



Colorado State Parks

Roxborough State Park

Park Management Plan

2010-2020



September 2010

ACKNOWLEDGEMENTS

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This management plan is the second to be developed using the *Colorado State Parks Management Plan Template*, which was developed by a diverse committee comprised of experienced park and program staff and was approved by the Parks Board in 2009.

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EXECUTIVE SUMMARY



Roxborough offers a wide variety of interpretation and environmental education opportunities for visitors.

Roxborough State Park is a popular 3,294-acre, day-use park located in Douglas County on the edge of the foothills about 25 miles southwest of Denver. Roxborough is a geologically significant site with more than 1.3 billion years of geologic time represented in elegant sandstone spires and steep, colorful hogbacks. The park also features unique and high quality plant communities, wildlife including large numbers of song birds and raptors, black bears, mountain lions, mule deer and rare species such as Preble’s Meadow Jumping Mouse; as well as abundant hiking and interpretive opportunities. Substantial portions of the park are designated as a Colorado Natural Area, National Natural Landmark, and National Archaeological District. Roxborough State Park is known by many as one of the Colorado State Park system’s “crown jewels” because of its remarkable landscape, beautiful natural features, and abundant wildlife (all within close proximity to Denver).

Each year, close to 100,000 people visit Roxborough, but with continued population growth projected along the Front Range, and a 3,100-acre master planned development (Sterling Ranch) situated just a couple miles northeast of the park entrance, visitation and use of Roxborough is projected to increase over time.¹ These factors, as well as the need to balance use with protection of significant natural, geologic, and historic resources protected by the park, influence many of the recommendations outlined in the Roxborough State Park Management Plan.

About the Plan

Management Plans are an important planning tool for park managers. The Roxborough State Park Management Plan serves as the foremost guiding document for Roxborough State Park. All other park planning documents should be consistent with this plan.

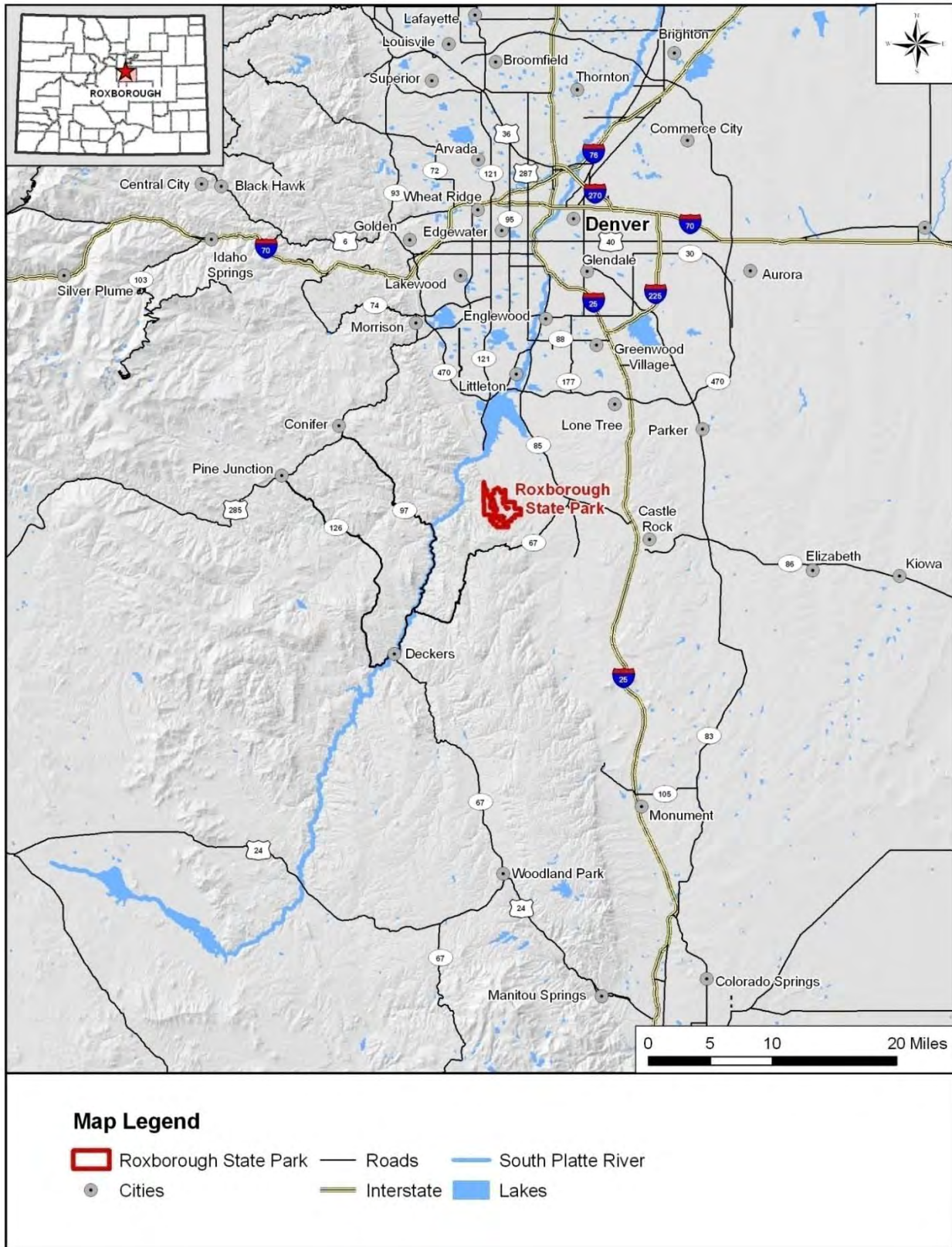
The Roxborough State Park Management Plan provides a conceptual planning framework for setting management priorities and provides specific management direction for park resources. The plan also:

- Serves as a guide and policy document for current and future park staff, other partnering agencies, elected officials, and interested members of the public.
- Guides management of natural, cultural, and recreational resources.
- Provides a framework for monitoring and maintaining resources at Roxborough State Park.
- Identifies park enhancement opportunities including possible upgrades to or new park facilities, recreation infrastructure, etc.
- Serves as a guide for future park budget allocations and annual funding requests.

Included in the plan is a description of the complete spectrum of recreational, cultural, and natural resources at Roxborough State Park. Implementation of the Roxborough State Park

¹Sterling Ranch website, 2009. <<http://sterlingranchcolorado.com/index.html>>

Map 1. Location



Management Plan will assist park staff in their efforts to preserve and enhance the park for future recreational users.

The Roxborough State Park manager should regularly review the park management plan to evaluate implementation progress. This includes annually reviewing the document at the beginning of each calendar year.

Park Goals

The following overarching goals set the tone for park management decisions at Roxborough State Park. All management recommendations and priorities relate directly back to these goals.

- a. Protect and interpret the significant natural, cultural, and paleontological resources.
- b. Sustainably manage the park while planning ahead for anticipated increases in visitation associated with local and regional population growth.
- c. Offer a range of high quality visitor experiences that are compatible with park resource management needs.
- d. Provide high-quality customer service and opportunities to access and learn about park resources and enjoy popular recreation activities.
- e. Conduct development activities and operations in a manner that do not adversely affect park resources and environments.
- f. Build cost-effective, high quality recreation facilities that are aesthetically compatible, visually consistent with park resources, energy efficient, and which do not exceed the maintenance capabilities of park staff.
- g. Support retail opportunities that enhance the visitor experience.

Management Zoning

The management zoning scheme adapted specifically for Colorado State Parks provides a framework for identifying areas that provide for different types of visitor experiences and recreation opportunities, based on the resource constraints that occur within the park. Within each management zone, suitable types of facilities and land uses are also identified, along with the suggested visitor experience and management focus.

Influencing the zoning of Roxborough State Park were a number of factors including resource, land ownership, and engineering suitability mapping (presented in subsequent sections of the plan). In addition, historical activities, existing land uses, and other issues occurring in specific areas of the park also influenced management zoning.

In addition to natural resource, land ownership, and engineering suitability mapping, other factors influencing park zoning included historical activities, established land uses, and acquisition history. At Roxborough State Park, three distinct areas were identified in the plan (these are depicted on Map 2 and briefly discussed below). Additional details on these areas and how they influenced Roxborough State Park's management zoning are provided in Section 4.0.

Inner Sanctum — The Inner Sanctum area corresponds to much of the original “core” of Roxborough State Park, which today includes the Visitor Center and hiking trails that extend between the Dakota Hogback and the Fountain formations. This area experiences the highest concentration of visitors and includes the most dramatic natural and scenic park features.

Western Foothills — The Western Foothills occurs within the highest elevation area of the park along a transitional vegetation zone that features upland mesic oak thicket and Douglas fir forest. The highest peak in the park (Carpenter Peak) is located in this area, which offers unparalleled views of the park below and much of the Front Range. Much of Roxborough’s designated Colorado Natural Area Boundary is included in this area.

Southdowns Area — The Southdowns Area generally includes lands occurring along the eastern one-third of the park, and is comprised of Roxborough State Park’s most recently acquired lands (1997). Presently, little if any park visitation occurs in the Southdowns area. The Sharptail Trail, which is a Douglas County trail that extends through Roxborough, is the only trail currently situated in this portion of the park. Much of the Southdowns area features mixed grass prairie with rolling hills topped with scrub oak thicket.

Summary of Recommended Park Enhancement Opportunities

Based on natural resource considerations, outdoor recreation trends, visitor preferences, financial considerations, and other issues identified in this plan, there are a number of possible park “enhancement opportunities” suggested for Roxborough State Park (Map 2). These enhancement opportunities are discussed in detail in Section 5.0 Park Enhancement Opportunities and Initiatives. All of the Enhancement Opportunities and other suggested management priorities are included in the *Summary Implementation Priorities Table* included in Section 6.0. Enhancement opportunities generally include park improvements that are significant in terms of their spacial scale and level of effort needed to implement them, and may warrant considerable financial resources. It is important to note that new facilities and infrastructure should be balanced with maintaining and preserving what we already have. Also, major new facility investments should be balanced with resource enhancements. Finally, park enhancement opportunities are not “commitments.” Implementation of enhancement opportunities and other recommendations in the management plan are contingent on the park securing adequate financial and human resources. Any park enhancement that requires additional funding or staffing must be considered or weighed within the context of other Division-wide needs.

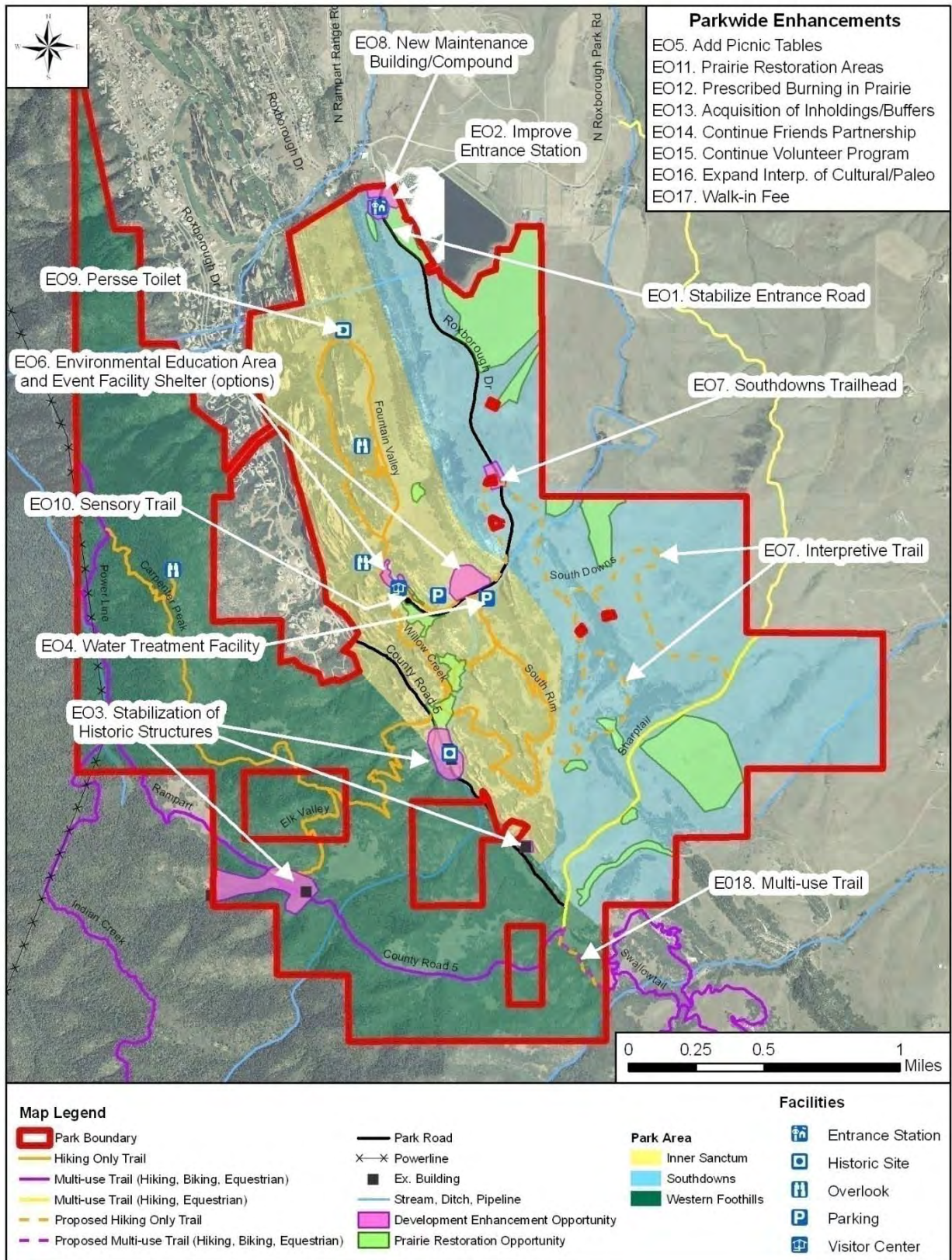
Existing Facilities and Infrastructure

- EO1. Stabilization of Park Entrance Road
- EO2. Improvements to Park Entrance Station
- EO3. Stabilize and Interpret Historic Structures

