintain the diversity of recreational experience for Park users based on management zoning of the Park. Specifically, one goal includes preserving the “backcountry” feel of the north side of the Park. This approach complements the recreational use of Lory State Park which has more remote areas in the southern section of the Park that border the remote areas of Horsetooth Mountain Park. This backcountry designation not only provides a unique outdoor recreational experience within minutes of a major urban area, but also provides some quiet, relatively undisturbed areas for wildlife refuge.

Horsetooth Mountain Park is used by a large variety of recreationalists including hikers, joggers, mountain bikers, horseback riders, nature viewers and picnickers. Based upon a survey conducted in both 1997 and 2005, 93% of the Park users have never had a conflict with another user. Of those who did have a conflict, the interactions usually involved conflict between hikers and mountain bikers or between hikers and other hikers with dogs on or off leash. During the public workshop designed to explore Park issues, conflicts between mountain bikers and horseback riders were mentioned. Nevertheless, the general preference of the TAC and the public was to continue to have multiple use trails and limit segregation of various users. Emphasis will be on education and user courtesy. Consequently, most trails in Horsetooth Mountain Park will be open to all users with the exception of those trails that received high visitation primarily by hikers or those with steps or other steep impediments that make use by mountain bikers or horseback riders inappropriate.

Dogs and other pets are allowed in the Park. They must be on a leash and under control, however, at all times. This is to prevent the harassment of wildlife and to insure a safe experience for all users. Public concern has been expressed with regard to excessive dog excrement along the trails, in particular the first one quarter to one half mile of the trails that lead from the trailheads. Horse manure on the trails also poses a health and safety concern particularly for mountain bikers who may lose control of their bike when encountering fresh manure. Most manure is now concentrated on the trails that lead to Lory State Park (Swan Johnson, Shoreline and Nomad trails) and control of manure should be focused in these areas.

Backcountry camping is an under-utilized use of the Park. It is being proposed to establish three (3) designated backcountry campsites to provide a diversity of visitor experience and minimize resource damage associated with dispersed campsites. This program will be phased-in to assure



the success of the program from an experience, cost and impact standpoint, starting with only one designated campsite which will be evaluated before others are established. The program may be terminated if costs and impacts are too high. The three potential campsites will be located near the Logger's Cabin, near West Towers Trail (previously known as Towers Road) and near Mill Creek Trail and Tower's Trail intersection (see Map 4.1). These sites provide service vehicle access, while being located in remote settings that provide scenic overlooks and privacy.

Implementation steps:

- Develop a multi-user volunteer ranger program that emphasizes user education and outreach.
- Promote trail etiquette through clearly marked information signage and brochures.
- Provide dog waste bags, trash cans and a dog refuse cleanup procedure to address dog refuse problems along the first 1/4 to 1/2-mile of trails.
- Increase ranger presence in both front and back country areas to improve safety, provide information and control inappropriate visitor activities.
- Establish one of the potential designated backcountry campsites to provide a diversity of visitor experience and minimize resource damage associated with dispersed campsites. The initial one designated campsite will be evaluated before it becomes permanently established or the other made available for public use.
- Monitor visitor satisfaction on a regular basis through visitor surveys or interviews.
- Work with user groups to ensure that all events held in the Park go through the Department's adopted special event review process to determine if events are appropriate and to minimize impacts to natural and cultural resources as well as other visitors' experiences.

b) Trail Maintenance and Construction

In a 2005 survey, most Park users (95%) rated trail design as "excellent or good" with only 5% rating the trail design as "fair to very poor". The survey was conducted during May and June. On July 28, 1997, Horsetooth Mountain Park sustained considerable damage from a 500+ year flood including significant damage to trails. Inventory of the trail system after the flood revealed that water bar and sound trail construction enabled the majority of the trails to endure the flood with little to no damage. However, trails constructed



Naturalist Leading Hike

(Rick Price)



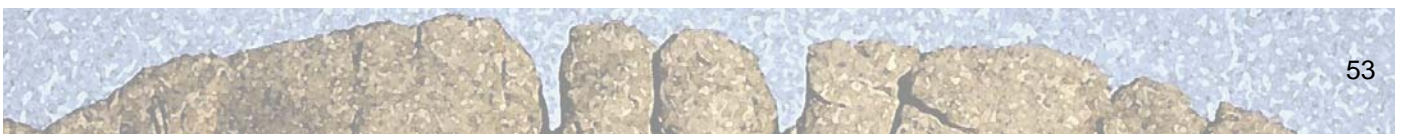
parallel to and near Spring Creek did sustain significant damage, demonstrating the need to keep trails away from the drainage. In addition, the flood revealed the wisdom of minimizing creek crossings to prevent bridge washout. Continued sound trail location and construction practices are essential to maintain the good trail rating of Horsetooth Mountain Park.

Implementation steps:

- Provide a more interconnected trail network through better trail connections, design and wayfinding signs.
- Implement trail classes for the Park that define the level of maintenance for each of the trails in the network.
- Annually complete an inventory of the Park's trail network to identify priorities for trail improvements as defined by their zoning designation and within the allocated budget.
- Realign the Horsetooth Falls Trail to move it out of the Spring Creek riparian areas as much as possible.
- Rename the lower portion of the Soderberg Trail (until it meets the South Ridge Trail [previously known as the service road]), as the Horsetooth Rock Trail and designate it as hiking only.
- Extend the Audra Culver Trail at the south end to connect directly east to the Horsetooth Rock Trail. This connection will allow hikers to access Horsetooth Rock Trail from the south end of Audra Culver Trail.
- Work with the County Road Department to encourage the addition of bike lanes along CR 38E to Inlet Bay as part of future road improvements.
- Implement the existing Departmental policy of closing some trails during mud season to prevent erosion, trail surface damage and poor visitor experience without closing access to the Park.
- Make the social trail connecting Spring Creek Trail to Stout Trail an official system trail
- Make the social trail known as Shoreline Trail an official system trail
- Close the Nomad Trail seasonally (April 1st thru July corresponding with butterfly lifecycle periods) to protect rare butterfly species. Annually evaluate the effectiveness of the closure. More lengthy or permanent closures may occur if seasonal closures are ineffective.
- Provide interpretation at key locations such as Horsetooth Rock and Horsetooth



Existing Kiosk Horsetooth Mountain Trailhead (Greg Oakes)



Falls.

- Maintain and improve the Park service roads (South Ridge and Towers trails) as budget allows. This includes erosion control and surface material.

c) Educational Opportunities

Currently, education and interpretation are limited to the trailhead kiosks, conducting naturalist-led hikes and talks, and the Horsetooth Falls interpretive brochure. Numerous additional educational opportunities exist in Horsetooth Mountain Park that could allow for the development of an integrated natural/historical/cultural/education site as budget allows.

Implementation steps:

- Develop a comprehensive interpretation plan that includes integrated interpretive themes and design of materials, trails, exhibits, webpage, etc, as appropriate.
- Develop interpretation materials that would be placed in the vicinity of Soderberg outbuildings and along the Swan Johnson Trail to provide educational information on historic buildings and cultural history of the area and encourage visitors to protect them by staying on the trail.
- Continue to provide volunteer naturalist-led cultural and natural history programs with the Volunteer Naturalist Program.
- Condense plant, bird and wildlife lists to a useable format and publish for public distribution.
- Identify appropriate opportunities for school and university classroom interactions



- in the Park.
- An educational sign/kiosk will be placed at the Horsetooth Mountain Trailhead and include Larimer County Parks and Open Lands Regulations, cultural/natural resource interpretive information and a site map showing significant features such as trails, protected lands, etc.
 - Partner with NAI, CSU and other organizations to improve interpretation and visitor experience in the Park.

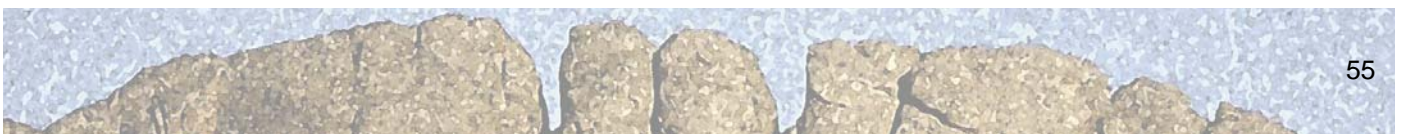
d) Horsetooth Mountain Trailhead Design and Re-Development

To improve access and visitor experience into Horsetooth Mountain Park, the existing Horsetooth Mountain Trailhead will be expanded and enhanced. The existing parking area currently accommodates 56 standard vehicles, 2 accessible vehicles and 8 equestrian vehicles with trailers which does not meet the demand for single car Park visitors. The proposed updated parking area will accommodate 84 standard vehicles, 4 accessible vehicles, 2 equestrian/bus spaces and 2 employee spaces. Studies have shown that the demand for equestrian spaces has diminished due to the opening of the Soderberg Trailhead. Androcite-surfaced walks will be constructed throughout the trailhead to provide pedestrian access from CR 38E and a safer experience for visitors. ADA accessible parking spaces, walks, trail entry plaza, picnic shelters and restrooms will be provided. Similarly, the redesign of the trailhead will provide an aesthetically pleasing entrance and traffic circulation alternative to the existing trailhead layout.



Existing Horsetooth Mountain Trailhead

(Greg Oakes)



The Park will continue to stay open 24 hours a day due to interest in providing night use. The northeast corner of the parking lot will continue to be gated and closed at night to deter vandalism and unwanted behavior. The trailhead will have a light on the new restroom that is downcast and if necessary in the future, additional appropriate lighting may be added to further protect the trailhead facilities.

An expanded Group Picnic Area/Outdoor Classroom will be developed to accommodate large gatherings of people for such uses as reunions, birthdays, educational events and weddings as appropriate and approved through the Departmental Special Event Process. As with the current policy, a fee will be charged for reserving the group picnic area. When the group area is not rented, it will be available for general visitation with 4 picnic tables, 2 grills at each shelter and one water fountain/spigot for both shelters. Native shrub and tree species will be planted around this area for shade as well as screening for the neighboring private property. There will also be 2 other small picnic shelters and 4 open picnic tables provided at the trailhead.

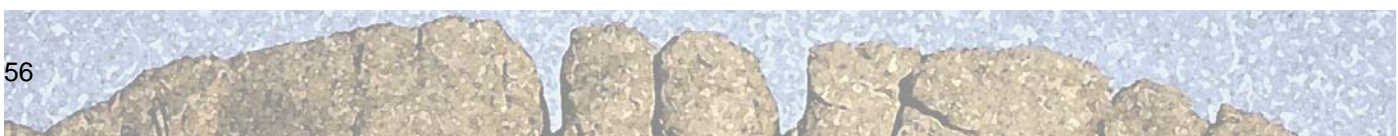
An entry station may be developed depending on the need to continue to charge user fees at the Park. This will allow staff to better control fees, provide information and provide shelter for employees collecting fees. The style of architecture will be consistent with other Larimer County Parks and Open Lands facilities. In addition to the entry station, a self-service pay/information station will be available when the entry station is not staffed. The entry experience will be enhanced through native plantings along the road.

The existing South Ridge Trail/Road access (previously know as the service road) will be relocated to the west edge of the trailhead to separate the road entrance from the trail entrances. This road will primarily be for maintenance and emergency access purposes, but horses will also access the South Ridge Trail and trail system via this road from the trailhead. Other visitors (hikers and bicyclists) will access the South Ridge Trail from the trail entry plaza.

A trailhead plaza will be developed to provide a better experience for visitors. The plaza will have amenities, such as new vaulted toilets with natural material finishings, drinking fountain/jug filler, benches, wayfinding signs and a relocated information kiosk. The kiosk will provide interpretation and general information, such as maps, trail etiquette information, emergency information and regulations. Visitor access will filter through the plaza to provide Park visitors information they need before entering the Park. The plaza will provide a separation between the parking area and restroom/kiosk signs providing a safe staging area. Additionally, a new entrance sign will be designed and installed at the Horsetooth Mountain Trailhead.

4.5 Park Administration

Park administration issues range from boundary signage and long-term funding issues for the Park to continuing to provide buffers and expand the current acreage. Throughout the management planning process, both the TAC and the public have expressed concern regarding the need for additional buffers to the Park. Suggestions have been made to expand the Park to



H o r s e t o o t h M o u n t a i n P a r k



H o r s e t o o t h M o u n t a i n T r a i l h e a d C o n c e p t

include the land owned by Colorado State University as well as other properties to buffer the Park. Any land added to the Park will fall under the guidelines of the adopted management plan. Any lands acquired would be negotiated in cooperation with the private landowners.

Implementation steps:

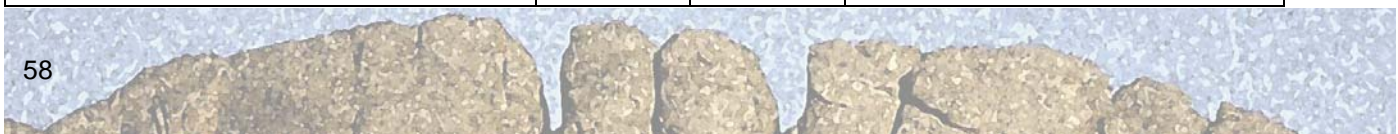
- Explore land acquisition possibilities on the south and west side of the Park to determine the capability and economic feasibility of expanding the buffer.
- Install signs where feasible to notify visitors of “leaving public lands” and private property boundaries.
- Seek long-term funding solutions for the Park.
- Work with the Friends of Larimer County Parks and Open Lands (an existing nonprofit organization) to help raise funds for the Park.
- Improve communication with stakeholders. Keep stakeholders updated about resource conditions, visitor experiences and administrative functions by keeping an updated website about Park information and activities.

4.6 Summary of Implementation Tasks and Phasing

A tabular summary of implementation tasks and proposed timelines are provided below (Table 3). These tasks will be prioritized and implemented as budget and time allow. In general, Larimer County Parks and Open Lands Department updates management plans on a 5-10 year basis. Issues, proposed new activities, special event requests, or other unforeseen actions not covered in this management plan will be reviewed on a case-by-case basis by the Resource Stewardship Team to determine if the proposed action is appropriate.

Table 3. Summary of Implementation tasks for the Horsetooth Mountain Park Management Plan.

Park Management Implementation Tasks	Priority	Date	Partners with HT District Staff
Forest Stewardship			
Work with contractors, volunteers and staff to implement the Forest Stewardship Plan	High	Ongoing	Colorado State Forest Service Emergency Services
Control mountain pine beetle through reduction of timber stand density per Forest Stewardship Plan	High	Spring 2008	Colorado State Forest Service Emergency Services
Control ponderosa dwarf mistletoe per Forest Stewardship Plan	High	Ongoing	Colorado State Forest Service Emergency Services
Monitor forest health and fire risk on an ongoing basis as outlined in the Forest Stewardship Plan	High	Ongoing	Colorado State Forest Service Emergency Services
Coordinate with Lory State Park when implementing the Forest Stewardship Plan	High	Summer 2006	Lory State Park



Park Management Implementation Tasks	Priority	Date	Partners with HT District Staff
Grassland and Shrubland Management			
Implement the 1999 Grassland and Shrubland Management Plan.	High	Spring 2007	Colo Natural Heritage Program Open Lands Program
Engage staff and volunteers to monitor grassland and shrubland health as outlined in the Grassland and Shrubland Management Plan	Med	Spring 2007	Colo Natural Heritage Program
Use prescribed burning/grazing to reduce non-native species and fuel loads in grasslands	High	Spring 2009	Colorado State Forest Service Emergency Services NRCS
Use burning and/or cutting to reduce the invasion of grasslands & shrublands by ponderosa pine	Low	Spring 2010	Colorado State Forest Service Emergency Services
Begin restoration in degraded areas, particularly the valley on the east side of the Park	Med	2008	NRCS Open Lands Program Weed Program
Noxious Weed Management			
Continue to implement and update the Integrated Pest Management Plan for noxious weed control	High	Ongoing	Weed Program
Identify and map newly listed noxious weed infestations as defined by the State	High	Ongoing	Weed Program
Monitor the success of the Integrated Pest Management activities	High	Annually	Weed Program
Wildlife Management			
Monitor locations of sensitive species and determine steps needed to minimize disturbance	High	Fall 2008	Colorado Division of Wildlife
Consult with knowledgeable butterfly experts before doing management prescriptions	High	Ongoing	Colorado Natural Heritage Program
Engage staff and volunteers to inventory and monitor non-sensitive wildlife species	Low	Summer 2009	Volunteer Program
Cooperate and partner with the DOW on wildlife management within Park boundaries	Med	Ongoing	Colorado Division of Wildlife
Establish reporting system for wildlife sightings	Low	Summer 2009	HT District
Encourage research and inventory of existing wildlife populations	Low	Ongoing	Colorado Division of Wildlife CSU



Park Management Implementation Tasks	Priority	Date	Partners with HT District Staff
Maintain existing large undisturbed areas in and adjacent to the Park as a refuge for wildlife	High	Ongoing	HT District
Hydrology Management			
Maintain all springs to insure that they are still in good operating condition	Med		HT District
Develop a spring rotation plan that enables 1-2 springs to “rest” each year and allow plant life to recover from trampling by wildlife	Med	Fall 2008	NRCS
Cultural Resource Management			
Evaluate options for long-term use of the Soderberg House and funding opportunities available for the option chosen	Med	Ongoing	Open Lands Program
Protect and stabilize as needed the ranch buildings and continue to maintain the house appropriately	Med	Ongoing	Open Lands Program
Protect, store and use, when appropriate for educational purposes, the donated ranch items from the Soderberg Family	Low	Ongoing	Education Program
Develop a cultural resource inventory for the Park	Low	Ongoing	HT District
Recreation Experience	High		
Develop a multi-user volunteer ranger program that emphasizes user education and outreach	High	Ongoing	Volunteer Program
Promote trail etiquette	High	Ongoing	HT District
Install dog waste bags, trash cans and a dog refuse cleanup procedure	High	Ongoing	HT District
Increase ranger presence in both front and back country	High	Ongoing	HT District
Educate users to remain on designated trails	High	Ongoing	HT District
Establish Interpretive Overlooks	Med		HT District
Establish one of the three (3) designated backcountry campsites as a trial situation	Low	Spring 2008	HT District
If the first backcountry designated campsite works and is appropriate, install the remaining two sites	Low	2010	HT District