New Facilities & Infrastructure

- EO4. Water Treatment Facility
- EO5. Add Picnic Tables
- EO6. Environmental Education/Event Facility Shelter
- EO7. Southdowns Trailhead and Interpretive Hiking Trails
- EO8. New Maintenance Building/Compound

Map 2. Enhancement Opportunities



- EO9. Vault Toilet Adjacent to Persse Place
- EO10. Sensory Trail near the Visitor Center

Rehabilitation & Restoration Efforts

- EO11. Prairie/Grassland Restoration
- EO12. Prescribed Burning for Ecological Restoration

Management Initiatives

- EO13. Acquisition of Key Inholdings and/or Protection of Buffer Parcels
- EO14. Continue to Build Partnership with the Friends of Roxborough State Park
- EO15. Continue to Operate and Maintain a Successful Volunteer Program
- EO16. Expand Interpretation of the Park's Geological, Cultural & Paleontological Resources
- EO17. Establishment of Walk-In Fee
- EO18. Formalize Multi-use Trail Connection to Nelson Ranch

Budget Considerations

During the development of the Roxborough State Park Management Plan, Colorado State Parks experienced annual reductions in General Fund taxpayer support resulting in targeted budget cuts in June 2009 and June 2010, as well as fee increases in FY 2010 and FY 2011. At the time of formal adoption, Colorado State Parks projected that no General Fund Dollars would be allocated to the Division in 2012.

These financial challenges were considered during the development of the Roxborough State Park Management Plan, and helped influence the type and scale of suggested park enhancements, as well as other implementation priorities. Despite current and ongoing financial challenges, the Roxborough State Park Management Plan remains relevant and should continue to be used as an important tool for planning the park's future. While Roxborough and many other parks are currently experiencing budget reductions, there will indeed be a time when improving the park, and further investing in its natural and recreational resources makes sense. Recommendations included in this plan will help guide such investments.

Regardless of whether the Division secures funding for park enhancements, Roxborough is fortunate to have the Friends of Roxborough, an extensive volunteer group, and other stakeholders that have the capacity to generate significant financial resources. Additionally, not all recommendations in the plan require a capital investment. Some of the recommended park enhancements and management actions increase efficiencies, and do not require additional capital or operating expenditures. Others may be paid for with the help of grants. Such park enhancements should be pursued regardless of the present day financial situation.



Park Description

Roxborough State Park is a popular 3,294-acre, day-use park located in Douglas County on the edge of the foothills about 25 miles southwest of Denver. Roxborough is a geologically significant site with more than 1.3 billion years of geologic time represented in elegant sandstone spires and steep, colorful hogbacks. The park also features unique and high quality plant communities, wildlife including large numbers of song birds and raptors, black bears, mountain lions, mule deer and rare species such as Preble’s Meadow Jumping Mouse; as well as abundant hiking and interpretive opportunities. Substantial portions of the park are designated as a Colorado Natural Area, National Natural Landmark, and National Archaeological District. Roxborough State Park is known by many as one of the Colorado State Park system’s “crown jewels” because of its remarkable landscape, beautiful natural features, and abundant wildlife (all within close proximity to Denver).

Each year, close to 100,000 people visit Roxborough, but with continued population growth projected along the Front Range, and a 3,100-acre master planned development (Sterling Ranch²) just a couple miles northeast of the park entrance, visitation and use of Roxborough is projected to increase over time. This factor, as well as the need to balance use with protection of significant natural, geologic, and historic resources protected by the park, help influence many of the recommendations outlined in the Roxborough State Park Management Plan.

Purpose of the Plan

The Roxborough State Park Management Plan serves as the foremost guiding document for Roxborough State Park. The ultimate purpose of developing the park management plan is to outline the vision for the park (see inset) as well as priorities that will provide for both the public’s enjoyment and the protection of the park’s resources. The Plan provides a conceptual planning framework for setting management priorities and provides specific management direction for park resources. The Plan also:

Roxborough Vision Statement:

Roxborough State Park was established to protect unparalleled scenery and resource values and does so through innovative outdoor recreation, educational and volunteer programs. Roxborough will continue to set a high standard for engagement with the natural environment while preserving and enhancing park resources for future generations. The park will continue to serve the people of Colorado as a premier site for environmental education and resource stewardship and is an irreplaceable treasure within the Colorado State Park system.

²Sterling Ranch website, 2009. <<http://sterlingranchcolorado.com/index.html>>

- Serves as a guide and policy document for current and future park staff, other partnering agencies, elected officials, and interested members of the public.
- Guides management of natural, cultural, and recreational resources.
- Provides a framework for monitoring and maintaining resources at Roxborough State Park.
- Identifies park enhancement opportunities including possible upgrades to or new park facilities, recreation infrastructure, etc.
- Serves as a guide for future park budget allocations and annual funding requests.

Included in the plan is a description of the complete spectrum of recreational, cultural, and natural resources at Roxborough State Park. Implementation of the Roxborough State Park Management Plan will assist park staff in their efforts to preserve and enhance the park for future recreational users.

The Roxborough State Park manager should regularly review the Plan to evaluate implementation progress. This includes annually reviewing the document at the beginning of each calendar year.

Relationship to the Division Strategic Plan

Using the Division Strategic Plan as an overarching guide, the Roxborough State Park Management Plan serves as the primary “go-to” planning document for Roxborough State Park staff. Specifically, the Division Strategic Plan is a useful guide for achieving a broad range of Division-wide goals and objectives, while the management plan is the primary guidance document for park-level planning efforts. The Roxborough State Park Management Plan is consistent with the following Division-wide Mission, Vision, and Goals which are highlighted below:

Mission

To be leaders in providing outdoor recreation through the stewardship of Colorado’s natural resources for the enjoyment, education, and inspiration of present and future generations.

Vision Statement

Colorado State Parks offer exceptional settings for renewal of the human spirit. Residents and visitors enjoy healthy, fun-filled interaction with the natural world, creating rich traditions with family and friends that promote stewardship of our natural resources. Parks employees and their partners work together to provide ongoing and outstanding customer service through recreational programs, amenities, and services.

Division-wide Goals

- ***Goal 1: Connect People to the Outdoors by Providing Quality Outdoor Recreation Opportunities and Settings***
- ***Goal 2: Conserve, Enhance, Manage and Interpret Natural, Cultural, and Scenic Resources***

- **Goal 3: Foster and Actively Promote Excellence in our Workforce**
- **Goal 4: Stabilize and Strengthen Colorado State Parks' Financial Condition**
- **Goal 5: Strengthen Outreach and Partnerships**

Park Goals

- Protect and interpret the significant natural, cultural, and paleontological resources.
- Sustainably manage the park while planning ahead for anticipated increases in visitation associated with local and regional population growth.
- Offer a range of high quality visitor experiences that are compatible with park resource management needs.
- Provide high-quality customer service and opportunities to access and learn about park resources and enjoy popular recreation activities.
- Conduct development activities and operations in a manner that do not adversely affect park resources and environments.
- Build cost-effective, high quality recreation facilities that are aesthetically compatible, visually consistent with park resources, energy efficient, and which do not exceed the maintenance capabilities of park staff.
- Support retail opportunities that enhance the visitor experience.

Future Plan Updates

The Roxborough State Park Management Plan should be updated every 10 years by park and other Division staff (e.g., Division planning, region, natural resource, and capital development staff). To ensure that the Plan is a dynamic document that meets the changing needs of the park and visitors over time, the Plan may be supplemented with updated information as needed, including minor changes to management actions, additional management actions that help the park adapt to changes in recreational trends, and possibly additional mapping. This may occur during the annual review at the beginning of the calendar year, or whenever relevant information becomes available. In addition, at the 5-year mark, the Park Manager should perform a detailed review of the plan and determine whether any formal amendments to the Plan are necessary. In general, park management plans may need to be amended when changes in circumstances are significant enough to merit changing the plan. Examples of when formal amendments to the Plan may be necessary are listed below:

- Changes to the park land base (e.g., additional lands are purchased or portions of the park are sold off)
- Major new facilities or infrastructure are planned for the park
- A policy or directive is instituted that significantly affects park management direction
- Major changes to land use occur within or adjacent to the park
- Changes to the Management Zoning are necessary
- Significant environmental stress (i.e., fire, drought, etc.)

Previous Planning Efforts

The following is a list of some of the relevant plans that were reviewed and considered in developing this management plan:

- Roxborough State Park Natural Resource Stewardship Plan, Colorado State Parks, 2010

- Roxborough State Park Management Plan Update (Draft) – Colorado State Parks, 2002
- Roxborough State Park Management Plan – Colorado State Parks 1985 & 1987
- Roxborough State Parks Fuels Management Plan – November, 2005
- Interpretive Master Plan Roxborough State Park – Colorado State Parks, Undated
- Trail Impact Report for Roxborough State Park – PKM Design Group, Inc. 1999
- Concepts for Sustainable Trails – Sustainable Trails, Inc. January 2000

Public Input Process

Public input is an important part of the management planning process. Members of the public were encouraged to provide input on the Plan at two public open house meetings conducted on June 9, 2009 and May 11, 2010 at the West Metro Fire Station, District 15. The public was also invited to submit comments online or via mail. Visitors to Roxborough were also encouraged to complete surveys as part of the *Corona Research Field Intercept Survey* between June 2008 and May 2009.

Public Open House Comments

The first open house meeting (June 9, 2009) was attended by about 20 interested community members and provided them an opportunity to learn about the planning process. Attendees also offered Parks staff valuable feedback on issues of interest or concern. A sampling of comments gathered at the first meeting generally focused on a variety of subjects including:

- Addition of amenities such as a covered rest area and/or a covered environmental education area
- Trail connections to Sharptail Trail in the South Downs area for mountain-biking and equestrian use
- Parking area for mountain-bikers
- Improved interpretation of archaeological, paleontological, and geologic resources
- Sensory trail near the George O'Malley Visitor Center
- Preserving the main part of the park "as is"

At the May 11, 2010 open house meeting, Parks' staff presented the public with ideas of potential park enhancement opportunities being considered in the Draft Management Plan and presented associated mapping; 33 community members attended and provided feedback. An additional 15 written and email comments were submitted. A sampling of key takeaways and comments gathered at the second meeting focused on a variety of subjects including:

- Stabilization of Historic Structures³ was assigned as being the highest priority
- Park enhancements EO9 (the multi-use trail) and EO7 (Environmental Education Area and Event Facility Shelter (EE/EF shelter)) were identified as the lowest priorities
- Among the comments received, there was no clear consensus on the importance of park enhancement EO8 (Southdowns trailhead and interpretive trail)
- Provide suitable parking options that accommodate trailers if equestrian use is allowed.
- Continue to encourage and work with Friends of Roxborough and other volunteers
- Preserve the natural resources of the park and protect it as a designated Natural Area
- Concern that multi-use trails may damage the park as a natural resource

Online and Written Comments

Following the May 11, 2010 open house meeting, online comments were accepted until June 2, 2010 and an additional 15 written and email comments were received. Detailed comments were received from a former park manager, several volunteer naturalists and Friends of Roxborough, as well as from the Audubon Society of Greater Denver, and several equestrians. Most of the detailed comments expressed strong concern regarding a multi-use trail and the EE/EF shelter (EO7). Among comments provided were:

- Provide suitable parking options that accommodate trailers if equestrian use is allowed
- Concern over increased trash, disruption of wildlife and vegetation, vandalism, and that multi-use trails will degrade the natural areas
- Concern that additional structures or parking lots will degrade existing viewsheds
- Continue to work with Friends of Roxborough and other volunteers; any new interpretive programs should include their input
- Toilet at Persse Place would be welcomed
- Pave the entrance road
- Group and/or picnic table areas are not needed or wanted; a modest educational shelter near the Visitor Center would be more preferable
- Concern about offering parking for overnight visitors accessing Pike National Forest from Roxborough

Display boards and comment cards were also available in the park visitor center from May 17 to May 30, 2010; park staff were trained how to answer questions and observed 56 people look at the boards. Two additional comment cards were received during the display period. Those two comments emphasized the importance of an environmental education facility and keeping the park in as natural of a state as possible. The water treatment facility and environmental education shelter were highest in priority and the multi-use trail and Southdowns Trailhead and Interpretive Trail were lowest in priority.

Key Stakeholders

Key public and agency partners were involved in the development of the management plan in order to ensure its success. Stakeholders listed in bold, below, participated as members of the Roxborough State Park Advisory Council (RSPAC), which met quarterly throughout development of the plan with members of the Roxborough Planning Team. Other key stakeholders participated in public open houses and/or were contacted individually during development of the plan to ensure they were informed of the planning process and that they could weigh in on management plan recommendations if desired.

- Friends of Roxborough – Del Kelley, President
- One Roxborough – Sean Burke, Member
- Roxborough Park Foundation – Trudy Peterson, General Manager
- Vickey Trammel – Roxborough Volunteers
- Colorado Division of Wildlife – Matt Martinez, District Wildlife Manager
- Douglas County – Cheryl Matthews, Open Space Director
- Sterling Ranch LLC – Jack Hoagland, Principal

Visitor Survey

Visitor surveys were used as another tool to further gauge visitor ideas, needs, and issues. Detailed results from the 2009 Corona Research Visitor Survey (discussed in *Section 3.0 – Park Setting and Resources*) provided a rich dataset that enhanced the creation of this Plan. Roxborough State Park staff and volunteers collected 328 completed surveys between June 2008 and May 2009, the second highest survey sample among the other State Parks.

Influences on Management

There are a number of outside or “external” factors that may influence park management (e.g., land development patterns and zoning adjacent to the park, population projections, partnerships, etc.). Three of the more significant “external” forces that either indirectly or directly influence park management that were factored into the Plan are listed below.

- Roxborough State Park is operated and managed as a day-use park. As such, plan recommendations and overall management of the park is generally focused on continued day-use operations.
- Continued population growth in and along the Front Range, and areas zoned for residential and commercial development near the park, will inevitably increase visitor use over time and may ultimately influence management needs.
- Public interest and support for Roxborough can be measured by the size of its Friends of Roxborough group and the large number of volunteers that assist with park operations and programs. The Friends of Roxborough is one of the strongest friends groups of any park. There are over one hundred eighty (180) Roxborough volunteers that contribute over 8,000 hours annually to the Volunteer Naturalists programs alone. These partners to the Park are major stakeholders that provide tremendous support as well as influence management direction.

Management Considerations

Management considerations include issues and concerns that have been identified by park staff based on first-hand experience, knowledge, and/or information gathered from the public during the open house meetings and through survey responses. Some of the specific key management considerations addressed in this plan are as follows:

- **Natural Resource Protection:** As a designated Colorado Natural Area and National Natural Landmark, continued protection of unique park features is central to future management of Roxborough State Park.
- **Diversification of Recreation Opportunities on Newly Acquired Lands:** Roxborough cannot be all things to all people; however, diversification of outdoor recreation opportunities at the park may help generate added support for the park, ensure its long-term operational success, and add additional recreational benefits for visitors.
- **Long-term Operations and Maintenance:** Long-term operations and maintenance needs at Roxborough must be weighed alongside the inherent financial constraints of Colorado State Parks.

- **Land Acquisition:** There are numerous private inholdings within Roxborough. The management plan evaluates the feasibility of uniting park inholdings and the need for potential strategic land buffers.
- **Visitor Center Renovation:** With the George O'Malley Visitor Center recently renovated in 2009, the park has an opportunity to explore new ways to enhance the visitor experience.
- **Office/Maintenance Needs:** The original Visitor Center was designed in 1987 for one full-time employee and has since increased to three full-time employees, limiting the amount of space for storage and equipment. Currently Roxborough houses equipment at the Visitor Center and at a garage at Chatfield State Park. Because of limited storage space, the park does not have the maintenance equipment typical of a state park.
- **Volunteer Program:** The Friends of Roxborough, volunteer naturalists, and trail stewards are important assets and allow visitors to give back to the park on a personal level. Enhancing the Volunteer Program will provide vital services to the park and maintain a healthy relationship with the public.
- **Environmental Education:** Roxborough offers premier and unique opportunities for environmental education within the Denver Metropolitan Area. Environmental education will continue to be a priority at this park.

2.0 REGIONAL PLANNING CONTEXT



Physical Setting

Roxborough State Park is located in the Denver Metropolitan Area along the Front Range. The park is situated in the northwest corner of Douglas County and is flanked by Pike National Forest to the west, and upland grassland communities to the east. The surrounding area is an attractive mix of pine forests and rangeland. Residential development is scattered around the park. Rural agricultural lands are also found to the east and southeast of the park.

Chatfield State Recreation Area is just three miles north of the park. Douglas County provides multiple open space areas and trails for recreation within close vicinity of Roxborough, as well as a number of local golf courses, including an award-winning 18-hole golf course that directly borders the park (Arrowhead Golf Course). The closest incorporated towns are the Town of Castle Rock (about 6.5 miles to the east) and Castle Pines North (about 7.5 miles to the northeast). The City of Littleton and Columbine and Ken Caryl neighborhoods are located approximately 13 miles north of the park.

The ridges of the Dakota, Lyons, and Fountain formations slice through segments of Roxborough State Park. These ridges were formed when sedimentary beds were tilted to a 60-80 degree angle by the upward mountain building activity of the Laramide Orogeny. Wind and weather have sculpted them into present dramatic forms, creating a unique, scenic landscape.

Climate

Average daily temperatures at Roxborough State Park range from 30°F in December and January to 73°F in July, and may fluctuate by as much as 31°F in a given month (Table 1). Average annual precipitation totals 18.1 inches (Table 2). Roxborough is accustomed to typical Front Range winters, receiving the majority of snow in March and April. Summer high temperatures typically average the high 80's. The many exposed rock formations within the park absorb and retain heat. Southwest-facing rocky ledges always have the earliest spring flowers because of the heat holding capacity of the rocks.

Table 1 .Roxborough State Park Mean Temperatures⁴

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max °F	46.0	49.4	54.7	61.3	70.5	81.9	87.7	85.8	77.8	67.1	53.5	46.5	65.2
Mean °F	30.2	34.0	40.0	47.0	56.3	66.8	72.8	71.3	62.5	51.3	38.4	30.9	50.1
Min °F	14.3	18.5	25.2	32.6	42.1	51.7	57.8	56.8	47.1	35.5	23.3	15.3	35.0

Source: KASSLER Weather station, 0.91 miles from Roxborough Park

⁴ IDcide - Local Information Data Server. 20 Apr. 2009 <<http://www.idcide.com/weather/co/roxborough-park.htm>>.

Table 2. Roxborough State Park Average Precipitation Totals

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Inch	0.57	0.58	1.68	2.36	2.85	1.69	1.60	1.80	1.52	1.28	1.33	0.80	18.06

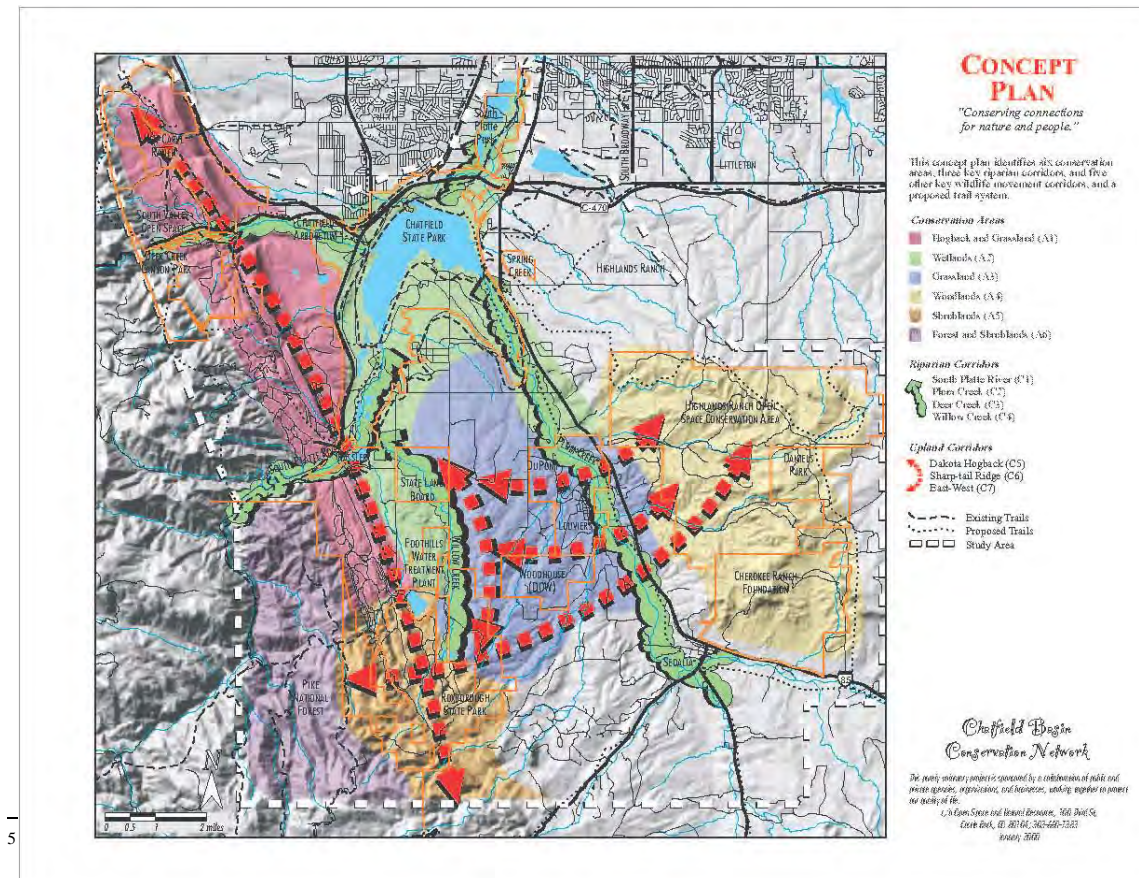
Source: KASSLER Weather station, 0.91 miles from Roxborough Park

Much like other nearby areas along the Front Range, the park is often swept by northwest winds. These winds are strongest in the spring and fall. Gusts of wind often precede summer thunderstorms. Small spiraling “dust devils” accompany the winds, but tornadoes are not common for this area. Lightning bolts have been known to jump from ridge to ridge during thundershowers in a spectacular, but potentially dangerous display.

Eco-Regional Setting

Roxborough State Park is an integral component of the more broadly-defined Chatfield Basin, which covers a large portion of western Douglas County and consists of a broad expanse of public and private lands that drain into Plum Creek and the South Platte River (Figure 1). Included within the Chatfield Basin is a species-rich transition zone (ecotone) that straddles three ecological units, where the mountains meet the plains and northern and southern communities merge. Hundreds of bird species inhabit this area. In total, nearly 400 species of birds are known to nest or migrate through the Chatfield Basin. Rare animals in the Chatfield Basin include the peregrine falcon, bald eagle, four species of minnows, the Federally-listed Preble's meadow jumping mouse, and at least ten species of butterflies.⁵

Figure 1. Chatfield Basin Conservation Network Concept Plan (1998)



5

The Chatfield Basin study area includes the Plum Creek Watershed, which is generally bounded on the south by the Palmer Divide; the east by I-25; the north by South Platte Park; and the west by the Pike National Forest. Drainage is from south to north to the Chatfield Reservoir and on to South Platte Park. This area contains important riparian corridors, recreation areas, and scenic vistas. With more than 51,000 acres of protected open space and hundreds of miles of trails, the Chatfield Basin is an important part of what makes western Douglas County a special place.

Adjacent Land Use and Land Ownership

The entire western boundary of Roxborough State Park is adjacent to the Pike National Forest (). According to the 1984 Land and Resource Management Plan for Pike and San Isabel National Forests, these lands are managed primarily for Rural and Roaded-Natural Recreation (Management Area 2B) and Wildlife Habitat for Management Indicator Species (Management Area 4B). Management Area 2B supports a wide range of motorized and nonmotorized recreation opportunities, and may be prohibited or restricted on designated routes to protect physical and biological resources. Management Area 4B emphasizes protection of habitat for one or more management indicator species. Recreation and other human activities are regulated to favor the needs of designated species.⁶ About 500 acres of forest within these areas are scheduled for fuels treatment projects in the next few years.⁷

Douglas County Open Space manages land just outside the North and Southwest corners of the park, including Sharptail Ridge, Pike Hill, and Nelson Ranch Open Space areas. Most of these lands experience passive recreational use such as hiking and horseback riding. In addition, there is an adjacent protected property to the northwest (via a conservation easement) that provides public access by “special arrangement” (Red Mesa Ranch) and protected land to the southeast of the park with access prohibited (South Willow Creek). Just to the northeast of the park is Rampart Reservoir, which is closed to the public and is owned and managed by the City of Aurora. Two Denver Water properties are also located just north of the Aurora Rampart Reservoir and within the Pike National Forest.

Roxborough Park subdivision, which is located along much of the park’s northern boundary, is zoned Planned Development Urban (PDU) and consists of about 1,644 housing units. The Indian Creek Ranch subdivision in Sedalia is a residential development with over 100 large-lot ranchettes situated southeast of the park. Numerous other private residences within unincorporated Douglas County also abut the park.