Park Management Implementation Tasks	Priority	Date	Partners with HT District Staff
Monitor visitor satisfaction on a regular basis through visitor surveys or interviews	Med	Summer 2007	Colorado State University
Re-develop the Horsetooth Mountain Trailhead	High	Spring 2006	Engineering Department Open Lands Program
Ensure that all events held in the park go through the Departmental special event review process	High	Ongoing	Parks and Open Lands Staff
Trail Maintenance and Construction			
Inventory the Park's trail network to identify priorities for trail improvements	High	Annual	Trails Program
Make the social trail connecting Spring Creek Trail to Stout Trail a system trail	High	2006	Trails Program
Realign the Horsetooth Falls Trail to move it out of the Spring Creek riparian area	High	2007	Trails Program
Improve the HT Rock Trail to meet front country trail standards	High	2007	Trails Program
Extend the Audra Culver Trail to connect east to the Horsetooth Rock Trail	High	2007	Trails Program
Develop system and implement closure of Nomad Trail seasonally for rare butterflies	High	Spring 2006	HT District
Make the social Shoreline Trail a system trail	Med	2007	Trails Program
Maintain South Ridge Trail/Towers Trail roads as budget allows	Med	Ongoing	Construction Crew/Contractor
Work with the County Road Department to encourage adding bike lanes along CR 38E as part of future road improvements	Low	Ongoing	Road and Bridge Department
As trails are maintained or re-routed, design them to minimize erosion	High	Ongoing	Trails Program
Implement the existing Departmental policy of closing some trails during mud season	Med	Ongoing	HT District
Implement zoning that defines the level of maintenance for each trail	High	2006	HT District



Park Management Implementation Tasks	Priority	Date	Partners with HT District Staff
Education/ Interpretation Opportunities			
Develop a comprehensive education plan	High	Summer 2008	Education Program
Implement the education plan	High	Fall 2008	Education Program
Continue to provide volunteer naturalist-led cultural and natural history programs	Med	Ongoing	Education Program
Condense plant, bird, and wildlife lists to a useable format and publish for public distribution	Low	Summer 2007	Education Program
Identify appropriate opportunities for school and university classroom interactions in the Park	Med	Ongoing	Education Program
Install a educational sign/kiosk at the Horsetooth Mountain Trailhead	High	2006/07	Education Program Construction Crew
Partner with NAI, CSU, and other organizations to improve interpretation and visitor experience in the Park	Low	Ongoing	NAI CSU Education Program
Develop interpretation signs near Soderberg outbuildings and along the Swan Johnson Trail	Med	2007	NAI CSU Education Program
Provide interpretation at Horsetooth Rock and Horsetooth Falls.	Med	2007	NAI CSU Education Program
Administration			
Explore land acquisition possibilities on the south and west sides of the Park	Med	Ongoing	Open Lands Program
Install signs where feasible to notify visitors of private property boundaries	High	Ongoing	HT District
Seek long-term funding solutions for the Park.	High	Ongoing	Larimer County
Work with the Friends of Larimer County Parks and Open Lands to help raise funds for the Park	Med	Ongoing	Volunteer Program
Improve communication with stakeholders	High	Ongoing	HT District



5. APPENDIX A: Planning Team, Public and Agency Involvement

Planning Team

Larimer County Parks and Open Lands Department formed a planning team to update the resource management plan for Horsetooth Mountain Park. The team was made up of Larimer County staff and consultants from EDAW, a landscape architecture and environmental planning firm with an office in Fort Collins, CO.

The planning team was made up of the following people:

Name	Title	Project Role	Organization
Gary Buffington	Department Director	Supervision	Larimer County Parks and Open Lands Department
Mark Caughlan	Horsetooth District Manager	Project Manager	Larimer County Parks and Open Lands Department
K-Lynn Cameron	Open Lands Manager	Open Lands Advisor	Larimer County Parks and Open Lands Department
Meegan Flenniken	Resource Specialist	Resource Management	Larimer County Parks and Open Lands Department
Tom Keith	Principal	Supervision	EDAW
Drew Stoll	Landscape Architect	Project Manager	EDAW
Greg Oakes	Landscape Architect	Park Entrance Design	EDAW
Kelley Savage	Landscape Architect	Park Entrance Design	EDAW
Craig Severn	Ecologist	Resource Management	EDAW
Chad Schneckenburger	Park Planning	Reviewer	EDAW
Linda Spangler	Publishing	Publication	EDAW

Public Involvement

Extensive public and agency involvement was utilized to ensure full representation of those parties interested in Horsetooth Mountain Park.

Two public meetings were conducted to hear issues and concerns from the public. The first meeting introduced the management planning process, reviewed existing conditions and identified public recommendations and concerns regarding the Park. The second public meeting was an open house to present the preliminary management plan alternatives. These meetings were advertised with press releases and individual invitations to Park neighbors, public agencies



and organized visitor groups. A third meeting was held with leaders of organized user groups to discuss management plan alternatives. A summary of public meeting outcomes can be found at the end of this appendix.

Stakeholder interviews were conducted with Park neighbors and organized visitor groups. The purpose of these interviews was to seek the opinions of key stakeholders that have a particular interest in the Park, or have significant knowledge of Park resource or visitation. A summary of stakeholder comments can be found at the end of this appendix. The following list of questions was asked during the stakeholder interviews:

- What do you like most about the Park?
- What do you like least about the Park?
- What trails do you use the most?
- What improvements would you like to see in the Park?
- Do you have other comments or suggestions?

The following stakeholder groups were interviewed:

Stakeholder Group	Primary Activity / Interest
CSU Outdoor Adventure Program	Outdoor Education
Continental North Subdivision	Neighbor
Colorado Mountain Club	Hiking/ Nature Study
Quarter Horse Association	Horseback Riding
Diamond Peaks Mountain Bike Patrol	Mountain Bicycling
Larimer County Horseman's Association	Horseback Riding
Team BOB (Babes on Bikes)	Mountain Bicycling
Individual Neighbors	Neighbor

Technical Advisory Committee

Three Technical Advisory Committee (TAC) meetings were held with public agencies and scientists that have an interest in the management of the Park's resources and visitor experiences. These meetings served to review important aspects of the Park and review management alternatives and evaluate potential natural and cultural resource impacts. The agencies and scientists are important to the long-term conservation of the Park. Members of the technical advisory committee are listed below.

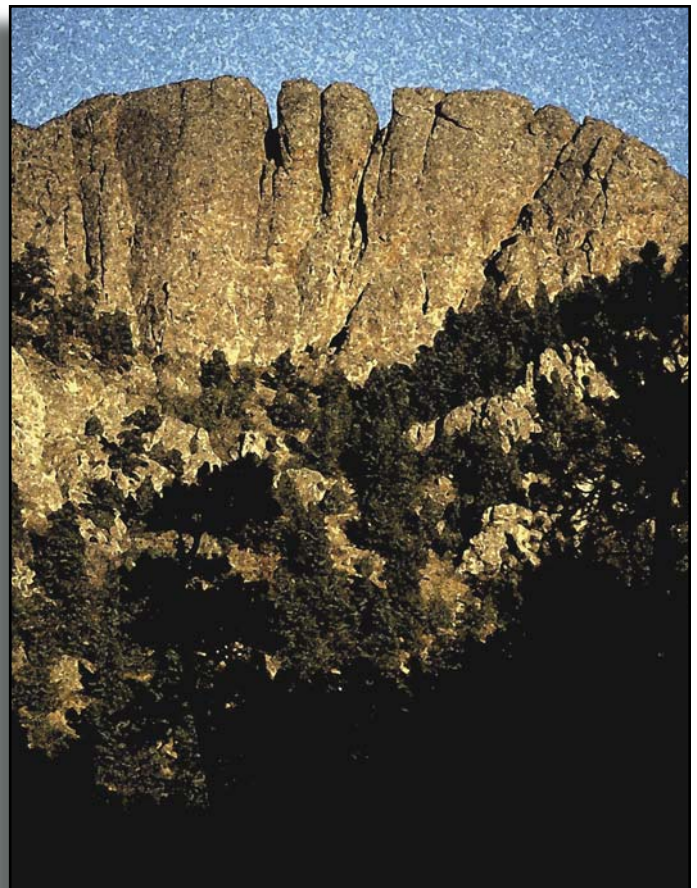


Name	Expertise	Organization
Kathy Seiple	Director	Lory State Park
Ann Montoya	Interpretation/ Education	Larimer County Parks and Open Lands Department
Renee Rondeau	Ecology/Vegetation Communities	Colorado Natural Heritage Program
Karen Mancini	Environmental Planner	Fort Collins Natural Areas Department
Don O. Hunter	Mountain Lion Research	USGS
Porter Ingrum	Land Use Planning	Larimer County Planning Department
John MacFarlane	Park Management	Retired HTMP Manager
Maxine Guill	Weed Specialist	Larimer County Parks and Open Lands Department
Kym Williams	Trails Management	Larimer County Parks and Open Lands Department
Joel Wykoff	Trails Management	Larimer County Parks and Open Lands Department
Boyd Lebeda	Forestry Management	Colorado State Forest Service
Paul Opler	Butterfly Expert	Independent Researcher

Acknowledgements

Special thanks to the technical advisory committee and the public for their participation, interest and feedback in the development of the Resource Conservation and Visitor Experience Management Plan for Horsetooth Mountain Park.

This plan is the compilation of previous management plans, studies, and contributions of all those who participated in the process. Every person that has worked over the years to conserve the Park, as well as the tax payers who funded the original purchase of the land, deserve a great deal of credit. Thank you!



Issues and Solutions Identified During the Public Process

Issues	Management Solutions
Keep public access open 24 hours a day to the Park	The main Park entrance on County Road 38E will remain open 24 hours a day.
Provide a trail along CR 38E from the Park to Inlet Bay	The management plan will recommend bike lanes along CR 38E to Inlet Bay, however construction of bike lanes will depend on future road improvements to CR 38E.
Improve the Park service roads for visitor use.	The service roads will be maintained and improved as budget allows. This includes erosion control and surface material.
Audra Culver trail ends on the road and should connect to another trail	This possibility was explored with Trails Staff and connecting the Audra Culver Trail to HT Rock Trail would not be a sustainable trail option.
Provide hitching posts for horses.	It is intended that visitors tie their horses to their trailers. Posts can be provided if warranted in the future.
Expand trails into Culver Open Space Only allow guided public access to Culver Open Space.	The management plan will explore management zones for the Park and look at areas where varying levels of recreation and buffering are appropriate in light of sensitive natural and cultural resources. Culver Open Space was created to protect sensitive resources and to buffer both the Park and residential areas from each other. New trails would limit the effectiveness of this buffer. In addition, there is currently poor non-sustainable access from the Park into this open space.
Restore/ stabilize historic structures and use them for Park services.	The Soderberg Open Space Management Plan already calls for the preservation and conservation of historic structures. This activity will be implemented as budget is available. These structures could be used for educational purposes.
Provide graduated entrance fees for different visitors (i.e. county residents, single Park pass, family pass).	The County Commissioners approve fees on an annual basis. There are stipulations on graduated or flat rates. Everything is fair game.
Keep the Park undeveloped Keep access to the backcountry difficult Sawmill Trail should not be open to horses Reroute Mill Creek trail (erosion, sensitive habitat) Stout, Sawmill and Herrington trails need more maintenance	The management plan will explore management zones for the Park and trail system and look at existing trail uses and designations. These zones will reflect the allowable uses in the Park (developed zone will be the only zone allowing trailhead facilities, etc.). Trails will be designated as level I, II or III depending on the following factors: location in frontcountry or backcountry zones, frequency of use, remoteness, desired experience and hence will receive a specific level of corresponding maintenance. For example, Westridge Trail, located in the backcountry zone, receives low use and provides a more remote visitor experience and therefore will be maintained less frequently and at a narrower width with only a trail name sign and no other amenities. Some trails may require re-routing due to sensitive habitat balancing visitor experience and sustainable trail routing options.
Connect Stout to Horsetooth Falls Trail	Due to the current existence of a good quality trail making this connection already, the low resource impact it creates and connectivity to popular trails within the Park, this trail is proposed for designation.



Issues	Management Solutions
Create a new trail in the NW part of the Park where there are no trails. Protect sensitive wildlife habitat. Keep some areas of the parks as low intensity areas.	The management plan will explore management zones for the Park and look at areas where varying levels of recreation and buffering are appropriate in light of sensitive natural and cultural resources. The Park currently has a high density of trails and the NW part of the Park is important wildlife habitat. Effort will be made to minimize impacts to sensitive wildlife habitat and some existing trails may be rerouted or closed.
Interpret Native American History in the Park	Native American history will be part of the interpretive messages provided at the Park.
Provide backcountry patrolling during high use times and camping	As Park budget allows, backcountry patrolling will be increased to provide services and enforce regulations.
Provide designated backcountry campsites	Potential for backcountry campsites will be explored and potentially phased in order to evaluate impacts on resources and budget. If impacts or costs are too high, the backcountry campsites will likely be discontinued.
Some trail users don't yield the right-of-way to others.	Education of multi-use trail etiquette will be done via information signs and education efforts by staff and volunteers.
There is conflict with bikes on trails close to the trailhead If some trails will be hiking only, then provide some trails for horses only	As part of looking at Park zoning, the possibility of designating the Frontcountry - HT Falls Trail and HT Rock Trail (to the Wathan intersection) as hiking only will be proposed. Both these trails are the highest used in the Park with the majority of the use as hiking. By designating hiking only on these two heavily used pedestrian trails, multi-use conflicts may be reduced and visitor experience improved. These two trails represent 11.3% of the trail system in the Park, leaving 88.7% as multi-use trails.
Allow the use of Park passes for pedestrian access for both Lory State Park and Horsetooth Mountain Park.	Currently you are able to purchase a pass from one of the Parks and travel by trail the same day to the other Park (reciprocity).
In the Park, explain why some conservation lands have entrance fees and other's do not.	The new entrance kiosk will include a description of why entrance fees are charged for this Park.
Provide better wayfinding and other signs. Provide better Park maps for visitors.	As the trail network is improved, the way-finding signs will be improved. A new Horsetooth Mountain Trailhead kiosk will be built, which will include way finding information.
Consider road capacity and aesthetics when redesigning the Horsetooth Mountain Trailhead.	The redesigned Park entrance will emphasize an attractive and natural landscape. There will be a new entrance sign that will reflect the character of the Park. Trailhead travel lanes will allow for automobile stacking to minimize congestion on CR38E.
Can an additional access point be added in the future?	The new entrance at Soderberg Open Space provides additional parking and access to Horsetooth Mountain Park. Any future trailhead development would need to account for carrying capacity of the Park to ensure protection of resources as well as consideration of visitor experience such as impacts from crowding on trails, etc.
Improve erosion and vegetation control on the trails.	Trail maintenance is completed as budget allows. Organized user groups may assist with trail maintenance. Some trails that are located on highly erodable soils may be rebuilt or relocated
Limit the use of lights in the Park to preserve the dark night sky.	Lights will not be used in the Park entrance. If lights are needed, only lights activated by motion sensors or work on a limited-time timer will be used.
There are no signs marking the Park boundaries to prevent trespassing	Signs will be installed where feasible to notify of "leaving public lands" and private property boundaries.



Issues	Management Solutions
Add a visitor contact building at the main entrance.	A small visitor contact building will be built close to the Park entrance. This building will be staffed during high-use periods so long as user fees are charged. The staff person will hand out Park information, assist with emergencies and charge entrance fees. The building will have windows for cars to drive up to when a staff person is present, otherwise there will be a self-service kiosk.
Keep the public informed about the planning process.	The project webpage will be used as the main communication tool. A list of interested people and organizations will be contacted directly (people who participated in public meetings and those who have contributed their comments). Project website: http://www.larimer.org/parks/htmlp_plan/
Close some trails during mud season, but provide alternative routes.	The Parks and Open Lands Department has a policy which allows closing some trails during mud season; however this policy has not yet been implemented. This plan will address closing some trails during mud season without closing access to the Park.
It is difficult to find the new Soderberg Trailhead	Directional signs will be placed on CR 38E to direct users to the Soderberg Trailhead
Slash piles are unattractive	Slash piles are created when forest improvement and management thinning projects are undertaken. Piles of the cut tree branches are temporarily created until they can be burned under allowable burning conditions (at least 3" of snow on the ground and acceptable air quality standards).
Acquire adjacent lands to buffer the Park	As lands become available for acquisition or offered for donation as fee-simple or conservation easements, they will be considered within the mission of the Department.
Show costs associated with changes from this management plan.	The management plan will reflect approximate costs associated with changes/ improvements.
Provide financial information of how Park entrance fees are used and the Park's annual budget. Annual passes are too high	The county budget is published on the county web site at www.larimer.org . The cost of annual entrance fees to beyond the scope of this project



Summary of Stakeholder Interviews

In October, 2005, organizations and individuals were interviewed to seek their opinions about the resource conditions and visitor experiences at Horsetooth Mountain Park. These organizations and individuals were recognized as stakeholders for the Park.

The following questions were asked and the responses are listed below the questions.

Question: What do you like most about the Park?

- The Park is close to home
- Trails: good network, width, difficulty, diversity, length
- The roads take away from the backcountry experience
- There is a good range of activities
- Nice views
- The pedestrian access entrance north of the Soderberg entrance is appreciated
- New Soderberg trailhead is a good connection to Lory S.P. and disperses use
- Public access on the east side helps reduce trespassing on west side of the Park
- The thinning of trees has improved the forest in the Park
- The no hunting rule is appreciated
- It is good that the Park attracts people who care for nature
- The metal sign posts work well
- No facilities in the backcountry

Question: What do you like least about the Park?

- Trail signs and network are confusing for new visitors
- Add directional signs to the new Soderberg Entrance/Exit
- There is conflict with bikes on trails close to the Horsetooth Mountain Trailhead
- Audra Culver Trail ends on the road and should connect to another trail
- It is sometimes necessary to use roads to access some trails
- Some trails should not be open to horses: not designed for horses (Sawmill Trail)
- Reroute Mill Creek Trail (erosion, sensitive habitat)
- Stout, Sawmill and Herrington Trails need more maintenance
- Connect Stout to Horsetooth Falls Trail
- There are no signs marking the Park boundaries to prevent trespassing
- Park visitors tear down fences to access private property
- Camping causes a fire risk in the Park (actually no fires are allowed)
- Annual passes are too high
- Slash piles are unattractive
- Night riding should be allowed

Question: What trails do you use the most?

(note: more bicyclists responded than other users)

- Horsetooth Rock -1
- Audra Culver -1



- Horsetooth Falls -1
- Nomad – 7
- Shoreline -3
- Spring Creek -7
- Mill Creek -5
- Loggers -4
- Service Roads -4
- Herrington Loop -4
- Watson Trail -1
- Wathen -5
- West Ridge -1
- Stout -4
- Carey Springs -2
- Soderberg -1
- Ridge Trail -1

Questions: What improvements would you like to see in the Park?

- Improve some trails to reduce erosion, slope and danger (Mill Creek, Horsetooth Trail near Horsetooth Rock)
- Improve Tower Road for public use (bad erosion)
- Provide backcountry patrolling during high use times and camping
- Forest condition (disease) on neighboring properties may affect the Park's forest
- Keep it undeveloped
- Keep access to the backcountry difficult

Questions: Do you have other comments or suggestions?

- Improve the Park maps (too busy)
- Multiuse trails are appreciated
- If some trails will be hiking only, then provide some trails for horses only
- Cooperatively manage the forest with neighbors when possible
- People illegally access the Park from the west to avoid pay entrance fees
- Acquire adjacent Redstone Canyon properties when they are available to buffer the Park from adjacent land use
- Improve communication with neighboring homeowner associations



6. APPENDIX B: Bibliography

Cashman, R. 1978. *Legends and history are Horsetooth past*. Fort Collins Coloradoan. December 23, 1978.

CTL/Thompson. 2003. *Phase I Environmental Site Assessment Culver Property*. Ft. Collins, Colorado.

Colorado Climate Center. 1999. Website <http://ccc.atmos.colostate.edu>

Colorado State Forest Service, Ft. Collins District. 1998. *Horsetooth Mountain Park Forest Management Plan*. Ft. Collins, CO.

Colorado Division of Wildlife. 2002. Colorado Division of Wildlife Natural Diversity Information Source.

Colorado Natural Heritage Program. 1996. Significant Plant, Animal and Wetland

Colorado Natural Heritage Program. 1999. Management Alternatives for Natural

Colorado Natural Heritage Program. 1999. *Management Alternatives for Natural Communities and Imperiled Invertebrates at Horsetooth Mountain Park, Larimer County, Colorado*.

CSU, Dept of Natural Resource Recreation and Tourism. R431 Class 2001. Backcountry Management at Horsetooth Mountain Park.

Culver, Dale. May 1999. Personal Communication.

Doyle, G.A., S.L. Neid and R.J. Rondeau. 2004. *Survey of Critical Biological Resources, Larimer County, Colorado* CNHP.

EDAW, Inc. 1995. *Resource Management Plan for Horsetooth Reservoir, Carter Lake, Flatiron Reservoir and Pinewood Lake*. Larimer County, CO.

Harrington, H.D. 1964. *Manual of the Plants of Colorado*. Swallow Press, Chicago, Il.

Hendon, W.L. 1984. *Horsetooth Mountain Park and Lory State Park: Natural Resource Inventory, History and User Survey*. Colorado State University, Fort Collins, CO.

Hughey, Don and Audra. February 1999. Personal Communication.

Kettler, S., J. Sanderson, S. Spackman, K. Fayette, C. Pague, D. Clark and A. Hicks. 1996. *Significant Plant, Animal and Wetland Resources of Larimer County and their Conservation*. Prepared for Larimer County Parks and the Colorado Department of Natural Resources by the



Colorado Natural Heritage Program, Fort Collins, Colorado.

Kettler, S. and P. Pindea. 1999. *Management Alternatives for Natural Communities and Imperiled Invertebrates at Horsetooth Mountain Park, Larimer County, Colorado*. Prepared for Larimer County Parks and Open Lands by the Colorado Natural Heritage Program, Fort Collins, Colorado.

Larimer County, Parks and Open Lands Department. 2001. *Larimer County Open Lands Master Plan*. Loveland, Colorado.

Larimer County Parks and Open Lands. 1997. Horsetooth Mountain Park User Survey.

Larimer County Parks and Open Lands. 2005. Horsetooth Mountain Park User Survey.

Larimer County Parks and Open Lands. 2003. *Resource Management Plan for the Soderberg Open Space*.

Larimer County Parks and Open Lands. 2004. *Resource Management Plan for the Culver Open Space*.

Larimer County Parks and Open Lands. 2003. *Resource Management Plan for the Hughey Property Open Space*.

Larimer County Parks and Open Space Comprehensive Parks Master Plan. 1993.

Larimer County Parks and Open Lands Department. 1998. *Resource Management Plan for Horsetooth Mountain Park*. Loveland, CO 80537

Mitchell, Axton and McCarty, Inc. 1997. *Appraisal of Audra Hughey Property*. Greeley, CO.

National Park Service, Department of the Interior, 1997. Visitor Experience and Resource Protection Planning Methodology (VERP), <http://planning.nps.gov/document/verphandbook.pdf>

NatureServe. 2003. NatureServe explorer: An online encyclopedia of life (web application) Version 1.6, Arlington Virginia. (www.natureserve.org/explorer).

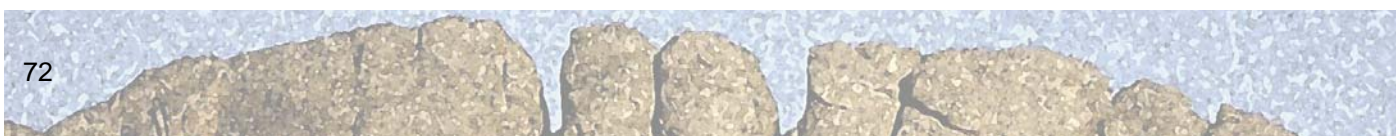
Opler, P. *Peterson Field Guides: Western Butterflies*. Houghton Mifflin Company, New York.

Opler, P. Unpublished. *Butterflies of Horsetooth Mountain and Lory Parks*.

Opler, P. Unpublished. Bird List of Horsetooth Mountain Park.

Significant Wildlife Habitat Maps, Larimer County, Colorado. 2002.

Soderberg, Johnny and Virginia. 1999. Personal Communication.



United States Department of Agriculture, Soil Conservation Service and Forest Service. 1980. *Soil Survey of Larimer County Area, Colorado*. U.S. Department of Agriculture. 239-812/3.

Watrous, A. 1998. *History of Larimer County, Colorado Volume II*. Vestige Press, Ft. Collins, CO.

Weber, W. A and Ronald C. Wittmann. 1996. *Colorado Flora: Eastern Slope*. University Press of Colorado. Niwot, CO.

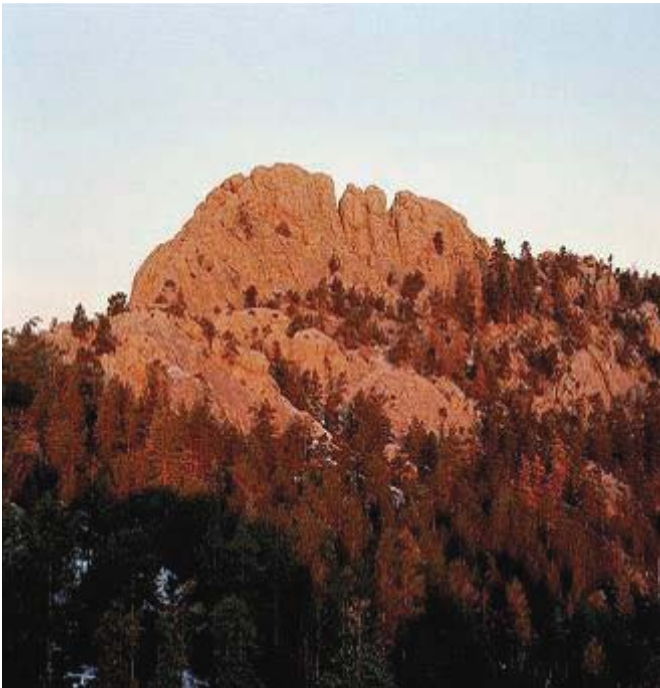
Larimer County Elections Office, 1981. Ballot to Tax Larimer County Residents for the Purchase of Horsetooth Mountain.

Larimer County Recreation Department, 1981. *Horsetooth Mountain Park Management Plan*



7. APPENDIX C: Visitor Survey and Results (2005)

Larimer County Parks and Open Lands Visitor Survey Results



Horsetooth Mountain Park Summer 2005



Tables

Table	Description	Page
1	Number of days	4
2	Number of hours	5
3	How often visited	5
4	Activity participated in	6
5	Trails used during visit	7
6	Reason for choosing LCPOL	7
7	Amenity desired	8
8	Evaluate staff courtesy	9
9	Evaluate staff professionalism	9
10	Evaluate staff appearance	10
11	Evaluate staff knowledge	10
12	Restroom cleanliness	14
13	Restroom availability	14
14	Restroom privacy	14
15	Parking area design	14
16	Parking area availability	14
17	Parking area signs	14
18	Picnic areas availability	15
19	Picnic areas access	15
20	Picnic areas cleanliness	15
21	Drinking water availability	15
22	Drinking water access	15
23	Drinking water quality	15
24	Trash disposal availability	16
25	Trash disposal identifiable	16
26	Trash disposal cleanliness	16
27	Number of trails	17
28	Design of trails	17
29	Level of signage	18
30	Destination	18
31	Wildlife viewing	20
32	Information/maps	20
33	Horseback riding	20
34	Hiking	20
35	Mountain biking	21
36	Solitude	21
37	Quality of experience	21
38	Educational programs	21
39	Encounters with wildlife	21
40	Entrance fee for walking in	22
41	Participation in programs	22
42	Condition of roads important	26
43	Condition of roads attained	26
44	Parking areas important	27
45	Parking areas attained	27
46	Picnic areas important	27
47	Picnic areas attained	27
48	Condition of trails important	27
49	Condition of trails attained	27
50	Drinking water important	28
51	Drinking water attained	28
52	Restrooms important	28
53	Restrooms attained	28
54	Knowledgeable staff important	28



55	Knowledgeable staff attained	28
56	Educational programs important	29
57	Educational programs attained	29
58	Educational program desired	29
59	Conflict with another user	30
60	Felt crowded	30
61	Acceptable number of visitors	31
62	Acceptable number of visitors	31
63	Influence of crowding	32
64	Day of visit	32
65	Number of people in group	33
66	Age of visitor	33
67	Gender of visitor	33
68	Area of residence	34
69	Household income	34
70	Ethnicity	35

Question one asked respondents to indicate their length of stay in the Park broken down in both number of days and number of hours. There were 36 total responses to the first part of this question (10%). Of those who responded, 24 stated they intended staying 1 day. This was the highest percentage at 67%. The next highest was 2 days, with a total response of 5, (14%). A total of 314 respondents skipped this question (90%). Results are found in Table 1.

Table 1.

Number of days	Frequency	Percent
1	24	67
2	5	14
3	2	7
4	4	11
7	1	3
Total	36	100
Missing	314	90
Total	350	

The second part of question one asked respondents to indicate the number of hours they intended on staying in the Park. There were a total of 279 responses to this question at 80%. Of those responding, 102 stated they intended on staying 2 hours (37% of the respondents). The next highest was 3 hours, with a total response of 78, (28% of respondents). The third highest frequency was 4 hours, with a total response of 56, (20% of respondents). A total of 71 respondents omitted this question (20%).

Results are found in Table 2.

Table 2.

Number of hours	Frequency	Percent
1	18	7
2	102	37
3	78	28
4	56	20
5	15	5
6	9	3
8	1	1
Total	279	100



Missing	71	20
Total	350	

Question three asked respondents how often they visited Larimer County Parks and Open Lands. There were a total of 341 visitors who answered this question (97%). Of those who responded, 90 (26%) indicated they visit the Park 1-4 times per year. The second highest response was 83 (24%), indicating this was their first visit to Horsetooth Mountain Park. The third highest response was 71 respondents (21%) who indicated they visit once a week or more. Only 9 respondents skipped over this question (3%).

Table 3.

How often do you visit	Frequency	Percent
This is my first visit	83	24
1-4 times per year	90	26
5-10 times per year	57	17
Once a month or more	40	12
Once a week or more	71	21
Total	341	100
Missing	9	3
Total	350	

Respondents were asked in question four to indicate which activities they intended on participating in while visiting the Park. This question was asked in the format to check all that apply. Of the activities indicated, hiking had the highest frequency with a total response of 285 (81%). The second highest response was spending time with family and friends with a response of 162 (46%). Scenic and wildlife viewing was the third chosen activity with a response of 128 (37%). A category of 'other' was also included in this question. Of those who indicated 'other', (43 responses) the activities included: backpacking, camping, campfires, climbing, dog walking, horseback riding and running.

Table 4.

Activity participated in	Frequency	Percent
Spending time with friends and family	162	46
Picnicking	60	17
Scenic/wildlife viewing	128	37
Hiking	285	81
Bicycling	61	17
Other	43	12

Question five asked respondents to refer to the route or trails they were on. This question had an 89% response rate. Only 37 respondents, (11%), failed to answer this question. From the responses, the Horsetooth Rock trail received the most response at 149 (48%). The Soderberg trail was the second most desired route with 133 responses (42%). The third most popular trail was Horsetooth Falls with a response frequency of 128 (41%). Finally, the Spring Creek trail was the fourth most desired route with 67 responses (21%). All of the other trails had response rates of less than 15%.

Table 5.



Trails used during visit	Frequency	Percent
Horsetooth Rock	149	48
Soderberg	133	42
Horsetooth Falls	128	41
Spring Creek	67	21
Wathen	41	13
Service Road	36	12
Westridge	20	6
Audra Culver	15	5
Herrington	10	3
Stout	9	3
Towers Road	7	2
Mill Creek	6	2
Carey Springs	2	1
Sawmill	2	1
Loggers	1	1

The sixth question of the survey asked respondents why they chose this area of Larimer County Parks and Open Lands as opposed to another location. This question was answered by 323 of the respondents (92%). Only 27 respondents (8%) omitted this question. According to the respondents, the number one reason they visited Horsetooth Mountain Park was because it was close to home (158 responses, 49%). The second most popular reason for visiting the Park was a recommendation from a friend (25 responses, 8%). Good views was the third reason for visiting (23 responses, 7%). Good trail maintenance was the fourth reason for visiting (22 responses, 7%). All other reasons listed had response rates of less than 6%. Table 6 lists the top 10 frequency and response rate categories for visiting Larimer County Parks and Open Lands.

Table 6.

Reason for choosing LC POL	Frequency	Percent
Close to home	158	49
Recommended from friend	25	8
Good views	23	7
Good trail maintenance	22	7
Beautiful	15	5
Hike to Horsetooth Rock	13	4
Accessible	9	3
Good bicycling trails	8	2
Hike to Horsetooth Falls	7	2
Convenience	6	2

Question seven asked respondents to indicate their desired amenity that was not offered. There were only 136 (39%) responses to this question. This question was left blank by 214 (61%) of the respondents. Of the 136 who did respond, 28 (21%) stated 'no amenities desired, everything is fine.' Trash cans on the mountain were desired by 24 (18%) of the respondents. Water fountains on trails accounted for 19 (14%) of the desired amenities. Free parking was also noted as a desired amenity by 8 (6%) of respondents. Table 7 illustrates the top 6 amenities desired.

Table 7.

Amenity desired	Frequency	Percent
Everything is fine	28	21



Trash cans on the mountain	24	18
Water fountains on mountain	19	14
Free parking	8	6
Hand sanitizer in bathrooms	7	5
More benches on trails	4	3

An evaluation of the staff was the basis for question eight. Respondents were asked to rate the staff on a scale of 1-5. One means very poor, 5 means excellent. The four different categories of evaluation were: courtesy, professionalism, appearance and knowledge. In all four categories, there was not a single rating of staff as poor.

An evaluation of staff courtesy received 334 responses, a response rate of 95%. Only 16 (5%) failed to answer this question. Of those who responded, 78 (82%) rated the staff as excellent. Additionally, 56 (17%) rated the staff as good. Only 5 (1%) rated the staff as very poor or fair. Results are found in Table 8.

Professionalism of the staff was also asked in question eight. A total of 332 (95%) respondents answered this portion of the question. A total of 18 (5%) omitted this question. Of those who answered, 264 (79%) believed the professionalism of staff to be excellent. Furthermore, 65 (20%) rated the staff professionalism as good. Only 3 respondents (1%) believed the staff professionalism to be very poor or fair. Results are found in Table 9.