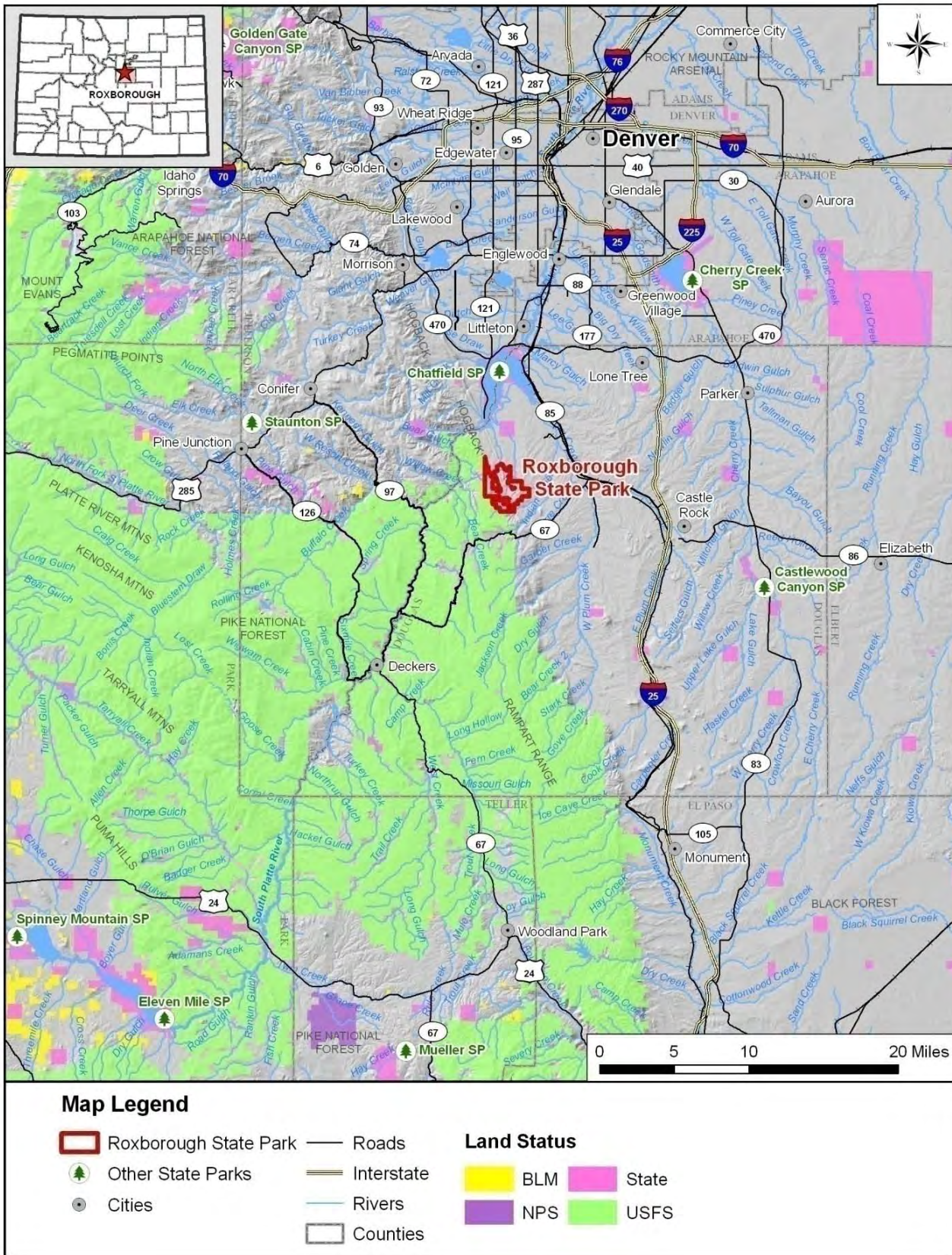
Eight private in-holdings and/or adjacent properties currently situated within Roxborough are owned by:

- David and Nancy Goodwin Trust
- Preshaw-Eisen
- United States Forest Service
- Ponce (Lot #202)

⁶ U.S. Forest Service. U.S. Forest Service Land and Resource Management Plan for Pike and San Isabel Forests; Comanche and Cimarron National Grasslands. 1981. Print.

⁷ Personal communication with Matt Schweich, GIS Specialist for the South Platte Ranger District. 04 Feb. 2010. Print.

Map 3. Regional Context Map



- Barrows (Lot #161)
- Tong (Lot # 169)
- Zanis Cross Foundation (Lot #336)
- Hasselberger Revocable Trust (Joy Barber)⁸

As of 2010, there were twelve privately-owned parcels exist directly adjacent to Roxborough State Park, in addition to property owned by Douglas County and Douglas County Open Space, the City of Aurora, and the U.S. Forest Service. Private property owners include:

- Davis
- Starbuck (Lot #3)
- Commercial Lot 2 (kiln site) owned by Roxborough Park Foundation
- Randall
- Nelson Ranch Investments, LLC
- Ice Tong Land & Cattle Co., LLC
- Lamee
- Roxborough Park Foundation
- Eagles Nest Owner’s Association
- Cleveland
- Haberer
- CNL Income Eagle West Golf LLC

Planned Development

In 2009, Sterling Ranch LLC submitted a Planned Development Application to Douglas County for a 3,100-acre, mixed-use commercial and residential development project (current estimates are around 10,000 households), situated about one mile from Roxborough State Park. Although Sterling Ranch’s proponents stress that the proposed development will result in a highly efficient, conservation-minded community located in an already growing county, this development will likely directly affect the park (e.g. increased visitation and pressure to access the park via alternate routes) as well as indirectly affect the park (e.g. wildlife movement between Roxborough and Chatfield and increased light pollution/light glare).

Additional residential and commercial development (about 50 residential lots and 2 acres of commercial development) is currently planned just north of the park adjacent to the proposed park entrance.

Local Recreation, and Tourism Trends, Needs, and Opportunities

There is an abundance of outdoor recreation opportunities around Roxborough State Park given its proximity to other state parks and county open space, neighboring national forests, and abundant regional trails. The park attracts tourists from around the country and the world. All of these opportunities must be considered when planning future park facilities. Some of the more popular local attractions are presented below in Table 3.

Recreational use in northwest Douglas County and Roxborough State Park is likely to increase over time in conjunction with projected population growth. In recent years, Roxborough staff

⁸ Parcel is pending purchase by Colorado State Parks as of January 13, 2010.

have fielded inquiries about expanding trail use to accommodate mountain bicyclists and equestrians, providing overnight camping options, as well as group picnic areas.

Table 3. Local Recreation and Tourism Attractions

Major Recreation Attractions	Approximate Distance from Roxborough	Acres/Miles of trails	Key Recreation Amenities
Castlewood Canyon SP	16 miles	2,621 acres 15 miles	Wildlife viewing, hiking, horseback riding, picnicking, rock climbing
Chatfield SP	3.5 miles	5,318 acres 26 miles	Camping, fishing, hiking, bicycling, boating, jet-skiing, cross-country skiing, snowshoeing, horseback riding, swimming
Pike National Forest - Waterton Canyon Area/South Platte River	< 1 mile	Numerous	Fishing, camping, cross-country skiing
Pike National Forest - Rampart Range Area	4 miles	Numerous	Four-wheel driving, mountain biking, hunting, camping, fishing, rock climbing
Backcountry Wilderness Area of Highlands Ranch	4 miles	8,000 acres (1,200 for recreational use) 5-miles of multi-use trails	Wildlife viewing, hiking, walking, bicycling
Highlands Ranch Metro District	5 miles	2,000 acres 70 miles of multi-use trails	Wildlife viewing, hiking, walking, bicycling
Sharptail Ridge Open Space (Sharptail Ridge Trail)	< 1 mile	4.4 miles	Hiking, horseback riding
Nelson Ranch Open Space (Swallow Hill Trail)	< 1 mile	3.3 miles	Hiking, horseback riding, mountain biking
Park Hill	< 1 mile	2.0 miles	Hiking, horseback riding, mountain biking
Colorado Trail	1-2 miles	25 miles	Hiking, mountain biking
Lamb Spring Archeological Preserve	2.5 miles	35 acres	Mammal fossil remains, free monthly tours available May through October

Population Trends

The population estimate for Douglas County as of January 1, 2009 is 290,311 persons, a 1.2% increase from the previous year. Almost 90 percent of the population lives in urban designated areas of the County. The incorporated cities and towns have 38.7% of the total County population. The Town of Castle Rock and the Town of Parker are the two largest incorporated places in the County, each with population estimates around 45,000 persons. The City of Lone Tree and the City of Castle Pines North each have about 10,000 people. The other major urban area in Douglas County is the Primary Urban Area (PUA) which includes Highlands Ranch, Meridian International Business Center, and Stonegate. With a population of approximately 119,000 people, it is 41% of the total County population. The combined population of the three Separated Urban Areas (SUA), Roxborough, Castle Pines, and The Pinery, is 25,000 people, or 8.7% of the County.

The last two years the County's growth rate has slowed due to the downturn in the economy. Still, Douglas County has typically experienced a higher growth rate than surrounding counties and is projected to grow to 417,000 people by 2020.⁹ The senior population, those people age 65 and over, was only 4.2% of the total County population in 1990 and 2000. According to the American Community Survey 3-year estimate for 2005-2007, seniors made up 5.0% of the

⁹ Colorado County Population Projections (2000 - 2020). Raw data. Prepared by the Colorado Division of Local Government, State Demography Office. Nov. 2008.

County population. By the year 2030, seniors may comprise 20% of the total County population.¹⁰

The median 2007 household income in Douglas County was \$92,824, which ranks 9th in the Nation for highest median household income among counties with 65,000 or more population.

Four percent of the population is 65+ compared to the Colorado state average which is ten percent. According to the 2000 US Census one percent of Douglas County population was black and five percent was Hispanic. These figures compare to 3.8% of Colorado residents who were black and 14.7% Hispanic.¹¹

¹⁰ 2009 Douglas County Demographic Summary. Prepared by the Information Resource Group for Douglas County Community Development Department. February 2009.

¹¹ Colorado State Demography Office. 14 July 2009 <<http://www.dola.state.co.us/demog/>>.

3.0 Park Setting & Resources



This section provides an overview of the current condition of park resources and other issues or ongoing factors that affect park management efforts. Included in this section is a detailed description of current land use and land ownership within the park, park administration and special functions, visitation, existing recreation opportunities, natural and cultural resources, and other elements that directly or indirectly influence the management of Roxborough State Park. This information provides: 1) a contextual framework for understanding management needs and constraints, and 2) a “baseline” from which to identify Enhancement Opportunities and Implementation Priorities (highlighted in Sections 5.0 and 6.0).

Special Designations

Roxborough has received special acclaim for its distinctive scenic and scientific values from federal, state, and local agencies. Special designations at the park include National Natural Landmark, National Archaeological District, Colorado Natural Area, and Chatfield Basin Core Reserve Area ().

National Natural Landmark

The National Natural Landmark Program, administered by the National Park Service, recognizes Roxborough as a “nationally significant example of the Nation’s natural heritage.” Specifically, the park is identified as an excellent example of tilted faulted sedimentary strata containing atypical occurrences of at least two Front Range plant communities. Roxborough was designated as a National Natural Landmark in April 1980.

Upon the acceptance of the National Natural Landmark designation for Roxborough, Colorado State Parks agreed “to protect, use and manage the site in a manner which prevents the destruction or deterioration of its nationally significant values.” State Parks further agreed to consult with the National Natural Landmark staff about any concerns or problems in managing the area or changes in the natural values.

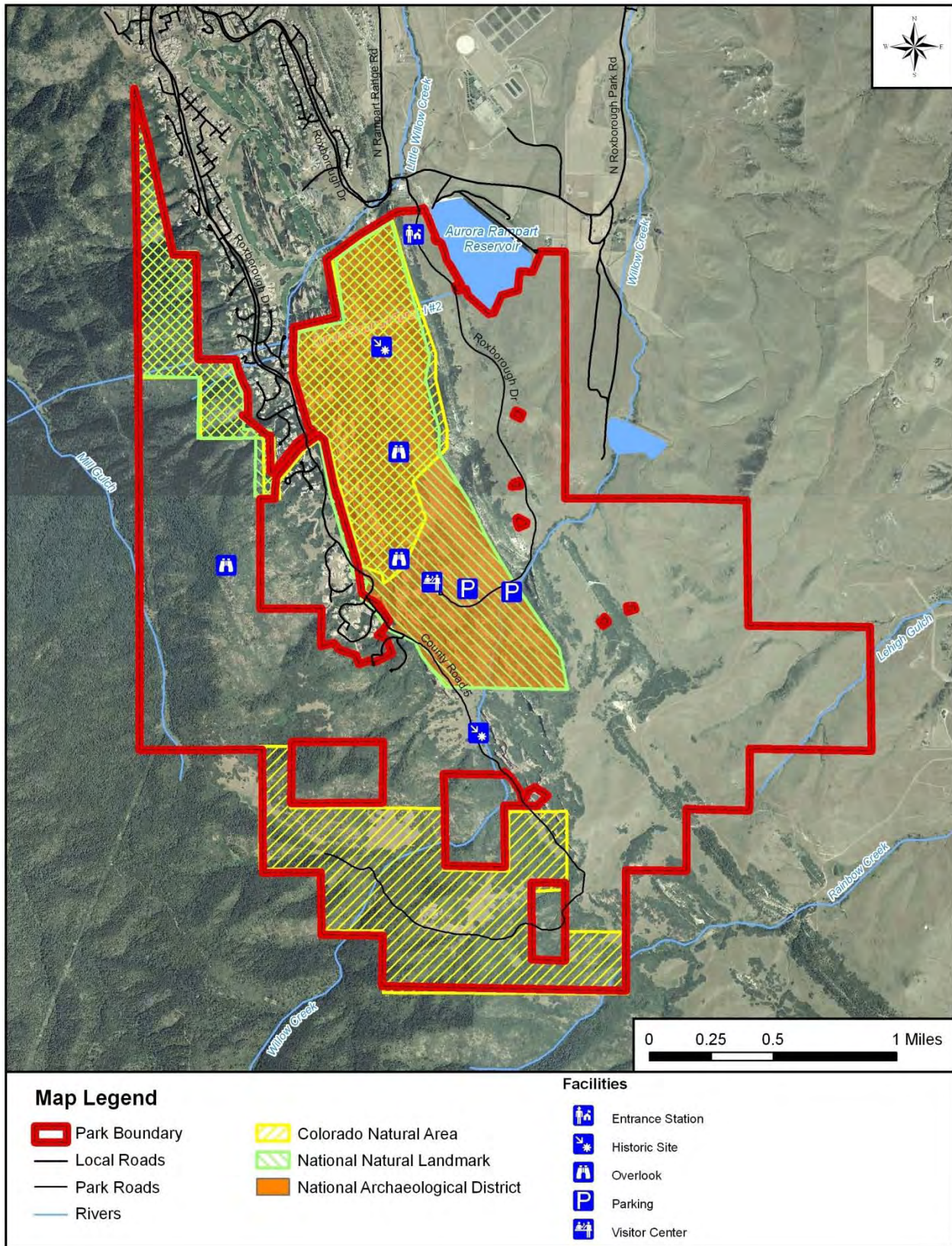
National Archaeological District

Roxborough’s archaeological values were also recognized as nationally significant in the park’s designation as a National Archaeological District on January 27, 1983. This designation highlights the density and diversity of archaeological sites found within the area surveyed by the Denver Chapter of the Colorado Archaeological Society in 1977. Archaeological evidence dates back over 5,000 years.

Colorado Natural Area

The Colorado Natural Areas Program (CNAP) designated Roxborough as a State Natural Area on October 4, 1979. The reasons for designation included the statewide significance of the geological formations representing over 500 million years (now thought to be over a billion years) of geologic history, the rich botanical diversity including several significant plant communities, and the habitat for rare species and raptors nesting and migration.

Map 4. Special Designations





Large portions of the Fountain Formation lie within the designated State Natural Area.

The Natural Area Articles of Incorporation directs Colorado State Parks to:

“... exercise diligence to protect and manage the park to perpetuate its natural qualities for the education and intrinsic value to its users.”

The park’s Natural Resource Stewardship Plan recognizes this goal and provides direction to manage the portion of the park designated as a natural area in a manner consistent with the preservation and protection of these resources. The natural areas agreement allows for improvements on the property if they are consistent with the reasons the area was established, but any actions that might harm or destroy the significant attributes require approval by the program. It should be noted that the Southdowns parcel was added to the park after the designation of the Natural Area and has not yet been designated as part of the Natural Area. Consequently, the Natural Area boundary is currently smaller than the park boundary.

Chatfield Basin Core Reserve

The Chatfield Basin Conservation Network identifies six conservation areas in the basin connected by riparian or upland conservation corridors. Roxborough State Park is the only publicly-owned preserve within the shrub lands conservation area.

The special recognition Roxborough has received through these designations underscores the need to employ thoughtful conservation practices in the management and future development of the park. Official copies of the designations are on file at the park office.

Park Land Ownership

Map 5 depicts land ownership within and directly adjacent to Roxborough State Park. A complete breakdown of Roxborough’s land acquisition history and legal descriptions is provided in Appendix A. The park is a consolidation of fee title property and management agreements, all of which are jointly owned and/or managed by Colorado State Parks and the Colorado State Land Board. Information on land acquisition purchases and ownership and management agreements are described below in more detail.

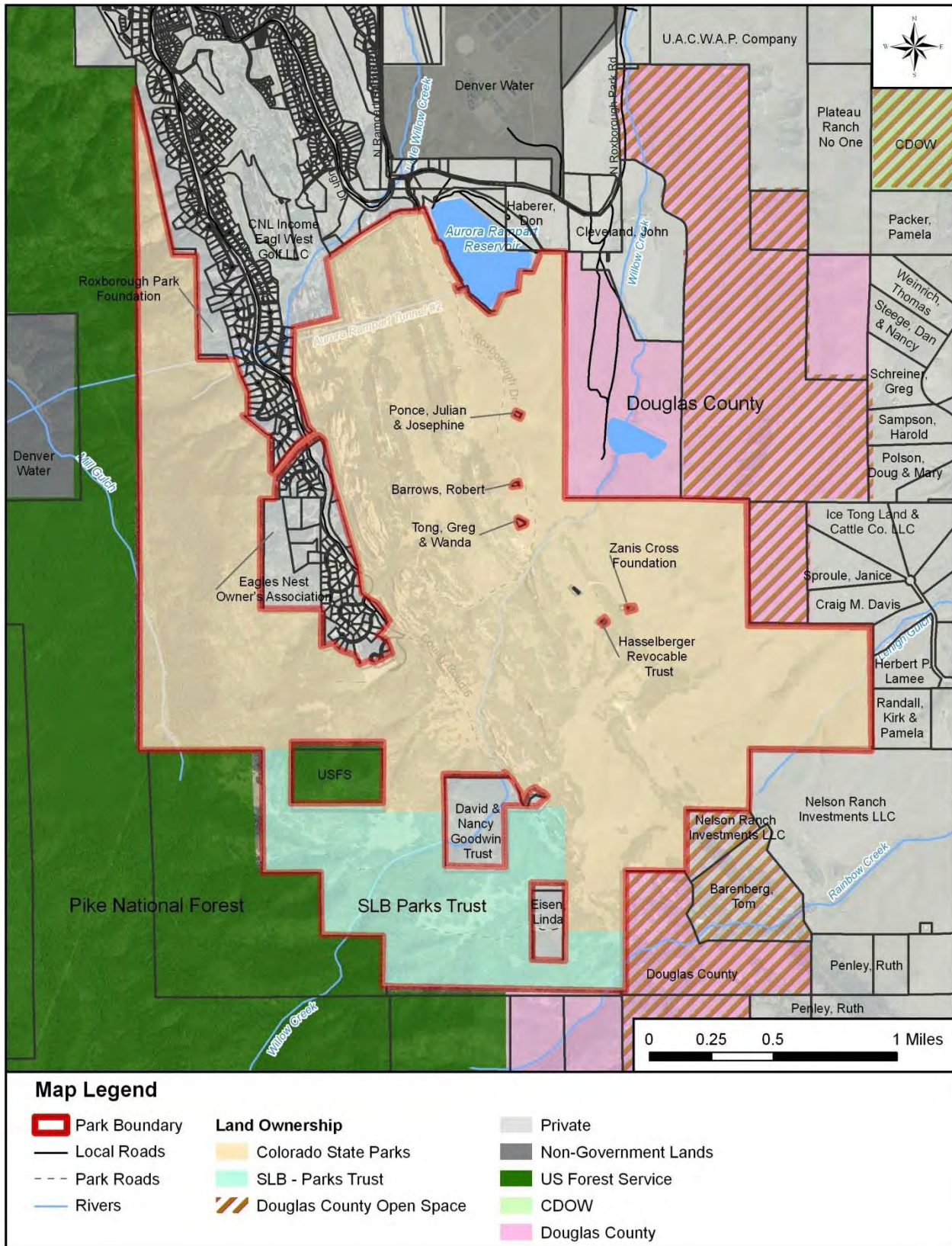
Land and Water Conservation Fund

The first three land acquisition purchases made by Colorado State Parks at Roxborough in 1975 were made possible by use of the Land and Water Conservation Fund, a federal grant program administered by the National Park Service, United States Department of the Interior. Lands purchased with this funding may not be converted to another use without demonstrating an equal or greater replacement value of lands traded.

Great Outdoors Colorado Management Agreement

Colorado State Parks was awarded open space grants from the Great Outdoors Colorado Trust Fund for the purchase of the Southdowns and South Willow Creek parcels in 1995 and 1997, respectively. Colorado State Parks agreed to manage these properties within the guidelines established by agreements with the Great Outdoors Colorado Trust Fund to insure the protection of these properties as open space. Specifically, Colorado State Parks must “manage the land in a manner designed to protect the property’s natural resources and other open space values, and to ensure appropriate public access.” These properties are to be managed

Map 5. Land Ownership



to maintain the visual integrity as open space and prevent degradation of existing natural resources.^{12,13}

Colorado State Land Board Stewardship Trust

Three parcels owned by the Colorado State Land Board are managed by special agreement as a part of Roxborough State Park and are included within the designated Colorado Natural Area boundary. These parcels are held within the Saline Lands Trust Fund of which Colorado State Parks is the beneficiary. These lands are also considered highly valuable for their natural resources and are included within the Colorado Stewardship Trust.

Douglas County Easements

Colorado State Parks has entered into two easement agreements with Douglas County at Roxborough State Park. These easements pertain to recreational use of the Sharptail Trail as well as emergency use of County Road 5. Information on these easements is provided below.

- **Trail Easement**—Colorado State Parks granted the “Trail Easement” on May 4, 2004 to Douglas County in order to provide for the recreational use and enjoyment of the public from the North Willow Creek Property to both the Nelson Property and the Pike National Forest via Douglas County Road 5 and further enjoy and appreciate the natural, scenic, open space, recreational, wildlife, aesthetic, and environmental values of the South Willow Creek Ranch and these properties (via the Sharptail Trail, as shown in exhibits). A management plan was required the Trail Easement to address the terms and conditions for public use of the trail easement property as well as maintenance and signage. This management plan fulfills this requirement.¹⁴

Douglas County is to maintain this trail as a single-track natural surface. Douglas County is responsible for monitoring, patrolling, signing, and weed management along this trail corridor per a separate memorandum of understanding dated October 12, 2004.¹⁵

- **Emergency Evacuation Easement (EEE)**—was entered into on October 30, 2001 in order to grant emergency evacuation route across the south end of the park between Douglas County Road 5 and the Nelson Ranch Open Space.¹⁶

Utility Easements

Utility easements through Roxborough State Park are held by the following interests:

- **City of Aurora** – Aurora Rampart Tunnel Water Pipeline (1964); location: across northern section of park.

¹² Colorado Department of Parks and Outdoor Recreation and Great Outdoors Colorado. Memorandum of Agreement - Use Restrictions on Southdowns at Roxborough State Park. July 10, 1995.

¹³ Colorado Department of Parks and Outdoor Recreation and Great Outdoors Colorado. Memorandum of Agreement - Use Restrictions on Willow Creek Ranch at Roxborough State Park. July 30, 1997.

¹⁴ Colorado Department of Parks and Outdoor Recreation and Great Outdoors Colorado. Memorandum of Agreement - Use Restrictions on Southdowns at Roxborough State Park. July 10, 1995.

¹⁵ Colorado Department of Parks and Outdoor Recreation and Great Outdoors Colorado. Memorandum of Understanding – Management Plan for Sharptail Trail. October 12, 2004.

¹⁶ Emergency Evacuation Easement between Douglas County and the Colorado Department of Parks and Outdoor Recreation. October 30, 2001.

- **Intermountain Rural Electric Association** – Powerline (1998); Stonehenge area
- **Roxborough Park Metropolitan District** – Access Easement (date unknown); location: near fire station.
- **Roxborough Water & Sanitation District** – water pipeline easement (2009); location: across from fire station
- **Xcel Energy** – gas pipeline easement (2009); location: across from fire station
- **Intermountain Rural Electric Association** – buried powerline easement (1997); location: Stonehenge area

Information concerning the purpose and location of these easements is on file in the park office.

Conservation Easements

Colorado State Parks purchased a conservation easement in 1986 for lots 180, 186 and portions of lots 171, 181, 182, 190 and 191 of the development known as “Stonehenge at Roxborough” on June 30, 1986. These conservation easements prohibit the construction of any surface improvements and are designed to protect the scenic qualities of the Fountain Formation as viewed from the park entrance. In 2001, additional conservation easements were acquired for lots 164, 170, 171, and 190-194 which offered similar protections.

Natural Resources

The most salient natural resource at Roxborough is the geologic formations, but the park is also home to variety of unique vegetation and wildlife. The varied hogback country mixed with foothills and open prairie, spanning less than ½ mile, supports a mosaic of plant communities that a variety of animals depend on for forage and cover. Because Roxborough is a resource-oriented state park, it is important to consider the conservation of these resources in all management decisions and in interpretative messages.¹⁷ A more detailed description and analysis of the natural resources of the park are available in the *Roxborough State Park Stewardship Plan*. The following sections summarize some of the key natural resources that occur at Roxborough.

Wildlife

The park provides habitat for a diversity of wildlife species (Appendix B). As Douglas county continues to increase in population, the park’s open spaces have become an increasingly important refuge for wildlife, including resident populations for mule deer, elk (in the winter and spring); and other wildlife such as red fox, coyotes, black-tailed prairie dogs, cottontail rabbits, and squirrels. Prairie rattlesnakes and gopher snakes are also very common. Visitors may occasionally spot a bobcat, mountain lion, or black bear. Roxborough provides breeding and migratory habitat for hundreds of avian species. In a 2009 breeding bird survey, 76 species were documented as potential nesters within the park. Some of the most commonly sighted species include black-billed magpie, western scrub-jay, and spotted towhee. Roxborough is a valuable raptor nesting area. Several species of raptors including a pair of Golden eagles and prairie falcons nest in the rock formations. To the west of the park is



Black bears near the George O’Malley Visitor Center.