Table 8.

Evaluate staff courtesy	Frequency	Percent
Very poor	2	1
Poor	0	0
Fair	3	1
Good	56	17
Excellent	273	82
Total	334	100
Missing	16	5
Total	350	

Table 9.

Evaluate staff professionalism	Frequency	Percent
Very poor	2	1
Poor	0	0
Fair	1	1
Good	65	20
Excellent	264	79
Total	332	100
Missing	18	5
Total	350	

The staff was also evaluated on their appearance. A total of 332 (95%) offered feedback on this portion of the question. Only 18 (5%) left this portion of the question blank. Of the 332 who responded, 274 (82%) rated the appearance of staff as excellent.



Additionally, 55 (16%) of the respondents rated the staff's appearance as good. Only 3 respondents (1%) rated the staff's appearance as very poor or fair. Results are found in Table 10.

The final portion of question eight asked respondents to evaluate the staff on their knowledge. A total of 312 (89%) respondents answered this portion of the question. There were 38 (11%) of respondents who skipped this question. The results were similar to the other portions of question eight; 236 (76%) rated the staff's knowledge as excellent, while 71 (23%) of the respondents rated the staff's knowledge as good. Only 5 (2%) rated the staff's knowledge as very poor or fair. Results are found in Table 11.

Table 10.

Evaluate staff appearance	Frequency	Percent
Very poor	2	1
Poor	0	0
Fair	1	1
Good	55	17
Excellent	274	82
Total	332	100
Missing	18	5
Total	350	

Table 11.

Evaluate staff knowledge	Frequency	Percent
Very poor	1	1
Poor	0	0
Fair	4	1
Good	71	23
Excellent	236	76
Total	312	100
Missing	38	11
Total	350	

Question nine asked respondents to rate certain aspects of the facilities. The rating was a scale of 1-5. One means very poor, 5 means excellent. The different categories of facilities included in this question were: restrooms (cleanliness, availability and privacy); parking areas (parking design, space availability and directional signs); picnic areas (availability, access and cleanliness); drinking water (availability, access and quality); and trash disposal (availability, identifiable and cleanliness).

An evaluation of the cleanliness of the restrooms received 251 (72%) response rate. There were a total of 99 (28%) who failed to answer this portion of the question. A total of 60 (24%) rated the cleanliness as excellent. While 131 (52%) rated the restroom cleanliness as good. A total of 60 respondents (24%) rated the restroom cleanliness as very poor, poor, or fair. Results



are found in Table 12.

Restroom availability received 254 (73%) response rate. There were 96 (27%) respondents who omitted this part of the question. Of those who responded, 89 (35%) rated restroom availability as excellent. A total of 124 (49%) respondents rated availability as good. Only 41 (16%) ranked restroom availability as very poor, poor, or fair. Results are found in Table 13.

The privacy of restrooms received 252 (72%) total responses. A total of 98 (28%) of respondents did not answer this portion of the question. From the responses given, 100 (40%) evaluated the privacy of restrooms as excellent. In addition, 128 (51%) rated the privacy as good. A total of 24 (9%) of respondents felt the privacy was very poor or fair. There was no rating of poor from any of the respondents. Results are found in Table 14.

An evaluation of parking areas was included in question nine. Parking areas design received 335 (96%) response rate. Only 15 (4%) of respondents omitted this portion of the question. Of those who responded, 162 (48%) felt the design of the parking lot was excellent and 149 (44%) rated the design as good. A total of 24 (7%) believed the parking design to be very poor, poor, or fair. Results are found in Table 15.

The space availability of the parking lot accrued 326 responses (93%). There were a total of 23 (7%) of respondents who skipped this question. A total of 153 (47%) of patrons believed the space availability to be excellent. Additionally, 129 (40%) felt the availability to be good. There were 44 (13%) of respondents who rated the availability as very poor, poor, or fair. Results are found in Table 16.

Directional signs of the parking area received 322 (92%) responses. A total of 28 (8%) failed to answer this portion of the question. Of those who responded, 157 (49%) considered the directional signs excellent. Also, 131 (41%) believed the signs as good. A total of 34 (10%) perceived the directional signs as very poor, poor, or fair. Results are found in Table 17.

A rating of the picnic areas was the next portion of this question. Picnic area availability received 264 (75%) response rate. Of those responding, 115 (44%) believed the picnic area availability was excellent. Furthermore, 121 (46%) of respondents felt the availability was good. Only 27 (10%) considered the picnic area availability as very poor, poor, or fair. Results are found in Table 18.

Access to the picnic areas acquired 254 responses (73%). A total of 96 respondents (27%) left this question blank. Nearly one-half 116 (46%) considered the access to picnic areas as excellent; while 115 (45%) deemed access to the picnic areas as good. A minimal 22 respondents (9%) believed access to the picnic areas as very poor, poor, or fair. Results are found in Table 19.

The cleanliness of the picnic areas acquired 253 (72%) total responses. There were a total of 97 (28%) of respondents who omitted this question. Again, nearly one-half, 118 (47%) of respondents believed the cleanliness of the picnic areas as excellent; 114 (45%) felt the cleanliness was good. A total of 20 (8%) of the respondents believed the picnic area cleanliness was very poor, or fair. There was no rating of poor from any of the respondents. Results are found in Table 20.

The drinking water availability, access and quality were the next portion of question nine. Availability of drinking water received 257 (73%) total responses; 93 respondents (27%) failed to answer this portion of the question. Of those who did



respond, 71 (28%) considered the availability as excellent. A total of 99 (38%) believed the drinking water availability was good. A rating of fair was assessed by 53 (21%) of the respondents. The remaining 34 (13%) believed the availability was very poor or poor. Results are found in Table 21.

Access to drinking water accrued 251 (72%) total responses. There were 99 (28%) who left this portion of the question blank. A total of 80 (32%) considered the access to drinking water as excellent; while 104 (41%) believed the access was good. A total of 42 (17%) of the respondents felt the access to drinking water was fair. The remaining 25 (10%) felt the access was very poor or poor. Results are found in Table 22.

The quality of drinking water received 236 (67%) responses. Nearly one-third, 114 (33%), of the respondents omitted this question. Of those who responded, 94 (40%) believed the quality of drinking water was excellent. A total of 90 (38%) of respondents felt the quality was good. Additionally, 29 (12%) considered the quality as fair. The remaining 22 (9%) of respondents believed the quality of drinking water as very poor or poor. Results are found in Table 23.

Trash disposal availability, identifiable and cleanliness was the final portion of question nine. There were a total of 278 (79%) responses to the trash disposal availability portion of this question. A total of 72 (21%) of respondents skipped this question. Altogether, 89 (32%) of respondents believed the availability was excellent; while 113 (41%) felt the availability was good. Additionally, 49 (18%) considered the availability of trash disposal was fair. The remaining 26 (9%) felt the availability was very poor or poor. Results are found in Table 24.

Identifying trash disposal was the next portion of question nine. There were a total of 273 (78%) responses to this question. A total of 77 (22%) of the respondents omitted this question. Of those who responded, 100 (37%) considered trash disposal identification as excellent; while more than one-third, 108 (40%) believed trash disposal identification was good. Furthermore, 49 of the respondents (18%) felt that identification was fair. The remaining 15 (5%) believed that identification of trash disposal was very poor or poor. Results are found in Table 25.

Trash disposal cleanliness was the final portion of question nine. A total of 272 (78%) respondents answered this portion of the question. There were 78 respondents (22%) who left this question blank. Altogether, 106 (39%) believed the trash disposal cleanliness was excellent. A total of 123 (45%) considered the cleanliness good; and 33 (12%) felt the cleanliness was fair. The remaining 9 respondents (3%) felt the cleanliness of trash disposal areas very poor or poor. Results are found in Table 26.

Table 12.

Restroom cleanliness	Frequency	Percent
Very poor	1	1

Table 13.

Restroom availability	Frequency	Percent
Very poor	1	1



Poor	11	4	Poor	5	2
Fair	48	19	Fair	35	14
Good	131	52	Good	124	49
Excellent	60	24	Excellent	89	35
Total	251	100	Total	254	100
Missing	99	28	Missing	96	27
Total	350		Total	350	

Table 14.

Restroom privacy	Frequency	Percent
Very poor	1	1
Poor	0	0
Fair	23	9
Good	128	51
Excellent	100	40
Total	252	100
Missing	98	28
Total	350	

Table 15.

Parking area design	Frequency	Percent
Very poor	1	1
Poor	1	1
Fair	22	7
Good	149	44
Excellent	162	48
Total	335	100
Missing	15	4
Total	350	

Table 16.

Parking area availability	Frequency	Percent
Very poor	3	1
Poor	9	3
Fair	32	10
Good	129	40
Excellent	153	47
Total	326	100
Missing	23	7
Total	350	

Table 17.

Parking area signs	Frequency	Percent
Very poor	3	1
Poor	2	1
Fair	29	9
Good	131	41
Excellent	157	49
Total	322	100
Missing	28	8
Total	350	

Table 18.

Picnic areas availability	Frequency	Percent
Very poor	1	1
Poor	1	1
Fair	25	9
Good	121	46
Excellent	115	44
Total	264	100
Missing	86	25
Total	350	

Table 19.

Picnic areas access	Frequency	Percent
Very poor	1	1
Poor	1	1
Fair	20	8
Good	115	45
Excellent	116	46
Total	254	100
Missing	96	27
Total	350	

Table 20.

Picnic areas cleanliness	Frequency	Percent
Very poor	1	1
Poor	0	0
Fair	19	7
Good	114	45

Table 21.

Drinking water availability	Frequency	Percent
Very poor	9	3.5
Poor	25	10
Fair	53	21
Good	99	38



Excellent	118	47	Excellent	71	28
Total	253	100	Total	257	100
Missing	97	28	Missing	93	27
Total	350		Total	350	

Table 22.

Drinking water access	Frequency	Percent	Drinking water quality	Frequency	Percent
Very poor	6	2	Very poor	5	2
Poor	19	8	Poor	17	7
Fair	42	17	Fair	29	12
Good	104	41	Good	90	38
Excellent	80	32	Excellent	94	40
Total	251	100	Total	236	100
Missing	99	28	Missing	114	33
Total	350		Total	350	

Table 23.

Table 24.

Trash disposal availability	Frequency	Percent	Trash disposal identifiable	Frequency	Percent
Very poor	4	1	Very poor	1	1
Poor	22	8	Poor	14	5
Fair	49	18	Fair	49	18
Good	113	41	Good	108	40
Excellent	89	32	Excellent	100	37
Total	278	100	Total	273	100
Missing	72	21	Missing	77	22
Total	350		Total	350	

Table 25.

Table 26.

Trash disposal cleanliness	Frequency	Percent
Very poor	1	1
Poor	8	3
Fair	33	12
Good	123	45
Excellent	106	39
Total	272	100
Missing	78	22
Total	350	

Question ten asked respondents to evaluate certain aspects of the trails in Horsetooth Mountain Park. The categories were: number of trails, design of trails, level of signage and destination. The rating was a scale of 1-5. One means very poor, 5 means excellent. For the category of number of trails, there were 332 (95%) total responses. Only 18 (5%) neglected to answer this portion of the question. Of those who responded, 161 (48%) rated the number of trails as excellent. Additionally, 155 of the respondents (47%) considered the number of trails good. Only 16 (5%) evaluated the trails as very poor, poor, or fair. Results are found in Table 27.



As for the design of trails, there were a total of 329 (94%) responses. A total of 21 (6%) of the respondents omitted this question. Altogether, 159 (48%) of the respondents believed the design of trails was excellent. Furthermore, 155 (47%) concluded the design of trails was good. A small percentage, 15 (5%) of the respondents evaluated the design of trails as very poor, poor, or fair. Results are found in Table 28.

The level of signage received 328 total responses (94%). A total of 22 (6%) of the respondents skipped this portion of the question. Of those who responded, 127 (39%) considered the level of signage as excellent. Additionally, 127 (39%) of the respondents felt the level of signage was good. A total of 62 responses (19%) believed the level of signage to be fair. The remaining 12 respondents (4%) deemed the level of signage to be very poor or poor. Results are found in Table 29.

The last category destination, received 321 (92%) total responses. There were 29 (8%) of the respondents who passed over this portion of the question. In total, 197 (61%) of the respondents considered destination as excellent, while 113 (35%) believed destination as good. Only 11 respondents (3%) felt that destination of trails was very poor, poor, or fair. Results are found in Table 30.

Table 27.

Number of trails	Frequency	Percent
Very poor	2	1
Poor	2	1
Fair	12	4
Good	155	47
Excellent	161	48
Total	332	100
Missing	18	5
Total	350	

Table 28.

Design of trails	Frequency	Percent
Very poor	1	1
Poor	2	1
Fair	12	4
Good	155	47
Excellent	159	48
Total	329	100
Missing	21	6
Total	350	

Table 29.

Level of signage	Frequency	Percent
Very poor	2	1
Poor	10	3
Fair	62	19
Good	127	39
Excellent	127	39
Total	328	100
Missing	22	6
Total	350	

Table 30.

Destination	Frequency	Percent
Very poor	1	1
Poor	1	1
Fair	9	3
Good	113	35
Excellent	197	61
Total	321	100
Missing	29	8
Total	350	

An evaluation of visitor opportunities was the basis for question eleven. Respondents were asked to rate the aspects of the following visitor opportunities: wildlife viewing, information/maps, horseback riding, hiking, mountain biking, solitude, quality of experience and educational programs. The rating was a scale of 1-5. One means very poor, 5 means excellent. For the category of wildlife viewing, there were 317 (91%) total responses. Only 33 (9%) of the respondents omitted this portion of the question. In total, there were 99 (31%) of the respondents who believed wildlife viewing was excellent. There were 139 responses (44%) who considered wildlife viewing as good. And 70 responses (22%) who maintained wildlife viewing was fair.



The remaining 9 responses (3%) felt wildlife viewing was very poor or poor. Results are found in Table 31.

Information and maps received 325 (93%) total responses. There were 25 (7%) of the respondents who skipped this question. Of those who responded, 138 (42%) considered information and maps as excellent. An almost equal number of respondents, 139 (43%) believed information and maps was good. There were 48 (15%) of the respondents who felt that information and maps was very poor, poor, or fair. Results are found in Table 32.

The category of horseback riding received a 50% response rate. There were 175 (50%) who answered and 175 (50%) who left this question blank. Of those who answered, 62 (35%) felt that horseback riding was excellent. There were 69 (39%) of the respondents who believed horseback riding was good. And 42 (24%) who considered it fair. A mere 2 responses (1%) felt that horseback riding was poor. There were no very poor ratings on this question. Results are found in Table 33.

As for hiking, there were 321 total responses (92%). A total of 29 (8%) omitted this question. Hiking received very favorable results; 239 (74%) considered hiking as excellent. While 79 (25%) believed hiking was good. Only 3 respondents (1%) felt hiking was very poor or fair. There were no poor responses. Results are found in Table 34.

Mountain biking also received very favorable responses. In total 236 (67%) of respondents answered this question. A total of 114 (33%) failed to answer this portion of the question. Altogether, 137 (58%) of the respondents felt mountain biking was excellent. There were 86 responses (36%) who believed mountain biking was good. Only 13 respondents (5%) considered mountain biking very poor, or fair. There were no poor responses. Results are found in Table 35.

For the category of solitude, there were 322 (92%) total responses. Altogether, 28 (8%) did not answer this portion of the question. Of those who responded, 129 (40%) believed the solitude was excellent; while 110 respondents (34%) considered it good. There were also 62 respondents (19%) who felt the solitude was fair. The remaining 21 respondents (6%) felt the solitude was very poor or poor. Results are found in Table 36.

The quality of the experience fared well. A total of 325 (93%) responses were received. There were 25 (7%) who omitted this question. Overall, 202 (62%) of the respondents believed the quality of the experience was excellent. A little more than one-third, 117 (36%) felt it was good. Only 6 respondents (2%) considered quality of the experience as very poor or fair. There were no poor responses. Results are found in Table 37.

Educational programs received only a 50% response rate. A total of 176 (50%) answered this question, 174 (50%) failed to answer this question. Of those who did respond, 58 (32%) believed educational programs were excellent; while 64 (36%) felt they were good. There were also 46 respondents (26%) who considered educational programs were fair. The remaining 8 (4%) believed educational programs were very poor or poor. Results are found in Table 38.

Table 31.

Table 32.

Wildlife viewing	Frequency	Percent	Information maps	Frequency	Percent
Very poor	1	1	Very poor	1	1
Poor	8	2	Poor	7	2
Fair	70	22	Fair	40	12
Good	139	44	Good	139	43
Excellent	99	31	Excellent	138	42



Total	317	100	Total	325	100
Missing	33	9	Missing	25	7
Total	350		Total	350	

Table 33.

Horseback riding	Frequency	Percent
Very poor	2	1
Poor	0	0
Fair	42	24
Good	69	39
Excellent	62	35
Total	175	100
Missing	175	50
Total	350	

Table 34.

Hiking	Frequency	Percent
Very poor	1	1
Poor	0	0
Fair	2	1
Good	79	25
Excellent	239	74
Total	321	100
Missing	29	8
Total	350	

Table 35.

Mountain biking	Frequency	Percent
Very poor	1	1
Poor	0	0
Fair	12	5
Good	86	36
Excellent	137	58
Total	236	100
Missing	114	33
Total	350	

Table 36.

Solitude	Frequency	Percent
Very poor	3	1
Poor	18	6
Fair	62	19
Good	110	34
Excellent	129	40
Total	322	1
Missing	28	8
Total	350	

Table 37.