¹⁷ According to C.R.S. 33-10-102, "State park" means a relatively spacious fee title area having outstanding scenic and natural qualities and often containing significant archaeological, ecological, geological, and other scientific values so as to make imperative the preservation of the area by the division for the enjoyment, education, and inspiration of residents and visitors.

designated critical habitat for Mexican Spotted Owl, though to date they have not been spotted in or near the park. Additionally, the oven bird, a ground nesting species rare to Colorado, is believed to be breeding in the park near Carpenter Peak.¹⁸ There has been a consistent population of black-tailed prairie dogs in the park, though as of 2010, the main colony has died back, likely from plague. Rare mammals include the federally listed Preble's Meadow Jumping mouse and a rare subspecies of Northern pocket gophers.

There are several rare amphibian and reptile species that are thought to occupy the park including the northern leopard frog, box turtle, green snakes and painted turtles, as well as the more common, yet declining short-horned lizard.

Butterfly populations are especially plentiful at Roxborough. Of the 93 species found at the park, of special note are: Moss' Elfin (*Callophrys mossii*), Sheridan's Hairstreak (*Callophrys sheridanii*), 'Hops' Spring Azure (*Celastrina ladon humulus*), Crossline Skipper (*Polites origenes*), as well as an unusual presence of fireflies (*Coleoptera: Lampyridae, Photurus sp. & Photinus sp.*).¹⁹ In the past, the park was thought to have potential habitat for the rare Pawnee Montane skipper, but in recent work from the USFWS, the park is outside the area considered habitat for this species. Also fireflies are a common sighting at Roxborough and fairly uncommon in Colorado.

Roxborough's greatest significance in terms of wildlife values may be that it affords people from the surrounding metropolitan area an opportunity to view many of Colorado's wild animals in their natural habitat.

Vegetation

Roxborough State Park is located in an ecotone, an area of transition between two major ecosystems: Foothill (5,400-7,000 feet) and Montane (7,000-9,500 feet). The park provides excellent habitat for many diverse plant communities and a diverse array of plant species (Appendix C). Mesic oak thickets cover about half (47%) of the park; mixed grass prairie occupies about 25%, and Douglas fir forests cover 10% of the park.²⁰

In the Foothill zone, much of the landscape is dominated by mixed grass prairie. However, pockets of increasingly rare tall-grass prairie also occur here. Grasslands gradually give way to shrub-like vegetation in higher elevation areas and many north-facing slopes. Gambel oak (scrub oak) is one of the dominant plants of the park. Oak is found fringing all rock formations and in "oak islands" at elevations ranging from 6,200 feet to forest openings at 7,000 feet along the western boundary of the park. Oak prefers rocky, shallow soil where the grass doesn't grow well. The Dakota hogback supports the driest stands and therefore the cover is less dense. Other common flora in the Foothill zone includes juniper (*Juniperus communis*), yucca (*Yucca glauca*), and mountain mahogany (*Cercocarpus montanus*). Dominant grass species are western wheatgrass, green needlegrass, big and little bluestem, prairie sandreed,



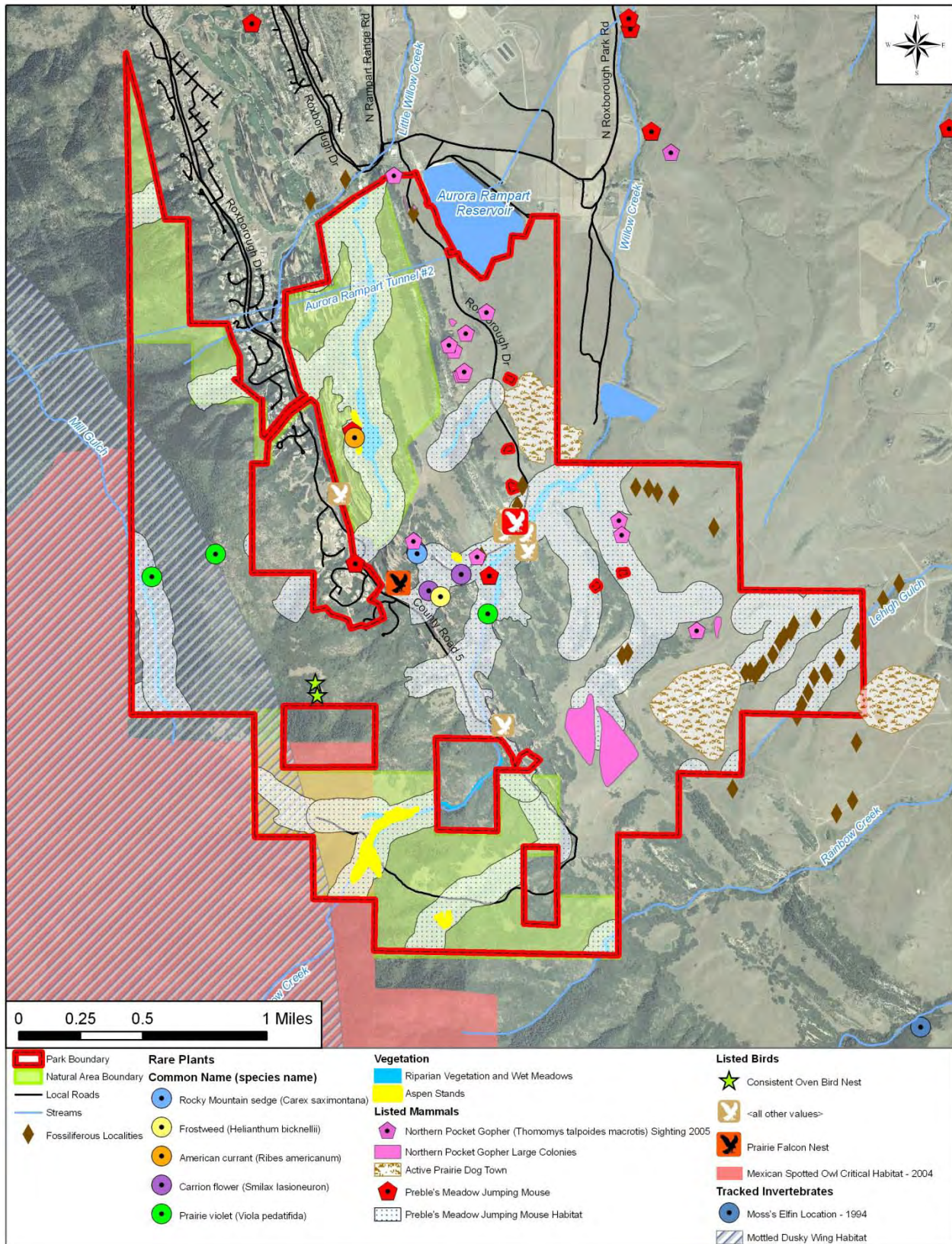
Spring and summer feature many varieties of wildflowers endemic to Colorado's Front Range (penstemon shown above).

¹⁸ Colorado Department of Parks and Outdoor Recreation. Roxborough Resource Stewardship Plan, Executive Summary, February 2010, page 2.

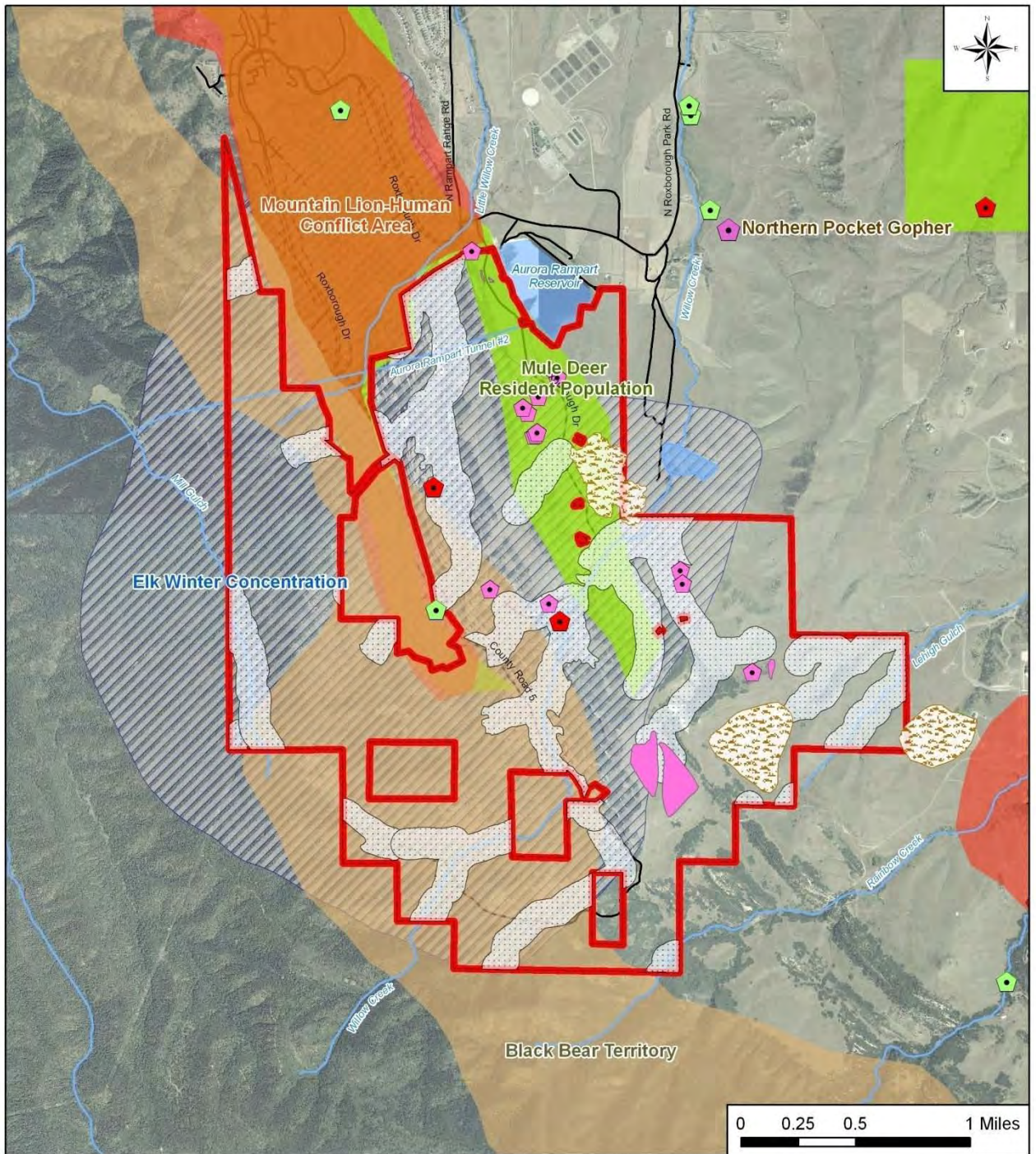
¹⁹ Colorado Department of Parks and Outdoor Recreation. Roxborough Resource Stewardship Plan, Executive Summary, February 2010, page 2.

²⁰ Bureau of Reclamation (BOR). 1998. Roxborough State Park Interface. Prepared for Colorado State Parks by the Remote Sensing and Geographic Information Group. US Department of the Interior. Denver, Colorado. Digital Products.

Map 6. Significant Features

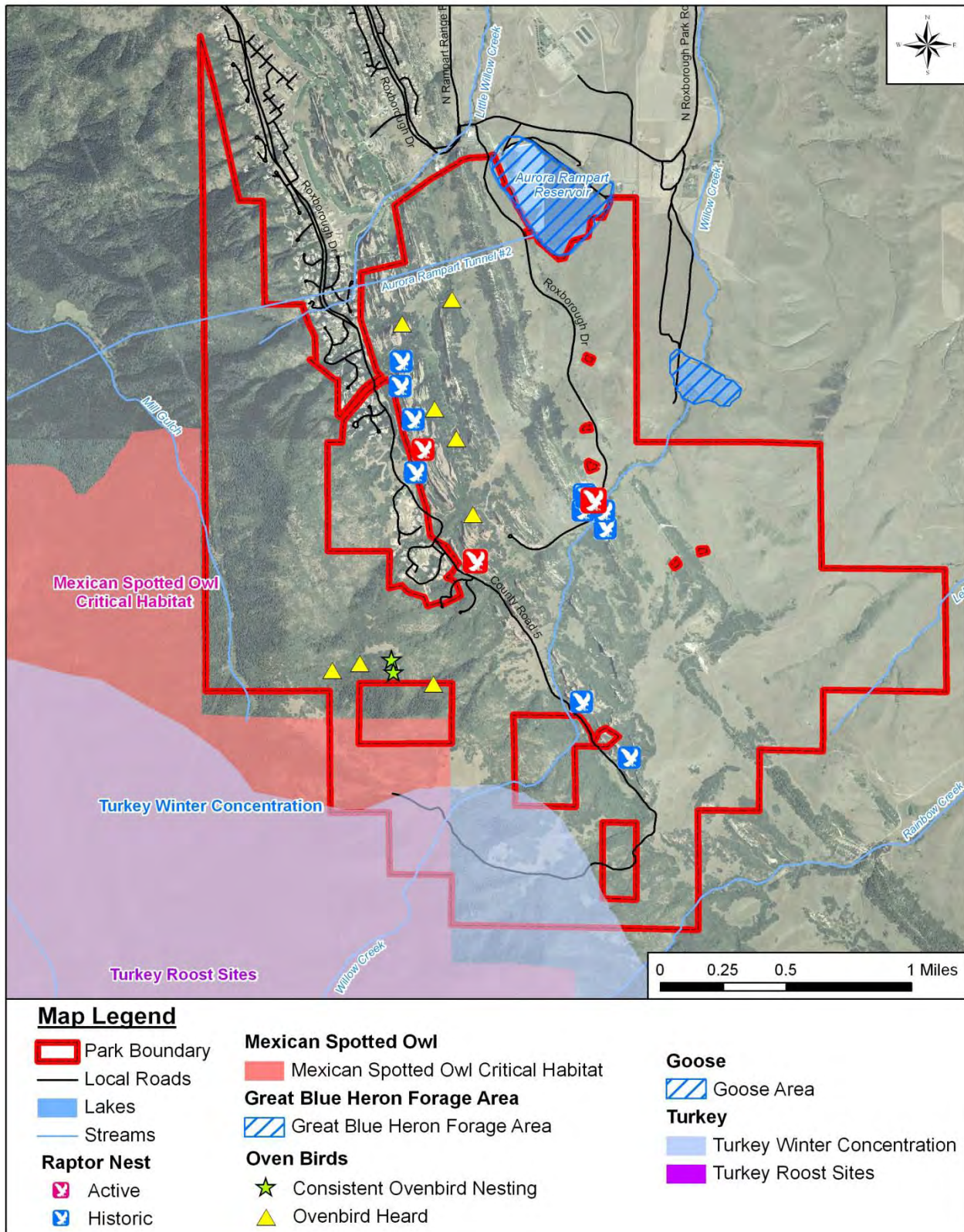


Map 7. Wildlife Habitat (Mammals)



Map Legend		General Mammals	Preble's Meadow Jumping Mouse	Black-Tailed Prairie Dog
Park Boundary	Black Bear Fall Concentration	Preble's Meadow Jumping Mouse Habitat	Active Prairie Dog Town	Northern Pocket Gopher Large Colonies
Local Roads	Mountain Lion Human Conflict Area	1997-2008 Trapped - found	Northern Pocket Gopher Large Colonies	Pocket_Gopher_Locations
Streams	Elk Winter Concentration	1999-2008 Trapped - not found		
Lakes	Mule Deer Resident Population			

Map 8. Wildlife Habitat (Birds)



blue and side-oats grama, needle-and-thread grass, prairie Junegrass, Indian ricegrass and purple threeawn.

A riparian area skirting Little Willow Creek supports the greatest species diversity of any area in the park. Large trees include Plains cottonwood, narrow-leafed cottonwood, willow, mountain maple, and box elder. Small trees and shrubs include Beaked Hazelnut, Oak, Hawthorn, Boulder Raspberry and Willow. Vines such as Wild Grape and Woodbine climb over the trees. Many forbs are found in the Park. Anemone, American Brooklime, and Water Plantain are unique to the riparian area. The wettest place in the park is the sedge meadow, located west of the loop trail in the valley between the Lyons and the Fountain formations. The dominant vegetation is a combination of sedges and rushes.

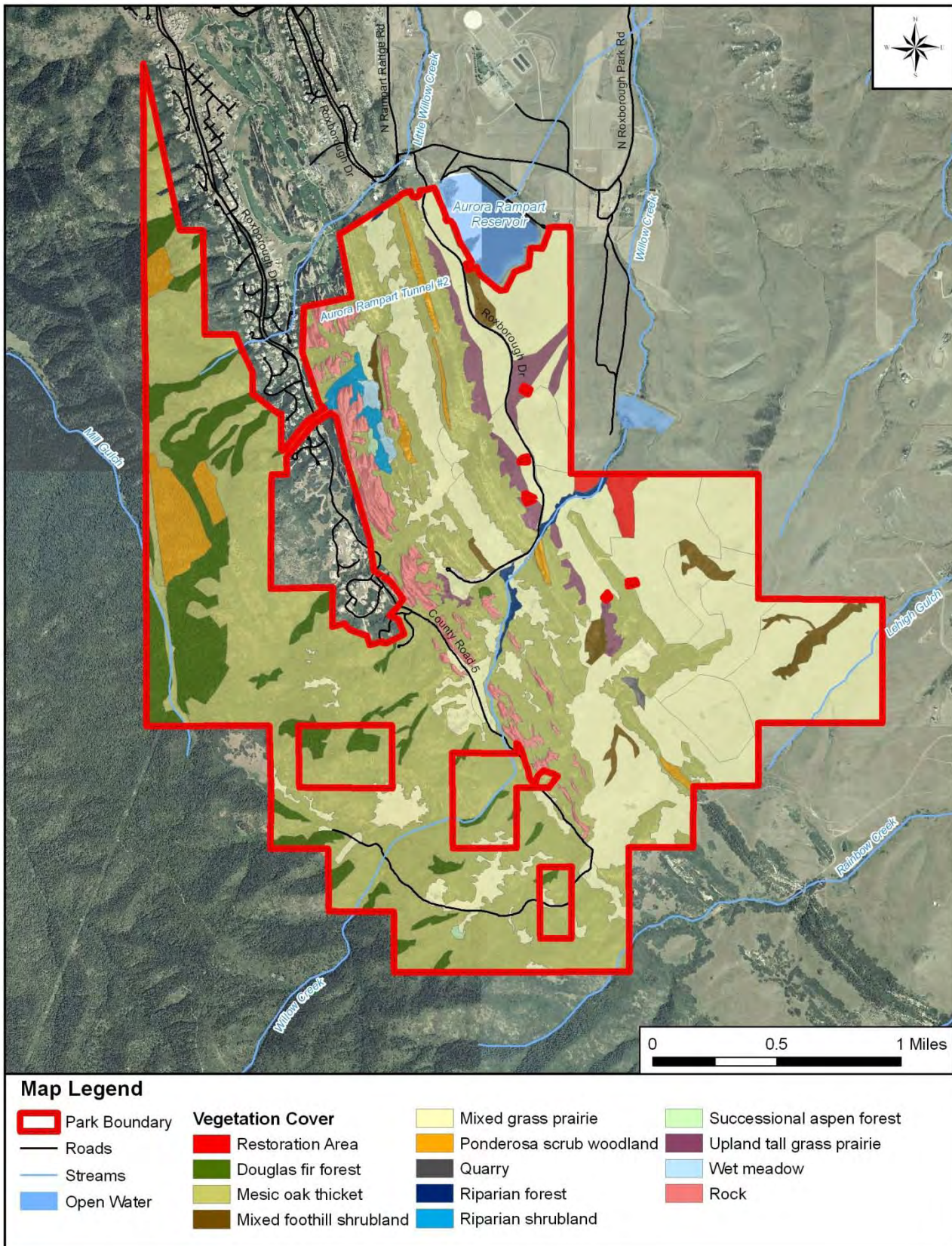
The Montane, or Ponderosa pine-Douglas fir zone consists of variable forested plant species. Ponderosa pine (*Pinus ponderosa*) is the predominant tree of this zone and is found on the ridge tops, particularly the Dakota hogback and the Lyons. Douglas fir (*Pseudotsuga menziesii*), grasses, wax currant (*Ribes cereum*), wildflowers, and many plants found in the Foothill zone, are also found in the Montane zone. Douglas fir forms almost pure stands in steep, moist, north and east facing ravines in higher elevations, mostly near the western boundary. Associated species are one-seeded kinnikinnick, ninebark, snowberry, heart-leaved arnica and saxifrage.

Especially Unique Plant Occurrences

Roxborough contains atypical occurrences of Gambel oak (growing to tree rather than shrub size) and aspen (growing 1,000 feet lower than its normal range). Rare and uncommon plant species at Roxborough include the following:

- **Roxborough Currant** (*Ribes americanum*). Found in the Fountain Valley near the riparian area just east of the aspen grove; Roxborough currant is on the “Plant Species of Special Concern to Colorado” list.
- **Joe-Pye Weed** (*Eupatorium maculatum*). Found in the Fountain Valley near the riparian area just east of the aspen grove; an eastern species growing at the western limit of its range.
- **Yellow Rockrose** (*Helianthemum bicknellii*). Found on the top of the Lyons formation and considered by Dr. William Weber, author of Rocky Mountain Flora, to be very rare.
- **Wood Lily** (*Lilium philadelphicum*).
- **Pine drops** (*Pterospora andromeda*). Found on Carpenter Peak and considered to be relatively uncommon. It is sensitive to collecting pressure.
- **Pinesap** (*Montropa hypopithys*). Found on Carpenter Peak and considered to be relatively uncommon. It is sensitive to collecting pressure.
- **Carrion** (*Smilax lasioneura*). Found during fuel mitigation plans; infrequent in outwash mesas and outer foothills of Front Range.
- **Prairie violet** (*Viola pedatifida*).
- **Alumroot** (*Heuchera richardsonii*)
- **Rocky Mountain Sedge** (*Cavex saximontana*).

Map 9. Vegetation Cover



Invasive Species

Invasive weed species are a significant threat facing the integrity of the natural communities and rare plant populations at Roxborough State Park. The Colorado Weed Management Act lists several dozen noxious weed species. The following table lists the state noxious weeds that have been observed in Roxborough.²¹



Roxborough volunteers assist in hand-pulling noxious weeds.

Table 4. Noxious Weed List

Weed Species:		
Common Name	Scientific Name	State List [^]
bouncingbet	<i>Saponaria officinalis</i>	B
bull thistle	<i>Cirsium vulgare</i>	B
Canada thistle	<i>Cirsium arvense</i>	B
cheatgrass	<i>Bromus tectorum</i>	C
chicory	<i>Cichorium intybus</i>	C
common burdock	<i>Arctium minus</i>	C
common mullein	<i>Verbascum thapsus</i>	C
dalmation toadflax*	<i>Linaria dalmatica</i>	B
diffuse knapweed**	<i>Centaurea diffusa</i>	B
field bindweed	<i>Convolvulus arvensis</i>	C
houndstongue	<i>Cynoglossum officinale</i>	B
jointed goatgrass	<i>Aegilops cylindrica</i>	B
leafy spurge	<i>Euphorbia esula</i>	B
musk thistle	<i>Carduus nutans</i>	B
pennycress	<i>Thlaspi arvense</i>	n/a
plumeless thistle	<i>Carduus acanthoides</i>	B
poison hemlock	<i>Conium maculatum</i>	C
prickly lettuce	<i>Lactuca serriola</i>	n/a
Russian knapweed	<i>Acroptilon repens</i>	B
Russian thistle	<i>Salsola tragus</i>	n/a
Scotch thistle	<i>Onopordum acanthium</i>	B
St. Johns wort	<i>Hypericum perforatum</i>	C
sulfur cinquefoil	<i>Potentilla recta</i>	B
white sweet clover	<i>Melilotus alba</i>	n/a
whitetop	<i>Cardaria draba</i>	B
yellow sweetclover	<i>Melilotus officinalis</i>	n/a
yellow toadflax	<i>Linaria vulgaris</i>	B

* designated by Douglas County Weed Management Program for elimination
 **designated by Douglas County Weed Management Program for suppression.
[^]Class B weed species: The Colorado Commissioner of Agriculture, in consultation with the Colorado Noxious Weed Advisory Committee and local governments, requires that these species be managed to prevent their spread.
[^]Class C weed species: The Colorado Commissioner of Agriculture will develop programs for local governments that focus on providing additional educational, research, and biological control resources to manage these weed species.

²¹ Colorado State Parks. *Roxborough State Park Stewardship Plan*. By Poe, Billerbeck, and Berberian. 2002. Print.

Threatened and Endangered Species

In addition to numerous rare plants and wildlife, Roxborough is home to several threatened and endangered species (Appendix D).

Map 10 shows the species habitat and important locations that can be represented on a map, the others are listed below:

Federal and state listed mammals

Federal and state listed mammals at the park include the Preble's Meadow jumping mouse and the Black-tailed prairie dog. The Preble's Meadow jumping mouse is listed by the U.S. Fish and Wildlife Service as a threatened species. The Preble's Meadow jumping mouse is a distinguished resident of two Roxborough riparian areas. Surveys for Prebles are ongoing to track their movement and habitat. The Black-tailed prairie dog is listed by CDOW as a "Species of Special Concern" and was a candidate species for listing under the U.S. Endangered Species Act, but was determined to not need listing at the time. A Black-tailed prairie dog colony is located east of Roxborough Drive near the northeastern border of the park.

There is a subspecies of the Northern Pocket Gopher in Douglas county which is likely to be present in the park that is also listed by CDOW as a "Species of Special Concern." Habitat and occurrences of pocket gophers were mapped within the park in 2010. However, their existence within the park cannot be confirmed because DNA testing and skull identification has not been performed on individuals within the park boundaries. However, positive identification has occurred less than 3 miles away just beyond Roxborough's northeastern boundary in 2005.