Quality of experience	Frequency	Percent
Very poor	1	1
Poor	0	0
Fair	5	1.5
Good	117	36
Excellent	202	62
Total	325	100
Missing	25	7
Total	350	

Table 38.

Educational programs	Frequency	Percent
Very poor	3	2
Poor	5	3
Fair	46	26
Good	64	36
Excellent	58	32
Total	176	100
Missing	174	50
Total	350	

An encounter with wildlife was the basis for question twelve. Respondents were asked if they encountered any wildlife and if so, list the type. In total there were 336 responses (96%). Only 14 (4%) omitted this question. Of those who answered, 208 (62%) of the respondents had an encounter with wildlife. The other 128 (38%) did not. The types of wildlife encountered varied greatly, however, the main frequency of species were: birds, deer, rabbits, snakes, squirrels and insects. Results are found in Table 39.

Table 39.

Encounters with wildlife	Frequency	Percent
Yes	208	62
No	128	38



Total	336	100
Missing	14	4
Total	350	

Respondents were asked in question thirteen if there should be an entrance fee for those who walk into the Park. Altogether, there were 329 responses (94%). There were 21 (6%) who did not answer this question. Of those who answered, 169 (51%) believe there should be a fee for visitors walking into the Park. There were 127 (39%) who felt there should not be a fee and 33 (10%) who had no comment. Results are found in Table 40.

Table 40.

Entrance fee for walking in	Frequency	Percent
Yes	169	51
No	127	39
No Comment	33	10
Total	329	100
Missing	21	6
Total	350	

Question seventeen asked respondents if they have ever participated in Park events such as: campground programs, guided hikes, volunteer projects, or other. Response rates for these questions were very low. There were 17 (5%) who stated they participated in campground programs; 22 (6%) participated in guided hikes; 26 (7%) who participated in volunteer projects. Four other respondents had participated in bike patrols, recreational hiking, trail construction and trail repair. Results are found in Table 41.

Table 41.

Participated in	Frequency	Percent
Campground program	17	5
Guided hike	22	6
Volunteer project	26	7
Other	4	1
Total	69	

The basis behind question eighteen was two fold. Respondents were asked how important certain facilities and services were to them and then to what level did Larimer County Parks and Open Lands meet their needs. The first part of the question involved the condition of roads in the Park. The condition of roads important received 318 (91%) responses. There were 32 (9%) who failed to answer this question. In total, 51 (16%) felt the condition of roads was extremely important, 81 (25%) believed they were very important and 111 (35%) considered them moderately important. The remaining 75 (23%) felt the importance of road condition as not at all important, slightly important, or was not applicable. Results are found in Table 42.

Respondents were then asked if the condition of roads was attained. For this part of the question, there were 234 (67%) responses. One-third, 117 (33%) omitted this part of the question. Of those who responded, 55 (23%) felt they extremely



attained the condition of roads, 126 (54%) noted the very category and 35 (15%) stated moderately attained. The other 17 (7%) considered the attainment of roads as not at all, slightly, or not applicable. Results are found in Table 43.

The importance and attainment of parking areas was the next portion of the question. A total of 319 (91%) responded to the parking areas important section. Of those, 66 (21%) felt it extremely important, 114 (36%) believed it very important and 94 (30%) considered it moderately important. There were 45 (14%) who felt parking areas important as not at all important, slightly important, or was not applicable. Results are found in Table 44.

Parking areas attained received 238 (68%) total responses. There were 113 (32%) who failed to answer this question. Of those responding, 69 (29%) noted extremely attained, 132 (55%) stated very attained and 27 (11%) felt they moderately attained parking areas. The remaining 9 (4%) noted not at all, slightly, or was not applicable. Results are found in Table 45.

Picnic areas important received 317 (91%) responses. A total of 33 (9%) did not answer this question. Altogether, 32 (10%) felt picnic areas were extremely important, 72 (23%) believed them to be very important and 105 (33%) considered the importance of picnic areas as moderately important. There were 108 (34%) who considered noted not at all important, slightly important, or was not applicable. Results are found in Table 46.

For the picnic areas attained section, there were 225 (64%) total responses. Slightly over on-third, 126 (36%) omitted this question. Of those who responded, 34 (15%) noted extremely attained, 98 (44%) stated very attained and 39 (17%) felt they moderately attained picnic areas. The other 53 (23%) noted not at all, slightly, or was not applicable. Results are found in Table 47.

The importance of condition of trails was the next part of question eighteen. This question received 316 (90%) total responses; while 34 (10%) did not answer. Altogether, 121 (38%) believed the condition of trails was extremely important, 146 (46%) felt they were very important and 40 (13%) considered trail condition moderately important. The remaining 9 (3%) felt the condition was not at all important, slightly important, or was not applicable. Results are found in Table 48.

Condition of trails attained received 240 (69%) responses. There were 111 (32%) who did not answer this question. Of those who responded, 85 (35%) noted extremely attained, 124 (52%) stated very attained and 24 (10%) felt they moderately attained the condition of trails. The other 6 (2%) noted not at all, slightly, or was not applicable. Results are found in Table 49.

The importance and attainment of drinking water was next. Drinking water important received 314 (90%) responses. Only 36 (10%) did not answer this portion of the question. Of those who answered, 89 (28%) felt that drinking water was extremely important, 115 (37%) believed it very important and 60 (19%) considered drinking water moderately important. The remaining 50 (16%) felt drinking water was not at all important, slightly important, or was not applicable. Results are found in Table 50.

Drinking water attained received 229 (65%) total responses. Slightly over on-third, 122 (35%) omitted this question. There were 43 (19%) who noted extremely attained, 80 (35%) who stated very attained and 40 (17%) who felt they moderately attained drinking water. The other 64 (28%) noted not at all, slightly, or was not applicable. Results are found in Table 51.

For the category of restrooms important, there were 314 (90%) total responses. A total of 36 (10%) did not answer this



question. Of those responding, 64 (20%) considered restrooms extremely important, 129 (41%) believed restrooms are very important and 79 (25%) felt they were moderately important. The remaining 42 (13%) considered them not at all important, slightly important, or was not applicable. Results are found in Table 52.

Restrooms attained received 230 (66%) responses, while 121 (35%) omitted the question. There were 43 (19%) respondents who noted extremely attained, 86 (37%) who stated very attained and 42 (18%) who felt they moderately attained restrooms. The other 58 (25%) stated not at all, slightly, or was not applicable. Results are found in Table 53.

The next question focused on the importance and attainment of knowledgeable staff. There were 314 (90%) who answered the importance section. A total of 36 (10%) omitted the question. Of those responding, 88 (28%) felt knowledgeable staff was extremely important, 107 (34%) considered it very important and 65 (21%) believed a knowledgeable staff was moderately important. The remaining 54 (17%) stated not al all important, slightly important, or was not applicable. Results are found in Table 54.

Knowledgeable staff attained received 229 (65%) responses. Slightly over one-third, 122 (35%) failed to answer this portion of the question. Altogether, 93 (41%) noted extremely attained, 85 (37%) stated very attained and 24 (10%) felt they moderately attained a knowledgeable staff. The other 26 (11%) noted not at all, slightly, or was not applicable. Results are found in Table 55.

The last portion of question eighteen asked about the importance and attainment of educational programs. The importance of educational programs received 305 (87%) responses. There were 45 (13%) who did not answer this question. Of those responding, 33 (11%) felt educational programs are extremely important, 68 (22%) felt they are very important, 77 (25%) noted educational programs are moderately important and finally, 47 (15%) believed educational programs are slightly important. The remaining 80 (26%) felt educational programs are not at all important, or were not applicable. Results are found in Table 56.

Educational programs attained received 205 (59%) total responses. There were 146 (42%) who failed to answer this portion of the question. Of those who responded, 24 (12%) noted extremely attained, 47 (23%) stated very attained, 34 (17%) noted moderately attained and finally, 7 (3%) felt they slightly attained educational programs. The other 92 (45%) stated not at all or was not applicable. Results are found in Table 57.

Table 42.

Condition of roads important	Frequency	Percent
Not at all	21	7
Slightly	41	13
Moderately	111	35
Very	81	25
Extremely	51	16
Not applicable	13	4
Total	318	100
Missing	32	9

Table 43.

Condition of Roads attained	Frequency	Percent
Not at all	4	1
Slightly	3	1
Moderately	35	1
Very	126	15
Extremely	55	54
Not applicable	10	23
Total	234	4
Missing	117	33



Total	350		Total	350	
-------	-----	--	-------	-----	--

Table 44.

Parking areas important	Frequency	Percent
Not at all	9	3
Slightly	32	10
Moderately	94	29
Very	114	36
Extremely	66	21
Not applicable	4	1
Total	319	100
Missing	31	9
Total	350	

Table 45.

Parking areas attained	Frequency	Percent
Not at all	2	1
Slightly	3	1
Moderately	27	1
Very	132	11
Extremely	69	55
Not applicable	4	29
Total	238	100
Missing	113	32
Total	350	

Table 46.

Picnic areas important	Frequency	Percent
Not at all	31	10
Slightly	50	16
Moderately	105	33
Very	72	23
Extremely	32	10
Not applicable	27	8
Total	317	100
Missing	33	9
Total	350	

Table 47.

Picnic areas attained	Frequency	Percent
Not at all	5	1
Slightly	6	2
Moderately	39	3
Very	98	17
Extremely	34	44
Not applicable	42	15
Total	225	19
Missing	126	36
Total	350	

Table 48.

Condition of trails important	Frequency	Percent
Not at all	3	1
Slightly	5	2
Moderately	40	13
Very	146	46
Extremely	121	38
Not applicable	1	1
Total	316	100
Missing	34	10
Total	350	

Table 49.

Condition of trails attained	Frequency	Percent
Not at all	1	1
Slightly	3	1
Moderately	24	10
Very	124	52
Extremely	85	35
Not applicable	2	1
Total	240	100
Missing	111	32
Total	350	

Table 50.

Drinking water important	Frequency	Percent
Not at all	12	4
Slightly	27	9
Moderately	60	19
Very	115	37
Extremely	89	28
Not applicable	11	3
Total	314	100
Missing	36	10

Table 51.

Drinking water attained	Frequency	Percent
Not at all	11	5
Slightly	20	9
Moderately	40	17
Very	80	35
Extremely	43	19
Not applicable	33	14
Total	229	100
Missing	122	35



Total	350	Total	350
-------	-----	-------	-----

Table 52.

Restrooms important	Frequency	Percent
Not at all	10	3
Slightly	19	6
Moderately	79	25
Very	129	41
Extremely	64	20
Not applicable	13	4
Total	314	100
Missing	36	10
Total	350	

Table 53.

Restrooms attained	Frequency	Percent
Not at all	4	2
Slightly	16	7
Moderately	42	18
Very	86	37
Extremely	43	19
Not applicable	38	16
Total	230	100
Missing	121	35
Total	350	

Table 54.

Knowledgeable staff important	Frequency	Percent
Not at all	12	4
Slightly	28	9
Moderately	65	21
Very	107	34
Extremely	88	28
Not applicable	14	4
Total	314	100
Missing	36	10
Total	350	

Table 55.

Knowledgeable staff attained	Frequency	Percent
Not at all	1	1
Slightly	3	1
Moderately	24	10
Very	85	37
Extremely	93	41
Not applicable	22	10
Total	229	100
Missing	122	35
Total	350	

Table 56.

Educational programs important	Frequency	Percent
Not at all	30	10
Slightly	47	15
Moderately	77	25
Very	68	22
Extremely	33	11
Not applicable	50	16
Total	305	100
Missing	45	13
Total	350	

Table 57.

Educational programs attained	Frequency	Percent
Not at all	8	4
Slightly	7	3
Moderately	34	17
Very	47	23
Extremely	24	12
Not applicable	84	41
Total	205	100
Missing	146	42
Total	350	

Question nineteen asked respondents what kind of educational programs they would like to see in Larimer County Parks and Open Lands. There were a total of 85 (24%) responses. A total of 265 (76%) omitted this question. There were multiple answers for this question. The top 6 categories of requested educational programs are found in Table 58.

Educational program	Frequency	Percent
Wildlife	18	21
Plants	4	5
Wildflowers	4	5
Children's programs	4	5

Geology	3	4
Trail building and maintenance	2	2

Conflict was the basis behind question twenty. The question asked if the respondent ever had a conflict with another user and if so, what type of user and why. There were 318 (91%) responses. Only 32 (9%) failed to answer this question. Of those who responded, 295 (93%) reported they have never had a conflict, 14 (4%) claimed they have had a conflict once and 9 (3%) stated they have had a conflict more than once. The conflicts given were: 9 (39%) had a conflict with dogs, 7 (30%) had a conflict with another hiker and 3 (1%) had a conflict with a bicyclist. Results are found in Table 59.

Table 59.

Conflict with another user	Frequency	Percent
Never	295	93
Once	14	4
More than once	9	3
Total	318	100
Missing	32	9
Total	350	

Question twenty one asked respondents if they felt crowded at the Park. There were 329 (94%) responses. Only 22 (6%) did not answer this question. Altogether, 39 (12%) reported they felt crowded, 274 (83%) did not feel crowded and 15 (4%) had no comment. Results are found in Table 60.

Table 60.

Felt crowded	Frequency	Percent
Yes	39	12
No	274	83
No comment	15	5
Total	329	100
Missing	22	6
Total	350	

The category of crowding continued in question twenty two. The first part of the question asked respondents what is an acceptable number of visitors to see. There was a scale for them to choose from 0 through greater than 200. There were 206 (59%) responses with 144 (41%) not responding. The second part of the question offered the respondent the option of choosing: the number of visitors doesn't matter to me; or it matters to me but I can't specify a number. For the second part of the question, 126 (36%) of the respondents answered while 223 (64%) did not answer. Results are found in Tables 61 and 62.

Table 61.

Acceptable number of visitors	Frequency	Percent
0	3	1
5	13	6
10	52	25
20	73	35
30	38	18
40	10	5
50	7	3
60	2	1



80	1	1
100	3	1
150	1	1
200	1	1
More than 200	2	1
Total	206	100
Missing	144	41
Total	350	

Table 62.

Acceptable number of visitors	Frequency	Percent
Number of visitors doesn't matter	66	52
Number matters but can't specify number	60	47
Total	126	100
Missing	223	64
Total	350	

Crowding continued in question twenty three. Respondents were asked what uses influenced their feelings of crowding. This question was phrased to check all that apply. The categories of crowding were: hikers, staff/rangers, mountain bikers, picnickers, horseback riders, or other. The category 'other', received 6 responses. The responses were: destinations, dogs, Memorial Day weekend, noise level, parking lot and serenity. All other results are listed in Table 63.

Table 63.

Influence of crowding	Frequency	Percent
Hikers	154	44
Staff/Rangers	30	9
Mountain bikers	122	34
Picnickers	21	6
Horseback riders	67	19

Question twenty four asked for the respondents' date of visit. There were 333 (95%) responses with 17 (5%) who did not respond. Results are found in Table 64.

Table 64.

Day of visit	Frequency	Percent
Sunday	48	14
Monday	28	8
Tuesday	33	10
Wednesday	48	14
Thursday	28	8
Friday	51	15
Saturday	97	29
Total	333	95
Missing	17	5
Total	350	

The next demographic question, twenty five, asked for the number of people in the respondent's group and the



respondent's age. There were 335 (95%) responses for number of people in group. Only 15 (4%) omitted this question. There were 290 (83%) responses for age of visitor, with 60 (17%) not answering the question. Results are found in Tables 65 and 66.

Table 65.

Number of people in group	Frequency	Percent
1	54	16
2	157	47
3	59	18
4	38	11
5	5	2
6	11	3
7	5	2
8	1	1
9	1	1
12	2	1
13	1	1
18	1	1
Total	335	100
Missing	15	4
Total	350	

Table 66.

Age of visitor	Frequency	Percent
15-19	30	10
20-29	121	41
30-39	56	19
40-49	35	12
50-59	35	12
60-69	10	3
70-79	3	1

Respondents were asked in question twenty six for their gender. A total of 336 (96%) of the respondents answered while 14 (4%) did not. Of those who answered, 161 (48%) were female and 175 (52%) were male. Results are found in Table 67.

Table 67.

Gender of visitor	Frequency	Percent
Female	161	48
Male	175	52
Total	336	100
Missing	14	4
Total	350	

Question twenty seven asked for the respondent's zip code. The majority of the visitors were from the Fort Collins/Loveland area; however, results showed respondents from California, New York, Florida, Iowa, Ohio, Wisconsin, Nebraska and various cities and towns within Colorado. Results are found in Table 68.

Table 68.

Area of residence	Frequency	Percent
Ft. Collins/Loveland	238	72
Greeley	14	4
Denver Metro	14	4



Longmont	7	2
Boulder	4	1
Estes Park	2	1
Golden	1	1
Out of state	33	10

Question twenty eight was removed from the survey due to insufficient data.

Household income was asked of respondent's in question twenty nine. A total of 300 (86%) responded. There were 50 (14%) who failed to answer the question. Results are found in Table 69.

Table 69.

Household income	Frequency	Percent
Under \$10,000	51	17
\$10,000 - \$30,000	48	16
\$30,000 - \$50,000	64	21
\$50,000 - \$70,000	40	13
\$70,000 - \$90,000	24	8
\$90,000 and above	73	24
Total	300	100
Missing	50	14
Total	350	

The final demographic question, thirty, asked respondents their ethnicity. A total of 319 (91%) responded, while 31 (9%) did not respond. Results are found in Table 70.

Table 70.

Ethnicity	Frequency	Percent
Caucasian	302	95
Hispanic/Latino	10	3
Asian	1	1
African-American	1	1
American Indian	0	0
Other	5	2
Total	319	100
Missing	31	9
Total	350	



Larimer County Parks and Open Lands is conducting this survey to better understand your satisfaction of our facilities and services. Your participation is completely voluntary and your responses are voluntary. Your answers will be anonymous. Thank you.

1. How long are you planning to stay during this visit?

_____ Days _____ Hours

2. What park or open lands area are you visiting today?

3. How often do you visit Larimer County Parks and Open Lands?

_____ This is my first visit

_____ 1 – 4 times per year

_____ 5 – 10 times per year

_____ Once a month or more

_____ Once a week or more

4. What activities will you participate in during this visit? (check all that apply)

_____ Spending time with friends and family

_____ Picnicking

_____ Scenic/wildlife viewing

_____ Hiking

_____ Bicycling

_____ Other (please specify) _____

5. Please refer to the route or trails you were on today. Refer to trail map or brochure. _____

6. Why did you choose this area of Larimer County Parks and Open Lands to recreate as opposed to another location? _____

7. What amenity would you like to see that we do not offer? _____



8. Please evaluate our staff on the following aspects:

	Very poor	Poor	Fair	Good	Excellent
Courtesy	1	2	3	4	5
Professionalism	1	2	3	4	5
Appearance	1	2	3	4	5
Knowledge	1	2	3	4	5

9. Please rate the following aspects of these facilities

	Very Poor	Poor	Fair	Good	Excellent
Restrooms					
Cleanliness	1	2	3	4	5
Availability	1	2	3	4	5
Privacy	1	2	3	4	5
<hr/>					
Parking Areas					
Parking design	1	2	3	4	5
Space availability	1	2	3	4	5
Directional signs	1	2	3	4	5
<hr/>					
Picnic Areas					
Availability	1	2	3	4	5
Access	1	2	3	4	5
Cleanliness	1	2	3	4	5
<hr/>					
Drinking Water					
Availability	1	2	3	4	5
Access	1	2	3	4	5
Quality	1	2	3	4	5
<hr/>					
Trash Disposal					
Availability	1	2	3	4	5
Identifiable	1	2	3	4	5
Cleanliness	1	2	3	4	5



10. Please rate the following aspects of the trails at this Larimer County Parks and Open Lands area.

	Very Poor	Poor	Fair	Good	Excellent
Number of trails	1	2	3	4	5
Design of trails	1	2	3	4	5
Level of signage	1	2	3	4	5
Destination	1	2	3	4	5

11. Please rate the following aspects of these visitor opportunities at this area.

Visitor Opportunity	Very Poor	Poor	Fair	Good	Excellent
Wildlife Viewing	1	2	3	4	5
Information/Maps	1	2	3	4	5
Horseback Riding	1	2	3	4	5
Hiking	1	2	3	4	5
Mountain Biking	1	2	3	4	5
Solitude	1	2	3	4	5
Quality of Experience	1	2	3	4	5
Educational Programs	1	2	3	4	5

12. Did you encounter any wildlife today? Yes No

If yes, what did you see? _____

13. Currently, visitors who walk into this park are charged an entrance fee. Should there be a fee for these types of visitors?

Yes No No Comment



14. Larimer County Parks and Open Lands would like your reactions to the current user fees.

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
I understand the reasons behind the fee program	1	2	3	4	5
Public lands should be supported with public funds	1	2	3	4	5
Overall, I approve the fee program at this park	1	2	3	4	5
Fees are required to maintain the quality of the services Provided to the public	1	2	3	4	5
The fee program will limit my access to this park	1	2	3	4	5
I should not have to pay a fee to visit this park	1	2	3	4	5
Public lands should be supported by the people who use them	1	2	3	4	5
The current fees at this park are acceptable to me	1	2	3	4	5
I was satisfied with the quality of services I experienced at this park	1	2	3	4	5
I am more willing to pay the entrance fee knowing that 100% of the revenue stays in Larimer County	1	2	3	4	5

15. If there were designated campsites within the park or open space, would you be:

_____ More likely to camp overnight.

_____ Less likely to camp overnight.

_____ Not affected by camping.

16. Would you like to see more parks and open lands within Larimer County, similar to the one you visited? _____ Yes _____ No _____ No Comment

17. Have you ever participated in _____ Campground Program

_____ Guided Hike _____ Volunteer Project _____ Other (please specify)



18. We would like to know what facilities/services are important to you. Please indicate (1), how important each of these facilities/services listed below are to you when recreating. And (2), to what level did we meet your needs of these facilities/services during your visit today. Circle one number under IMPORTANCE and one number under ATTAINED for each experience.

	IMPORTANCE						ATTAINED					
	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Not applicable	Not at	Slightly	Moderately	Very	Extremely	Not applicable
Condition of roads	1	2	3	4	5	NA	1	2	3	4	5	NA
Parking areas	1	2	3	4	5	NA	1	2	3	4	5	NA
Picnic areas	1	2	3	4	5	NA	1	2	3	4	5	NA
Condition of trails	1	2	3	4	5	NA	1	2	3	4	5	NA
Drinking water	1	2	3	4	5	NA	1	2	3	4	5	NA
Restrooms	1	2	3	4	5	NA	1	2	3	4	5	NA
Knowledgeable staff	1	2	3	4	5	NA	1	2	3	4	5	NA
Educational programs	1	2	3	4	5	NA	1	2	3	4	5	NA

19. What kinds of educational programs would you like to see in Larimer County Parks and Open Lands? _____

20. Have you had a conflict with another user in the park or open space?

_____ Never _____ Once _____ More than once

If so, what type of user and why? _____



21. Did you feel crowded at this park or open space?

_____ Yes _____ No _____ No Comment

22. What is an acceptable number of visitors to see while you are at this park or open lands area?

It is OK to see as many as: *(Please circle a number or check one of the other two options)*

0 5 1 2 3 4 5 6 7 8 9 10 15 20 >
0 0 0 0 0 0 0 0 0 0 0 0 0 0 200

_____ The number of other visitors doesn't matter to me

_____ It matters to me but I can't specify a number

23. What uses influenced your feelings of crowding? (check all that apply)

_____ Hikers

_____ Staff/Rangers

_____ Mountain Bikers

_____ Picnickers

_____ Horseback Riders

_____ Other (please specify) _____

24. What is the date of your visit? _____ (mm/dd/yyyy)

25. How many people in your group? _____ What is your age? _____

26. What is your gender? M / F

27. What is your home zip code? _____

28. Please list the age and gender of other members of your group. (Example M-14)

29. Please check the box that best represents your household income range.

Under \$10,000 \$10,000 to 30,000 \$30,000 to 50,000
 \$50,000 to 70,000 \$70,000 to 90,000 \$90,000 and above

30. Please check the category that best describes your race?

Caucasian Hispanic/Latino Asian
 African-American American Indian Other



8. APPENDIX D: List of Wildlife and Plant Species

Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Aceraceae	Acer	glabrum
Aceraceae	Negundo	aceroides
Agavaceae	Yucca	glauca
Alliaceae	Allium	cernuum
Alliaceae	Allium	geyeri
Alliaceae	Allium	textile
Alsiniaceae	Cerastium	nutans
Alsiniaceae	Cerastium	strictum
Alsiniaceae	Cerastium	vulgatum
Alsiniaceae	Eremogone	fendleri
Alsiniaceae	Eremogone	hookeri
Alsiniaceae	Paronychia	jamesii
Amaranthaceae	Amaranthus	blitoides
Amaranthaceae	Amaranthus	retroflexus
Anacardiaceae	Rhus	aromatica
Anacardiaceae	Rhus	glabra
Anacardiaceae	Toxicodendron	rydbergii
Apiaceae	Harbouria	trachypleura
Apiaceae	Heracleum	sphondylium
Apiaceae	Lomatium	orientale
Apiaceae	Musineon	divaricatum
Apiaceae	Osmorhiza	longistylis
Apiaceae	Sanicula	marilandica
Apiaceae/Umbelliferae	Conium	maculatum
Apocynaceae	Apocynum	androsaemifolium
Asclepiadaceae	Asclepias	engelmanniana
Asclepiadaceae	Asclepias	pumila
Asclepiadaceae	Asclepias	speciosa
Asclepiadaceae	Asclepias	viridiflora
Aspleniaceae	Asplenium	septentrionale
Asteraceae	Achillea	lanulosa
Asteraceae	Acroptilon	repens
Asteraceae	Agoseris	glauca
Asteraceae	Ambrosia	artemisifolia
Asteraceae	Ambrosia	psilostachya
Asteraceae	Ambrosia	tomentosa
Asteraceae	Ambrosia	trifida
Asteraceae	Anaphalis	margaritacea
Asteraceae	Antennaria	howellii
Asteraceae	Antennaria	parvifolia
Asteraceae	Antennaria	pulcherrima
Asteraceae	Antennaria	rosea
Asteraceae	Arctium	minus
Asteraceae	Arnica	chamissonis
Asteraceae	Arnica	cordifolia
Asteraceae	Arnica	fulgens
Asteraceae	Artemisia	carruthii
Asteraceae	Artemisia	frigida
Asteraceae	Artemisia	ludoviciana
Asteraceae	Aster	laevis
Asteraceae	Aster	porteri
Asteraceae	Aster	spathulatus
Asteraceae	Bahia	dissecta
Asteraceae	Brickellia	californica
Asteraceae	Brickellia	eupatorioides
Asteraceae	Brickellia	grandiflora
Asteraceae	Carduus	nutans



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Asteraceae	Chlorocrepis	fendleri
Asteraceae	Chrysothamnus	nauseosus
Asteraceae	Cirsium	arvense
Asteraceae	Cirsium	incanum
Asteraceae	Cirsium	ochrocentrum
Asteraceae	Cirsium	vulgare
Asteraceae	Conyza	canadensis
Asteraceae	Cyclachaena	xanthifolia
Asteraceae	Dyssodia	papposa
Asteraceae	Erigeron	colo-mexicanus
Asteraceae	Erigeron	compositus
Asteraceae	Erigeron	divergens
Asteraceae	Erigeron	flagellaris
Asteraceae	Erigeron	glabellus
Asteraceae	Erigeron	pinnatisectus
Asteraceae	Erigeron	pumilus
Asteraceae	Erigeron	speciosus
Asteraceae	Erigeron	vetensis
Asteraceae	Gaillardia	aristata
Asteraceae	Grindelia	squarrosa
Asteraceae	Grindelia	subalpina
Asteraceae	Gutierrezia	sarothrae
Asteraceae	Helianthus	annuus
Asteraceae	Helianthus	nuttallii
Asteraceae	Helianthus	pumilus
Asteraceae	Heterotheca	foliosa
Asteraceae	Heterotheca	horrida
Asteraceae	Heterotheca	villosa
Asteraceae	Hymenopappus	filifolius
Asteraceae	Lactuca	serriola
Asteraceae	Lactuca	tatarica
Asteraceae	Liatris	punctata
Asteraceae	Machaeranthera	pattersonii
Asteraceae	Machaeranthera	pinnatifida
Asteraceae	Nothocalais	cuspidata
Asteraceae	Oligosporus	dracunculus
Asteraceae	Packera	fendleri
Asteraceae	Packera	plattensis
Asteraceae	Podospermum	laciniatum
Asteraceae	Pseudognaphalium	canescens
Asteraceae	Pseudognaphalium	viscosum
Asteraceae	Ratibida	columnifera
Asteraceae	Rudbeckia	hirta
Asteraceae	Senecio	atratus
Asteraceae	Senecio	integerrimus
Asteraceae	Senecio	rapifolius
Asteraceae	Senecio	spartoides
Asteraceae	Solidago	canadensis
Asteraceae	Solidago	missouriensis
Asteraceae	Solidago	nana
Asteraceae	Solidago	nemoralis
Asteraceae	Solidago	serotinoides
Asteraceae	Solidago	speciosa
Asteraceae	Solidago	velutina
Asteraceae	Stenactis	strigosus
Asteraceae	Stephanomeria	pauciflora
Asteraceae	Taraxacum	officinale
Asteraceae	Tetraneuris	acaulis
Asteraceae	Thelesperma	filifolium
Asteraceae	Townsendia	grandiflora



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Asteraceae	Townsendia	hookeri
Asteraceae	Tragopogon	dubius
Asteraceae	Tragopogon	pratensis
Asteraceae	Virgulus	ericoides
Asteraceae	Virgulus	falcatus
Asteraceae	Xanthium	strumarium
Asteraceae	Ximenesia	encelioides
Athyriaceae	Cystopteris	fragilis
Berberidaceae	Mahonia	repens
Betulaceae	Betula	fontinalis
Boraginaceae	Asperugo	procumbens
Boraginaceae	Cynoglossum	officinale
Boraginaceae	Lappula	redowskii
Boraginaceae	Lappula	squarrosa
Boraginaceae	Lithospermum	incisum
Boraginaceae	Lithospermum	multiflorum
Boraginaceae	Mertensia	ciliata
Boraginaceae	Mertensia	lanceolata
Boraginaceae	Onosmodium	molle
Boraginaceae	Oreocarya	virgata
Brassicaceae	Alyssum	parviflorum
Brassicaceae	Arabis	hirsuta
Brassicaceae	Barbarea	orthoceras
Brassicaceae	Camelina	microcarpa
Brassicaceae	Capsella	bursa-pastoris
Brassicaceae	Chorispora	tenella
Brassicaceae	Descurainia	pinnata
Brassicaceae	Descurainia	richardsonii
Brassicaceae	Descurainia	sophia
Brassicaceae	Draba	nemorosa
Brassicaceae	Draba	reptans
Brassicaceae	Erysimum	asperum
Brassicaceae	Erysimum	capitatum
Brassicaceae	Lepidium	perfoliatum
Brassicaceae	Lepidium	virginicum
Brassicaceae	Lesquerella	montana
Brassicaceae	Sisymbrium	altissimum
Brassicaceae	Sisymbrium	officinale
Brassicaceae	Thlaspi	arvense
Brassicaceae	Turritis	glabra
Cactaceae	Coryphantha	missouriensis
Cactaceae	Opuntia	macrorhiza
Cactaceae	Opuntia	polycantha
Cactaceae	Pediocactus	simpsonii
Calochortaceae	Calochortus	gunnisonii
Campanulaceae	Campanula	rotundifolia
Campanulaceae	Lobelia	siphilitica
Campanulaceae	Triodanus	perfoliata
Cannabaceae	Humulus	lupulus
Capparaceae	Cleome	serrulata
Capparidaceae	Polanisia	dodecandra
Caprifoliaceae	Symphoricarpos	albus
Caprifoliaceae	Symphoricarpos	occidentalis
Caryophyllaceae	Gastrollychnis	drummondii
Caryophyllaceae	Silene	antirrhina
Caryophyllaceae	Silene	scouleri
Chenopodiaceae	Chenopodium	album
Chenopodiaceae	Chenopodium	desiccatum
Chenopodiaceae	Chenopodium	glaucum
Chenopodiaceae	Chenopodium	leptophyllum



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Chenopodiaceae	Kochia	iranica
Chenopodiaceae	Krascheninnikovia	lanata
Chenopodiaceae	Salsola	australis
Chenopodiaceae	Salsola	collina
Commelinaceae	Tradescantia	occidentalis
Convallariaceae	Maianthemum	stellatum
Convolvulaceae	Convolvulus	arvensis
Convolvulaceae	Evolvulus	nuttallianus
Coptaceae	Thalictrum	dasycarpum
Crassulaceae	Amerosedum	lanceolatum
Cupressaceae	Juniperus	communis
Cupressaceae	Sabina	scopulorum
Cyperaceae	Carex	brevior
Cyperaceae	Carex	geophila
Cyperaceae	Carex	interior
Cyperaceae	Carex	microptera
Cyperaceae	Carex	nebrascensis
Cyperaceae	Carex	occidentalis
Cyperaceae	Carex	pachystachya
Cyperaceae	Carex	pennsylvanica
Cyperaceae	Carex	petasata
Cyperaceae	Carex	stenophylla
Cyperaceae	Carex	stipata
Cyperaceae	Cyperus	aristatus
Cyperaceae	Eleocharis	palustris
Cyperaceae	Schoenoplectus	pungens
Cyperaceae	Scirpus	pallidus
Equisetaceae	Equisetum	arvense
Equisetaceae	Hippochaete	laevigata
Ericaceae	Arctostaphylos	uva-ursi
Euphorbiaceae	Agaloma	marginata
Euphorbiaceae	Chamaesyce	fendleri
Euphorbiaceae	Chamaesyce	glyptosperma
Euphorbiaceae	Poinsettia	dentata
Euphorbiaceae	Tithymalus	brachyceras
Euphorbiaceae	Tithymalus	esula
Euphorbiaceae	Tithymalus	uralensis
Euphorbiaceae	Tragia	ramosa
Fabaceae/Leguminosae	Astragalus	adsurgens
Fabaceae/Leguminosae	Astragalus	agrestis
Fabaceae/Leguminosae	Astragalus	bisulcatus
Fabaceae/Leguminosae	Astragalus	drummondii
Fabaceae/Leguminosae	Astragalus	flexuosus
Fabaceae/Leguminosae	Astragalus	miser
Fabaceae/Leguminosae	Astragalus	missouriensis
Fabaceae/Leguminosae	Astragalus	parryi
Fabaceae/Leguminosae	Astragalus	racemosus
Fabaceae/Leguminosae	Astragalus	shortianus
Fabaceae/Leguminosae	Astragalus	spatulatus
Fabaceae/Leguminosae	Astragalus	tridactylicus
Fabaceae/Leguminosae	Dalea	candida
Fabaceae/Leguminosae	Dalea	purpurea
Fabaceae/Leguminosae	Glycyrrhiza	lepidota
Fabaceae/Leguminosae	Lathyrus	eucosmus
Fabaceae/Leguminosae	Lupinus	argenteus
Fabaceae/Leguminosae	Medicago	lupulina
Fabaceae/Leguminosae	Medicago	sativa
Fabaceae/Leguminosae	Melilotus	alba
Fabaceae/Leguminosae	Melilotus	officinalis
Fabaceae/Leguminosae	Oxytropis	lambertii



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Fabaceae/Leguminosae	Oxytropis	sericea
Fabaceae/Leguminosae	Psoralea	tenuiflorum
Fabaceae/Leguminosae	Thermopsis	divaricarpa
Fabaceae/Leguminosae	Trifolium	repens
Fabaceae/Leguminosae	Vicia	americana
Fumariaceae	Corydalis	aurea
Gentianaceae	Frasera	speciosa
Gentianaceae	Pneumonanthe	affinis
Geraniaceae	Erodium	cicutarium
Geraniaceae	Geranium	caespitosum
Grossulariaceae	Ribes	aureum
Grossulariaceae	Ribes	cereum
Grossulariaceae	Ribes	inerme
Helleboraceae	Delphinium	geyeri
Helleboraceae	Delphinium	nuttallianum
Helleboraceae	Delphinium	ramosum
Helleboraceae	Delphinium	virescens
Hydrangeaceae	Jamesia	americana
Hydrocharitaceae	Elodea	canadensis
Hydrophyllaceae	Ellisia	nyctelea
Hydrophyllaceae	Hydrophyllum	fendleri
Hydrophyllaceae	Phacelia	hastata
Hydrophyllaceae	Phacelia	heterophylla
Iridaceae	Iris	missouriensis
Iridaceae	Sisyrinchium	montanum
Juncaceae	Juncus	arcticus
Juncaceae	Juncus	dudleyi
Juncaceae	Juncus	interior
Juncaceae	Juncus	longistylis
Juncaceae	Juncus	saximontanus
Juncaceae	Juncus	torreyi
Juncaceae	Juncus	tracyi
Lamiaceae/Labiatae	Dracocephalum	parviflorum
Lamiaceae/Labiatae	Lycopus	americanus
Lamiaceae/Labiatae	Mentha	arvensis
Lamiaceae/Labiatae	Monarda	fistulosa
Lamiaceae/Labiatae	Monarda	pectinata
Lamiaceae/Labiatae	Nepeta	cataria
Lamiaceae/Labiatae	Salvia	reflexa
Lamiaceae/Labiatae	Scutellaria	brittonii
Lamiaceae/Labiatae	Teucrium	canadense
Liliaceae	Leucocrinum	montanum
Liliaceae	Lilium	philadelphicum
Linaceae	Adenolinum	lewisii
Loasaceae	Acroclasia	albicaulis
Loasaceae	Acroclasia	dispersa
Loasaceae	Nuttallia	multiflora
Loasaceae	Nuttallia	speciosa
Malvaceae	Sphaeralcea	coccinea
Melanthiaceae	Toxicoscordion	venenosum
Melanthiaceae	Veratrum	tenuipetalum
Monotropaceae	Pterospora	andromedeae
Nyctaginaceae	Oxybaphus	hirsutus
Nyctaginaceae	Oxybaphus	linearis
Nyctaginaceae	Oxybaphus	nyctagineus
Onagraceae	Chamerion	danielsii
Onagraceae	Epilobium	brachycarpum
Onagraceae	Epilobium	ciliatum
Onagraceae	Gaura	coccinea
Onagraceae	Gaura	parviflora



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Onagraceae	Gayophytum	diffusum
Onagraceae	Oenothera	albicaulis
Onagraceae	Oenothera	caespitosa
Onagraceae	Oenothera	coronopifolia
Onagraceae	Oenothera	nuttallii
Onagraceae	Oenothera	villosa
Orchidaceae	Corallorhiza	maculata
Orchidaceae	Limnorchis	hyperborea
Orobanchaceae	Aphyllon	fasciculatum
Oxalidaceae	Oxalis	dillenii
Oxalidaceae	Oxalis	stricta
Papaveraceae	Argemone	polyanthemos
Pinaceae	Pinus	ponderosa
Pinaceae	Pseudotsuga	menziesii
Plantaginaceae	Plantago	major
Plantaginaceae	Plantago	patagonica
Poaceae	Achnatherum	hymenoides
Poaceae	Agropyron	cristatum
Poaceae	Agropyron	cristatum
Poaceae	Agrostis	gigantea
Poaceae	Agrostis	scabra
Poaceae	Agrostis	stolonifera
Poaceae	Andropogon	gerardii
Poaceae	Anisantha	tectorum
Poaceae	Aristida	purpurea
Poaceae	Arrhenatherum	elatius
Poaceae	Avena	fatua
Poaceae	Bouteloua	curtipendula
Poaceae	Bromopsis	inermis
Poaceae	Bromus	japonicus
Poaceae	Buchloe	dactyloides
Poaceae	Calamagrostis	purpurascens
Poaceae	Chondrosom	gracile
Poaceae	Critesion	brachyanterum
Poaceae	Critesion	jubatum
Poaceae	Critesion	pusillum
Poaceae	Dactylis	glomerata
Poaceae	Danthonia	parryi
Poaceae	Danthonia	spicata
Poaceae	Dichanthelium	oligosanthes
Poaceae	Distichlis	stricta
Poaceae	Echinochloa	crus-galli
Poaceae	Elymus	canadensis
Poaceae	Elymus	elymoides
Poaceae	Elymus	trachycaulus
Poaceae	Elytrigia	albicans
Poaceae	Elytrigia	intermedia
Poaceae	Elytrigia	repens
Poaceae	Eragrostis	cilianensis
Poaceae	Festuca	arizonica
Poaceae	Festuca	saximontana
Poaceae	Glyceria	striata
Poaceae	Koeleria	macrantha
Poaceae	Leucopoa	kingii
Poaceae	Leymus	ambiguus
Poaceae	Muhlenbergia	montana
Poaceae	Muhlenbergia	racemosa
Poaceae	Panicum	capillare
Poaceae	Panicum	virgatum
Poaceae	Pascopyrum	smithii



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Poaceae	Phalaroides	arundinaceae
Poaceae	Phleum	pratense
Poaceae	Poa	bulbosa
Poaceae	Poa	compressa
Poaceae	Poa	nervosa
Poaceae	Poa	pratensis
Poaceae	Schedonnardus	paniculatus
Poaceae	Schizachyrium	scoparium
Poaceae	Secale	cereale
Poaceae	Setaria	glauca
Poaceae	Sporobolus	cryptandrus
Poaceae	Stipa	comata
Poaceae	Stipa	nelsonii
Poaceae	Stipa	viridula
Poaceae	Trisetum	spicatum
Poaceae/Gramineae	Elymus	lanceolatus
Poaceae/Gramineae	Poa	arida
Poaceae/Gramineae	Stipa	robusta
Poaceae/Gramineae	Thinopyrum	ponticum
Poaceae/Gramineae	Vulpia	octoflora
Polemoniaceae	Collomia	linearis
Polemoniaceae	Gilia	ophthalmoides
Polemoniaceae	Microsteris	gracilis
Polygonaceae	Acetosella	vulgaris
Polygonaceae	Eriogonum	effusum
Polygonaceae	Eriogonum	jamesii
Polygonaceae	Eriogonum	umbellatum
Polygonaceae	Persicaria	amphibia
Polygonaceae	Persicaria	maculata
Polygonaceae	Polygonum	arenastrum
Polygonaceae	Polygonum	douglasii
Polygonaceae	Pterogonum	alatum
Polygonaceae	Rumex	crispus
Polygonaceae	Rumex	trianulivalvis
Portulacaceae	Claytonia	rosea
Potamogetonaceae	Potamogeton	gramineus
Potamogetonaceae	Potamogeton	pectinatus
Primulaceae	Dodecatheon	pulchellum
Ranunculaceae	Anemone	cylindrica
Ranunculaceae	Anemonidium	canadense
Ranunculaceae	Atragene	occidentalis
Ranunculaceae	Batrachium	trichophyllum
Ranunculaceae	Ceratocephala	orthoceras
Ranunculaceae	Clematis	ligusticifolia
Ranunculaceae	Coriflora	hirsutissima
Ranunculaceae	Cyrtorhyncha	ranunculina
Ranunculaceae	Halerpestes	cymbalaria
Ranunculaceae	Hecatonia	sclerata
Ranunculaceae	Pulsatilla	patens
Ranunculaceae	Ranunculus	macounii
Ranunculaceae	Ranunculus	repens
Rhamnaceae	Ceanothus	fendleri
Rhamnaceae	Ceanothus	herbaceus
Rhamnaceae	Ceanothus	velutinus
Rosaceae	Agrimonia	striata
Rosaceae	Amelanchier	alnifolia
Rosaceae	Cerasus	pumila
Rosaceae	Cercocarpus	montanus
Rosaceae	Crataegus	erythropoda



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Rosaceae	Crataegus	macracantha
Rosaceae	Drymocallis	arguta
Rosaceae	Drymocallis	fissa
Rosaceae	Fragaria	vesca
Rosaceae	Geum	macrophyllum
Rosaceae	Oreobatus	deliciosus
Rosaceae	Padus	virginiana
Rosaceae	Physocarpus	monogynus
Rosaceae	Potentilla	diversifolia
Rosaceae	Potentilla	gracilis
Rosaceae	Potentilla	hippiana
Rosaceae	Potentilla	norvegica
Rosaceae	Potentilla	pensylvancia
Rosaceae	Potentilla	pulcherrima
Rosaceae	Prunus	americana
Rosaceae	Purshia	tridentata
Rosaceae	Rosa	sayi
Rosaceae	Rosa	woodsii
Rosaceae	Rubacer	parviflorum
Rosaceae	Rubus	idaeus
Rubiaceae	Galium	aparine
Rubiaceae	Galium	septentrionale
Rubiaceae	Galium	spurium
Rubiaceae	Galium	triflorum
Salicaceae	Populus	angustifolia
Salicaceae	Populus	deltoides
Salicaceae	Populus	tremuloides
Salicaceae	Populus	x acuminata
Salicaceae	Salix	amygdaloides
Salicaceae	Salix	exigua
Salicaceae	Salix	geyeriana
Salicaceae	Salix	monticola
Saxifragaceae	Heuchera	bracteata
Saxifragaceae	Heuchera	parvifolia
Saxifragaceae	Micranthes	rhomboidea
Scrophulariaceae	Castilleja	miniata
Scrophulariaceae	Catilleja	sessiliflora
Scrophulariaceae	Collinsia	parviflora
Scrophulariaceae	Linaria	canadensis
Scrophulariaceae	Linaria	genistifolia
Scrophulariaceae	Linaria	vulgaris
Scrophulariaceae	Mimulus	floribundus
Scrophulariaceae	Mimulus	glabratus
Scrophulariaceae	Orthocarpus	luteus
Scrophulariaceae	Penstemon	angustifolius
Scrophulariaceae	Penstemon	glaber
Scrophulariaceae	Penstemon	gracilis
Scrophulariaceae	Penstemon	secundiflorus
Scrophulariaceae	Penstemon	virens
Scrophulariaceae	Penstemon	virgatus
Scrophulariaceae	Scrophularia	lanceolata
Scrophulariaceae	Verbascum	thapsus
Scrophulariaceae	Veronica	americana
Scrophulariaceae	Veronica	anagallis-aquatica
Scrophulariaceae	Veronica	catenata
Selaginellaceae	Selaginella	densa
Selaginellaceae	Selaginella	underwoodii
Selaginellaceae	Selaginella	weatherbiana
Solanaceae	Physalis	heterophylla
Solanaceae	Physalis	virginiana



Plant List for Horsetooth Mountain Park*

*Plant list developed by the Colorado Natural Heritage Program in accordance with Weber and Wittmann (1996).

Family	Genus	Species
Solanaceae	Quincula	lobata
Solanaceae	Solanum	americanum
Solanaceae	Solanum	rostratum
Typhaceae	Typha	latifolia
Urticaceae	Parietaria	pennsylvanica
Urticaceae	Urtica	gracilis
Uvulariaceae	Streptopus	fassetii
Verbenaceae	Glandularia	bipinnatifida
Verbenaceae	Phyla	cuneifolia
Verbenaceae	Verbena	bracteata
Verbenaceae	Verbena	hastata
Violaceae	Viola	nuttalli
Violaceae	Viola	rydbergii
Violaceae	Viola	scopulorum
Viscaceae	Arceuthobium	vaginatum
Vitaceae	Parthenocissus	inserta
Vitaceae	Parthenocissus	quinquefolia
Vitaceae	Vitis	riparia
Woodsiaceae	Woodsia	oregana
Woodsiaceae	Woodsia	scopulina
Zygophyllaceae	Tribulus	terrestris

Common mammal species located at Horsetooth Mountain Park

Common name	Scientific name
Mule deer	(<i>Odocoileus hemionus</i>)
Mountain lion	(<i>Felis concolor</i>)
Coyote	(<i>Canis latrans</i>)
Black bear	(<i>Ursus americanus</i>)
Elk	(<i>Cervus canadensis</i>)
White tailed deer	(<i>Odocoileus virginianus</i>)
Least chipmunk	(<i>Eutamias minimus</i>)
Uinta chipmunk	(<i>Eutamias umbrinus</i>)
Rock squirrel	(<i>Citellus variegatus</i>)
Golden mantled squirrel	(<i>Citellus lateralis</i>)
Abert's squirrel	(<i>Sciurus aberti</i>)
Hispid pocket mouse	(<i>Perognathus hispidus</i>)
Deer mouse	(<i>Peromyscus maniculatus</i>)
Rock mouse	(<i>Peromyscus difficilis</i>)
Mexican woodrat	(<i>Neotoma mexicana</i>)
Prairie vole	(<i>Microtus ochrogaster</i>)
Porcupine	(<i>Erethizon dorsatum</i>)
Red fox	(<i>Vulpes fulva</i>)
Raccoon	(<i>Procyon lotor</i>)
Striped skunk	(<i>Mephitis mephitis</i>)
Mountain cottontail rabbit	(<i>Sylvilagus nuttalli</i>)
Bobcat	(<i>Lynx rufus</i>)



Bird List for Horsetooth Mountain Park

LEGEND

A - Abundant: Occurs in large numbers during season.

C - Common: Occurs regularly in moderate numbers.

U - Uncommon: Occurs regularly but in small numbers.

R - Rare: Occurs infrequently (may or may not be seen every year)

* - Breeding Species

	Spring	Summer	Fall	Winter
LOONS - Gaviidae				
___ Common Loon	R	R	R	R
GREBES - Podicipedidae				
___ Eared Grebe	U			
___ Western Grebe		U		U
___ Pied-billed Grebe			U	
PELICANS - Pelecanidae		C		U
___ White Pelican				
CORMORANTS - Phalacrocoridae	U	U	U	U
___ Double-crested Cormorant				
UU	U	U	U	R
U				
HERONS & BITTERNs - Ardeidae	C	C	C	C
___ Great Blue Heron				
R	C	C	C	C
WATERFOWL - Anatidae	U	U	U	U
___ Canada Goose	U		U	R
___ Snow Goose	U	U	U	U
___ Mallard	U	U	U	
___ Gadwall	C	C	U	U
___ Northern	U			
___ Northern Shoveler	U	U	U	U
___ Blue-winged Teal	U		U	
___ Green-winged Teal	U		U	R
___ Cinnamon Teal				R
___ American Wigeon	U		U	
___ Redhead	U			U
___ Ring-necked Duck	U		U	
___ Canvasback	U		U	
___ Lesser Scaup	C	C	C	C
___ Common Goldeneye				
___ Bufflehead	R	U	R	
___ Ruddy Duck				
___ Common Goldeneye	U	U	U	U
VULTURES - Cathartidae	U	U	U	U
___ Turkey Vulture	R	R	R	R
HAWKS & EAGLES - Acciptridae	C	C	C	U
___ Northern Goshawk	U		U	C
___ Sharp-shinned Hawk	U	U		
___ Cooper's Hawk	U	U	U	U
___ Red-tailed Hawk				
___ Rough-legged Hawk				
___ Swainson's Hawk				
___ Golden Eagle				



(Continued)

LEGEND

- A - Abundant: Occurs in large numbers during season.
- C - Common: Occurs regularly in moderate numbers.
- U - Uncommon: Occurs regularly but in small numbers.
- R - Rare: Occurs infrequently (may or may not be seen every year)
- * - Breeding Species

	Spring	Summer	Fall	Winter
___ Bald Eagle				U
___ Northern Harrier	R	R	R	R
___ Osprey	U	U	U	
FALCONS - Falconidae				
___ Prairie Falcon	U	U	U	U
___ Peregrine Falcon	R		R	
___ Merlin				R
___ American Kestrel	C	C	C	C
GROUSE & TURKEY - Phasianidae				
___ Blue Grouse	U	U	U	
___ Ring-necked Pheasant	U	U	U	U
___ Wild Turkey	C	C	C	C
CRANES - Gruidae				
___ Sandhill Crane			R	
RAILS - Rallidae				
___ Sora				R
PLOVERS - Charadriidae				
___ Semipalmated Plover	R			
___ Killdeer	U	U	U	
SANDPIPERS - Scolopacidae				
___ Willet	U	U	U	
___ Greater Yellowlegs	U			
___ Lesser Yellowlegs	U			
___ Spotted Sandpiper	C		U	
___ Wilson's Phalarope	U	U	U	
___ Long-billed Dowitcher	U		U	
___ Wilson's Snipe	U	U	U	U
GULLS & TERNS - Laridae				
___ Herring Gull				U
___ California Gull	C	C	C	
___ Ring-billed Gull	A	C	A	U
___ Franklin's Gull	A	U	A	
___ Forster's Tern	U			
___ Black Tern	U		U	
PIGEONS & DOVES - Columbidae				
___ Band-tailed Pigeon	U			
___ Rock Dove	C	C	C	U
___ Mourning Dove	A	A	A	R
CUCKOOS - Cuculidae				
___ Yellow-billed Cuckoo		U	R	
___ Black-billed Cuckoo		R		



(Continued)

LEGEND

A - Abundant: Occurs in large numbers during season.

C - Common: Occurs regularly in moderate numbers.

U - Uncommon: Occurs regularly but in small numbers.

R - Rare: Occurs infrequently (may or may not be seen every year)

* - Breeding Species

	Spring	Summer	Fall	Winter
OWLS - Strigidae				
___ Eastern Screech-owl	U	U	U	U
___ Great Horned Owl	U	U	U	U
___ Northern Pygmy-owl	U	U	U	U
___ Long-eared Owl	R		R	R
___ Northern Saw-whet Owl	U	U	U	U
NIGHTHAWKS & POOR-WILLS - Caprimulgidae				
___ Common Nighthawk	C	C	C	
___ Poor-will	U	C	U	
SWIFTS - Apodidae				
___ White-throated Swift	C	C	C	
HUMMINGBIRDS - Trochilidae				
___ Broad-tailed Hummingbird	C	C	C	
___ Rufous Hummingbird		U		
KINGFISHERS - Alcedinidae				
___ Belted Kingfisher	U	U	U	
WOODPECKERS - Picidae				
___ Common Flicker	C	C	C	U
___ Red-headed Woodpecker	R		R	
___ Lewis' Woodpecker	R			
___ Red-naped Sapsucker	U	U	U	
___ Hairy Woodpecker	C	C	C	C
___ Downy Woodpecker	U	U	U	U
___ Three-toed Woodpecker	R	R	R	R
TYRANT FLYCATCHERS - Tyrannidae				
___ Eastern Kingbird	U	U	U	
___ Western Kingbird	C	C	C	
___ Say's Phoebe	C	C	C	
___ Dusky Flycatcher	C	C	C	
___ Western Flycatcher	C	C	C	
___ Western Pewee	A	A	A	
___ Olive-sided Flycatcher	U	C	U	
LARKS - Alaudidae				
___ Horned Lark	U	U	U	R
SWALLOWS - Hirundinidae				
___ Violet-green Swallow	C	C	C	
___ Tree Swallow	C	C	C	
___ Northern Rough-winged Swallow	U	U	U	
___ Barn Swallow	C	C	C	
___ Cliff Swallow	C	C	C	



(Continued)

LEGEND

- A - Abundant: Occurs in large numbers during season.
- C - Common: Occurs regularly in moderate numbers.
- U - Uncommon: Occurs regularly but in small numbers.
- R - Rare: Occurs infrequently (may or may not be seen every year)
- * - Breeding Species

	Spring	Summer	Fall	Winter
JAYS, MAGPIES & CROWS - Corvidae				
___ Blue Jay	R	R	R	R
___ Steller's Jay	A	A	A	A
___ Scrub Jay	U	U	U	U
___ Black-billed Magpie	A	A	A	A
___ Northern Raven	U	U	U	U
___ American Crow	U		U	U
___ Pinyon Jay	R		R	
CHICKADEES - Paridae				
___ Black-capped Chickadee	C	C	C	C
___ Mountain Chickadee	A	A	A	A
___ Bushtit	R	R	R	R
NUTHATCHES - Sittidae				
___ Red-breasted Nuthatch	U	U	U	C
___ White-breasted Nuthatch	U	U	U	U
___ Pygmy Nuthatch	A	A	A	A
CREEPERS - Certhidae				
___ Brown Creeper	U		U	U
DIPPERS - Cinclidae				
___ Dipper				U
WRENS - Troglodytidae				
___ House Wren	A	A	A	A
___ Canyon Wren	R	R	R	R
___ Rock Wren	A	A	A	R
THRUSHES - Muscicapidae				
___ Golden-crowned Kinglet	U	U	U	U
___ Ruby-crowned Kinglet	U			
___ American Robin	A	A	A	U
___ Wood Thrush	R			
___ Hermit Thrush	A	C	C	
___ Swainson's Thrush	C	C	C	
___ Eastern Bluebird	R			
___ Western Bluebird	U	U	U	
___ Mountain Bluebird	A	A	A	U
___ Townsend's Solitaire	C	C	C	C
MOCKINGBIRDS & THRASHERS - Mimidae				
___ Gray Catbird	U	U	U	
___ Brown Thrasher	U	U		
WAXWINGS - Bombycillidae				
___ Bohemian Waxwing			R	U
___ Cedar Waxwing		R		



(Continued)

LEGEND

A - Abundant: Occurs in large numbers during season.

C - Common: Occurs regularly in moderate numbers.

U - Uncommon: Occurs regularly but in small numbers.

R - Rare: Occurs infrequently (may or may not be seen every year)

* - Breeding Species

	Spring	Summer	Fall	Winter
SHRIKES - Laniidae				
___ Northern Shrike				U
___ Loggerhead Shrike		R		
STARLINGS - Sturnidae				
___ European Starling	C	C	C	C
VIREOS - Vireonidae				
___ Solitary Vireo	C	C	C	
___ Warbling Vireo	C	C	C	
WARBLERS, SPARROWS, & BLACKBIRDS - Emberizidae				
___ Orange-crowned Warbler	C	U	U	
___ Virginia's Warbler	C	C	C	
___ Yellow Warbler	A	A	A	
___ Yellow-rumped Warbler	A	C	A	R
___ MacGillivray's Warbler	C	C	C	
___ Northern Yellowthroat	C	C		
___ Yellow-breasted Chat	C	C	C	
___ Wilson's Warbler	C	U	C	
___ American Redstart	U		U	
___ Western Tanager	U	U	U	
___ Rose-breasted Grosbeak		R		
___ Black-headed Grosbeak	C	C	C	
___ Blue Grosbeak	U	U		
___ Lazuli Bunting	A	A	A	
___ Indigo Bunting	R	R	R	
___ Painted Bunting	R			
___ Green-tailed Towhee	C	C	C	
___ Rufous-sided Towhee	A	A	A	
___ American Tree Sparrow	U			C
___ Chipping Sparrow	A	A	A	
___ Clay-colored Sparrow	U			
___ Brewer's Sparrow	U		U	
___ Vesper Sparrow	U		U	
___ Lark Sparrow	C	C	C	
___ Lark Bunting	R		R	
___ Lincoln's Sparrow	C	U	U	
___ Song Sparrow	C	C	C	U
___ White-crowned Sparrow	C		C	U
___ Dark-eyed Junco	C	U	C	C
___ Snow Bunting				R
___ Red-winged Blackbird	C	C	C	U



(Continued)

LEGEND

A - Abundant: Occurs in large numbers during season.

C - Common: Occurs regularly in moderate numbers.

U - Uncommon: Occurs regularly but in small numbers.

R - Rare: Occurs infrequently (may or may not be seen every year)

* - Breeding Species

	Spring	Summer	Fall	Winter
___ Western Meadowlark	C	C	C	R
___ Brewer's Blackbird	C	U	A	
___ Brown-headed Cowbird	C	C	C	
___ Northern Oriole	C	C	C	
FINCHES - Fringillidae				
___ House Finch	U	U	C	
___ Rosy Finch			U	U
___ Pine Siskin	C	C	C	C
___ American Goldfinch	C	C	C	R
___ Lesser Goldfinch	U	U	U	
___ Red Crossbill	U	U	U	R
___ Evening Grosbeak				U
WEAVER FINCHES - Passeridae				
___ House Sparrow	U	U	U	U



Butterflies of Horsetooth Mountain and Lory Parks

PARNASSIANS AND SWALLOWTAILS: Papilionidae

Parnassians: Subfamily Parnassinae

___ Rocky Mountain Parnassian Parnassius smintheus Doubleday

Swallowtails: Subfamily Papilioninae

___ Anise Swallowtail Papilio zelicaon Lucas___ Indra Swallowtail Papilio indra Reakirt___ Western Tiger Swallowtail Papilio rutulus Lucas___ Two-tailed Swallowtail Papilio mutlicaudatus W.F. Kirby___ Pale Swallowtail Papilio eurymedon Lucas**WHITES AND SULPHURS: Pieridae**

Whites: Subfamily Pierinae

___ Pine White Neophasia menapia (C. and R. Felder),___ Spring White Pontia sisymbrii (Boisduval)___ Checkered White Pontia protodice (Boisduval and Leconte)___ Western White Pontia protodice (Reakirt)___ Cabbage White Pieris rapae Linnaeus___ Large Marble Euchloe ausonides Lucas___ Olympia Marble Euchloe olympia W.H. Edwards___ Rocky Mountain Orangetip Anthocharis julia W.H. Edwards

Sulphurs and Yellows: Subfamily Coliadinae

___ Clouded Sulphur Colias philodice Godart___ Orange Sulphur Colias eurytheme Boisduval___ Queen Alexandra's Sulphur Colias alexandra W.H. Edwards___ Southern Dogface Zerene cesonia (Stoll)___ Mexican Yellow Eurema mexicanum (Boisduval)___ Dainty Sulphur Nathalis iole Boisduval**COPPERS, HAIRSTREAKS, AND BLUES: LYCAENIDAE:**

Coppers: Subfamily Lycaeninae

___ Tailed Copper Lycaena arota (Boisduval)___ Gray Copper Lycaena dione (Scudder)___ Bronze Copper Lycaena hyllus (Cramer)___ Ruddy Copper Lycaena rubida (Behr)___ Blue Copper Lycaena heteronea Boisduval

Hairstreaks: Subfamily Theclinae

___ Behr's Hairstreak Satyrium behrii (W.H. Edwards)___ California Hairstreak Satyrium californicum (W.H. Edwards)___ Coral Hairstreak Satyrium titus (Fabricius)___ Striped Hairstreak Satyrium liparops (Leconte)___ Hedgerow Hairstreak Satyrium saepium (Boisduval)___ Western Green Hairstreak Callophrys affinis (W.H. Edwards)___ Sheridan's Hairstreak Callophrys sheridanii (W.H. Edwards)___ Thicket Hairstreak Callophrys spinetorum (Hewitson)

(Continued)

Butterflies of Horsetooth Mountain and Lory Parks**COPPERS, HAIRSTREAKS, AND BLUES: LYCAENIDAE (Continued)**

- ___ Juniper Hairstreak *Callophrys grynea* (Hubner)
- ___ Brown Elfin *Callophrys augustinus* (W. Kirby)
- ___ Moss's Elfin *Callophrys mossii* (Hy. Edwards)
- ___ Western Pine Elfin *Callophrys eryphon* (Boisduval)
- ___ Gray Hairstreak *Strymon melinus* Hubner

Blues: Subfamily Polyommatainae

- ___ Marine Blue *Leptotes marina* (Reakirt)
- ___ Reakirt's Blue *Hemiargus isola* (Reakirt)
- ___ Western Tailed-Blue *Everes amyntula* (Boisduval)
- ___ Spring Azure *Celastrina ladon* (Cramer)
- ___ Hops Azure *Celastrina humulus* Scott MS
- ___ Rocky Mountain Dotted Blue *Euphilotes ancilla* (Barnes and McDunnough)
- ___ Arrowhead Blue *Glaucopsyche piasus* (Boisduval)
- ___ Silvery Blue *Glaucopsyche lygdamus* (Doubleday)
- ___ Melissa Blue *Lycaeides melissa* (W.H. Edwards)
- ___ Greenish Blue *Plebejus saepiolus* (Boisduval)
- ___ Boisduval's Blue *Icaricia icarioides* (Boisduval)
- ___ Acmon Blue *Icaricia acmon* (Westwood and Hewitson)

METALMARKS: FAMILY RIODINIDAE

- ___ Mormon Metalmark *Apodemia mormo* (C. & R. Felder)

BRUSHFOOT BUTTERFLIES: FAMILY NYMPHALIDAE

Longwings and fritillaries: Subfamily Heliconiinae

- ___ Gulf Fritillary *Agraulis vanillae* Linnaeus
- ___ Variegated Fritillary *Euptoieta claudia* (Cramer)
- ___ Aphrodite Fritillary *Speyeria aphrodite* (Fabricius)
- ___ Regal Fritillary *Speyeria idalia* (Drury)
- ___ Coronis Fritillary *Speyeria coronis* (Behr)
- ___ Callippe Fritillary *Speyeria callippe* (Boisduval)
- ___ Northwestern Fritillary *Speyeria hesperis* (W.H. Edwards)

Brushfoots: Subfamily Nymphalinae

- ___ Arachne Checkerspot *Poladryas arachne* (W.H. Edwards)
- ___ Gorgone Checkerspot *Chlosyne gorgone* (Hubner)
- ___ Northern Checkerspot *Chlosyne palla* (Boisduval)
- ___ Pearl Crescent *Phyciodes tharos* (Drury)
- ___ Northern Crescent *Phyciodes cocyta* (Cramer)
- ___ Field Crescent *Phyciodes pratensis* (Behr)
- ___ Variable Checkerspot *Euphydryas chalcedona* (Doubleday)
- ___ Satyr Comma *Polygonia satyrus* (W.H. Edwards)
- ___ Hoary Comma *Polygonia gracilis* (Grote and Robinson)
- ___ Mourning Cloak *Nymphalis antiopa* (Linnaeus)
- ___ Milbert's Tortoiseshell *Nymphalis milberti* (Godart)
- ___ American Lady *Vanessa virginiensis* (Drury)



(Continued)

Butterflies of Horsetooth Mountain and Lory Parks**BRUSHFOOT BUTTERFLIES: FAMILY NYMPHALIDAE (Continued)**

- ___ Painted Lady Vanessa cardui (Linnaeus)
 ___ West Coast Lady Vanessa annabella (Field)
 ___ Red Admiral Vanessa atalanta (Linnaeus)
- Admirals and relatives: Subfamily Limenitidinae
 ___ Viceroy Limenitis archippus (Cramer)
 ___ Weidemeyer's Admiral Limenitis weidemeyerii (W.H. Edwards)
- Leafwings and relatives: Subfamily Charaxinae
 ___ Goatweed Leafwing Anaea andria Scudder
 ___ Hackberry Emperor Asterocampa celtis (Boisduval and Leconte)
- Satyrs and Woodnymphs: Subfamily Satyrinae
 ___ Common Ringlet Coenonympha tullia (Muller)
 ___ Common Wood-nymph Cercyonis pegala (Fabricius)
 ___ Small Wood-Nymph Cercyonis oetus (Boisduval)
 ___ Riding's Satyr Neominois ridingsii (W.H. Edwards)
 ___ Chryxus Arctic Oeneis chryxus (Doubleday and Hewitson)
- Royalty: Subfamily Danainae
 ___ Monarch Danaus plexippus (Linnaeus)

THE SKIPPERS: Superfamily Hesperioidea, Family Hesperidae

- Spread-wing Skippers, Pyrgines: Subfamily Pyrginae
 ___ Silver-spotted Skipper Epargyreus clarus (Cramer)
 ___ Mottled Duskywing Erynnis martialis (Scudder)
 ___ Pacuvius Duskywing Erynnis pacuvius (Lintner)
 ___ Afranius Duskywing Erynnis afranius (Lintner)
 ___ Persius Duskywing Erynnis persius (Scudder)
 ___ Common Checkered-Skipper Pyrgus communis (Grote)
 ___ Common Sootywing Pholisora catullus (Fabricius)
- Skipperlings: Subfamily Heteropterinae
 ___ Russet Skipperling Piruna pirus (W.H. Edwards)
- Grass Skippers: Subfamily Hesperinae
 ___ Garita Skipperling Oarisma garita (Reakirt)
 ___ Morrison's Skipper Stinga morrisoni (W.H. Edwards)
 ___ Uncas Skipper Hesperia uncas W.H. Edwards
 ___ Juba Skipper Hesperia juba (Scudder)
 ___ Assiniboine Skipper Hesperia assiniboia (Lyman)
 ___ Ottoo Skipper Hesperia ottoo W.H. Edwards
 ___ Leonard's Skipper Hesperia leonardus Harris
 ___ Pahaska Skipper Hesperia pahaska (Leussler)
 ___ Green Skipper Hesperia viridis (W.H. Edwards)
 ___ Tawny-edged Skipper Polites themistocles (Latreille)
 ___ Crossline Skipper Polites origenes (Fabricius)



(Continued)

Butterflies of Horsetooth Mountain and Lory Parks

THE SKIPPERS: Superfamily Hesperioidea, Family Hesperiidae
___ Long Dash <u>Polites mystic</u> (W.H. Edwards)
___ Arogos Skipper <u>Atrytone arogos</u> (Boisduval and Leconte)
___ Woodland Skipper <u>Ochlodes sylvanoides</u> (Boisduval)
___ Taxiles Skipper <u>Poanes taxiles</u> (W.H. Edwards)
___ Dun Skipper <u>Euphyes vestris</u> (Boisduval)
___ Dusted Skipper <u>Atrytonopsis hianna</u> (Scudder)
___ Simius Roadside-Skipper <u>Amblyscirtes simius</u> W.H. Edwards
___ Bronze Roadside-Skipper <u>Amblyscirtes aenus</u> W.H. Edwards
___ Oslar's Roadside-Skipper <u>Amblyscirtes oslari</u> (Skinner)

Source: Paul Opler, January 21, 1997



9. APPENDIX E: Related Documents

Documents related to Horsetooth Mountain Park that are included in this appendix:

1. Ballot to Tax for the Purchase of Horsetooth Mountain Park (1981)
2. Horsetooth Mountain Park User Survey (1997)
3. Resource Management Plan for Horsetooth Mountain Park (1998)
4. Resource Management Plan for the Soderberg Open Space (2003)
5. Resource Management Plan for the Hughey Property Open Space (2003)
6. Resource Management Plan for the Culver Open Space (2004)