Federal and state listed birds

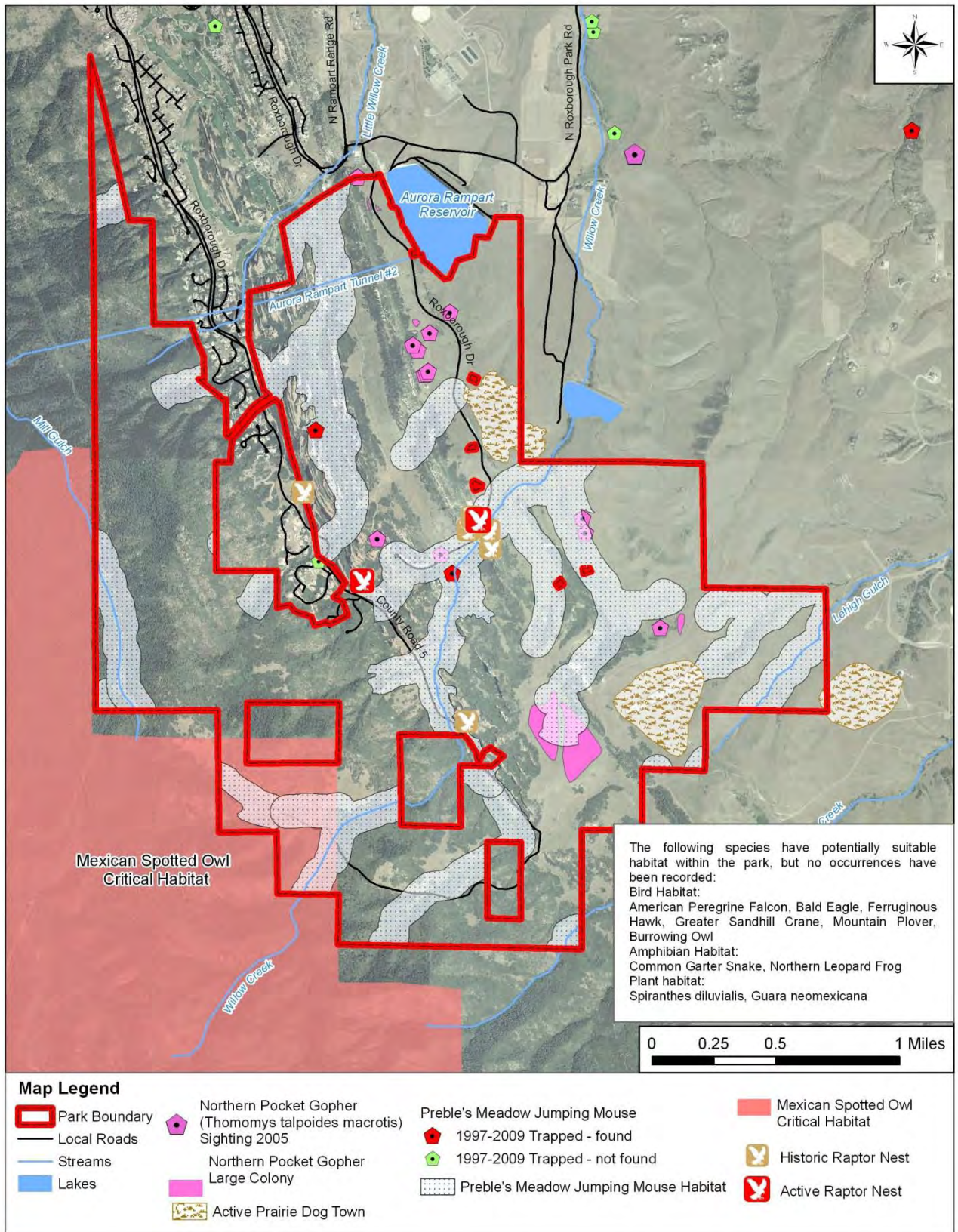
The Federally-threatened Mexican Spotted Owl does not have quality suitable habitat in the park, but the area immediately to the southwest of the park and the small U.S. Forest Service inholding are designated as critical habitat. In addition, these owls are known to have nested within 10 miles of the park.

A Plains Sharp-tailed Grouse production area was located directly east of Roxborough State Park in the past; however, the Division of Wildlife reports that this state endangered species is no longer present there. The following bird species have potentially suitable habitat within the park, but no spatial data exists: American Peregrine Falcon, Bald Eagle, Ferruginous Hawk, Greater Sandhill Crane, and Mountain Plover.

Threatened or endangered reptiles, amphibians, or fish

There are currently no documented threatened or endangered reptiles, amphibians, or fish inside the park boundaries; however, suitable habitat exists for the following reptile or amphibian species: the boreal toad, a rare subspecies of common garter snake, Northern leopard frog, and the plains leopard frog. There is very little water to support fish on the park and though potential fish habitat exists for the Arkansas Darter, Common Shiner, Flathead Club, and the Greenback Cutthroat Trout. None of these species are currently known within the park.

Map 10. Threatened and Endangered Species



Threatened or endangered plants

There are no Federally-threatened and endangered plants at Roxborough. However, there is low potential habitat within the park (in wetter drainage areas) for Ute Ladies’ Tress (*Spiranthes Diluvialis*) and the New Mexican Butterfly Plant (*Guara neomexicana*). The nearest occurrences for these plant species are over 20 miles away.

Table 5. : Federal Threatened and Endangered Plants in Colorado²²

<u>Status</u>	<u>Species/Listing Name</u>
E	Beardtongue, Penland (<i>Penstemon penlandii</i>)
T	Bladderpod, Dudley Bluffs (<i>Lesquerella congesta</i>)
T	Butterfly plant, Colorado (<i>Gaura neomexicana var. coloradensis</i>)
E	Cactus, Knowlton (<i>Pediocactus knowltonii</i>)
T	Cactus, Mesa Verde (<i>Sclerocactus mesae-verdae</i>)
T	Cactus, Uinta Basin hookless (<i>Sclerocactus glaucus</i>)
T	Ladies'-tresses, Ute (<i>Spiranthes diluvialis</i>)
E	Milk-vetch, Mancos (<i>Astragalus humillimus</i>)
E	Milk-vetch, Osterhout (<i>Astragalus osterhoutii</i>)
T	Mustard, Penland alpine fen (<i>Eutrema penlandii</i>)
E	Phacelia, North Park (<i>Phacelia formosula</i>)
T	Twinpod, Dudley Bluffs (<i>Physaria obcordata</i>)
E	Wild-buckwheat, clay-loving (<i>Eriogonum pelinophilum</i>)

Hydrology

Roxborough State Park is mostly rocky and dry. Although water features are not the main attraction for Roxborough’s visitors, the park does contain several important hydrologic resources including intermittent streams, wetlands, ponds, wells and aquifers. In total, there are approximately 34 acres of wetlands comprising about 1% of the park.

Aquifers

The park contains three principal aquifers: the Fountain Formation, the Lyons Formation and the upper and lower part of the Dakota Group. These areas are known to yield small quantities of water to wells drilled near the outcroppings. Aquifer depths range from 0 to 250 feet, and yield 1 to 60 gallons per minute with an average of 5 to 10 gallons.

Drainages

Four primary drainages that eventually flow into the South Platte River Drainage District are Willow Creek, Little Willow Creek, Mill Gulch, and Lehigh Gulch.

- Willow Creek runs through the southwestern portion of Roxborough, including through the Goodwin Trust in-holding, and empties directly into the South Platte River.
- Little Willow Creek drains the northeastern section of the park before flowing into the adjacent neighborhood.

²² U.S. Fish and Wildlife Service, “Species listed in Colorado based on published population data”. Web. September 22, 2009.

<http://ecos.fws.gov/tess_public/pub/stateListingIndividual.jsp?state=CO&status=listed>

- Mill Gulch bisects a sliver on the eastern edge of Roxborough as well as neighboring Pike National Forest.
- Lehigh Gulch drains the southeastern edge of the park and contains several documented fossil remains. Lehigh Gulch empties into Plum Creek, a tributary to the South Platte River.

Wetlands

There are three emergent wetlands associated with seeps or springs:

- Wetlands south of the Visitor Center
- Wetlands along the Fountain Valley Trail
- Wetlands north of the Fountain Valley Trail

Ponds

There are four small ponds in the southeastern portion of the park that were originally constructed as stock ponds to provide water for livestock before the property became part of the park. The areas around the stock ponds are heavily compacted from past use by livestock and dominated by weeds.

Wells

A well located near Willow Creek serves the park visitor center. It has an estimated yield of five gallons per minute and is approximately 210 feet below ground. It is unlikely that this has any significant impact on wetlands in the park.

Other Hydrologic Resources

Other important hydrologic resources adjacent to or running through Roxborough, but not managed or owned by Colorado State Parks, include Aurora Reservoir and the Rampart Pipeline in the northern portion of the park.

Water availability may be a key issue for Roxborough in future years with the increasing pressures of climate change and continual pumping of groundwater from the Denver Basin Aquifers. Warmer temperatures affect evaporation rates in water bodies and changes in runoff due to earlier spring snowmelt, which may alter Roxborough's hydrology.²³ Roxborough State Park sits on four Denver Basin Aquifers whose recharge rate is thought to be 40,000 acre-feet per year given the relatively low 15-16 inches of average annual rainfall in the Front Range.²⁴ Denver Basin Aquifers are currently being pumped an estimated 325,000 acre-feet per year or nearly ten times the groundwater recharge rate.²⁵

Geology & Soils

The spectacular hogbacks, spires, and monoliths within the boundaries of Roxborough tell a dramatic and colorful geologic story. The rock formations read like the chapters of a book with the oldest on the park's westernmost boundary and youngest on the east.

²³ Colorado Water Conservation Board. "Climate Change in Colorado." Web. 21 Sept. 2009. <state.co.us/Home/ClimateChange/>.

²⁴ Douglas County Water Resources. "Recharge and Discharge of the Denver Basin Aquifers." *Denver Basin Aquifers*. Web. 21 Sept. 2009. <http://www.douglas.co.us/water/Denver_Basin_Aquifers.html>.

²⁵ Ibid.

Billion-year-old gneiss and granite are exposed on Carpenter Peak. These metamorphic and igneous rocks underlie the western third of the park and are evident in many outcropping ridges and exposures.

The Fountain Formation lies next to the ancient gneiss and granite of the Carpenter Peak region, although an “unconformity” or gap of 640 million years separates the formations. The Fountain Formation makes up the western most hogback. It is a Pennsylvanian sandstone comprised of materials eroded from the Ancestral Rocky Mountain Range which existed about 30 miles west of Roxborough. The formation is a beautiful variation of red, maroon, and mauve due to the oxidation of iron minerals.

The central hogback is Lyons Sandstone. This formation was created from windblown sands and stream deposits of the Permian era. The Dakota Hogback is Cretaceous in age. Advances and retreats of a large inland sea were responsible for the sedimentary deposits of sandstone, shale and limestone. The footprints of Iguanodon dinosaurs were found on the eastern side of the Dakota Hogback.

These sedimentary formations were laid down as horizontal layers during the Pennsylvanian, Permian and Cretaceous ages. The layers were tilted at a dramatic angle during the mountain building of the Laramide Orogeny about 65 million years ago. Wind and weather have eroded and sculpted these tilted layers into the dramatic hogback ridges, outcroppings and strike valleys we see today.

Cultural, Archaeological, and Paleontological Resources

Cultural Resources

Roxborough State Park was first inhabited by early hunter and gatherers of the Early Archaic (5,850-3,050 BC) and Woodland period (about 500 to 1000 AD), however, evidence suggests human occupation in the region dates back to the Paleoindian stage (9,550-5,850 BC). Over time, early inhabitants hunted bison, developed agriculture, material goods, weaponry, trade, and complex social customs. The Apaches, Utes, Comanches, Arapahoes and Cheyennes are the primary Native American tribes thought to have lived around the Roxborough area.

The first Europeans to see the park were the members of the Long Expedition, who arrived at the mouth of the South Platte Canyon on July 6, 1820. They saw “a range of naked and almost perpendicular rocks rising abruptly to a height of 150 to 200 feet.”

With the discovery of gold along Cherry Creek in Denver in 1858, more people came to Colorado. From 1872 to 1876, the Hayden Survey mapped parts of Colorado and in the early 1870’s visited the Roxborough area. With Hayden was a young photographer, William Henry Jackson. Jackson took the first known photograph of Roxborough at this time. Albert T. Epperson and others homesteaded land in the present day park in 1887. Edward McKenzie Griffith acquired the Roxborough property in 1888. Up to this time the area was called Washington Park, probably after the Fountain formation rock that resembles George Washington’s profile. In 1889, Henry S. Persse acquired the property from Griffith when Griffith defaulted on a loan. The deed was the first legal reference to the area as “Roxborough Park.” Recent evidence suggests that the name “Roxbrough” comes from the Persse family’s ancestral home in Ireland.



Visitors to Roxborough circa 1910.

In 1902, Persse and others formed the Roxborough Land Company and began to buy land from some of the original homesteaders. The company planned to develop the area into a resort

that would rival the Broadmoor in Colorado Springs. The dream was never realized. Persse erected a stone house and various outbuildings that still remain in the park. The area became a favorite outing place for Persse's friends. Names such as Decker, Campion, Hill, Grant and Speer appear in the Persse's guest book dating from this time. Henry Persse did not live at Roxborough for any length of time. His oldest son, John, returned to the property in 1907 and lived there until his death in 1937.

In 1880, Anthony Helmer, Sr. homesteaded land east of the Dakota hogback and north of Roxborough. The Helmer family bought additional property around their original holding from the Persses and by 1921 owned most of the Roxborough Park area.

Archeological Resources

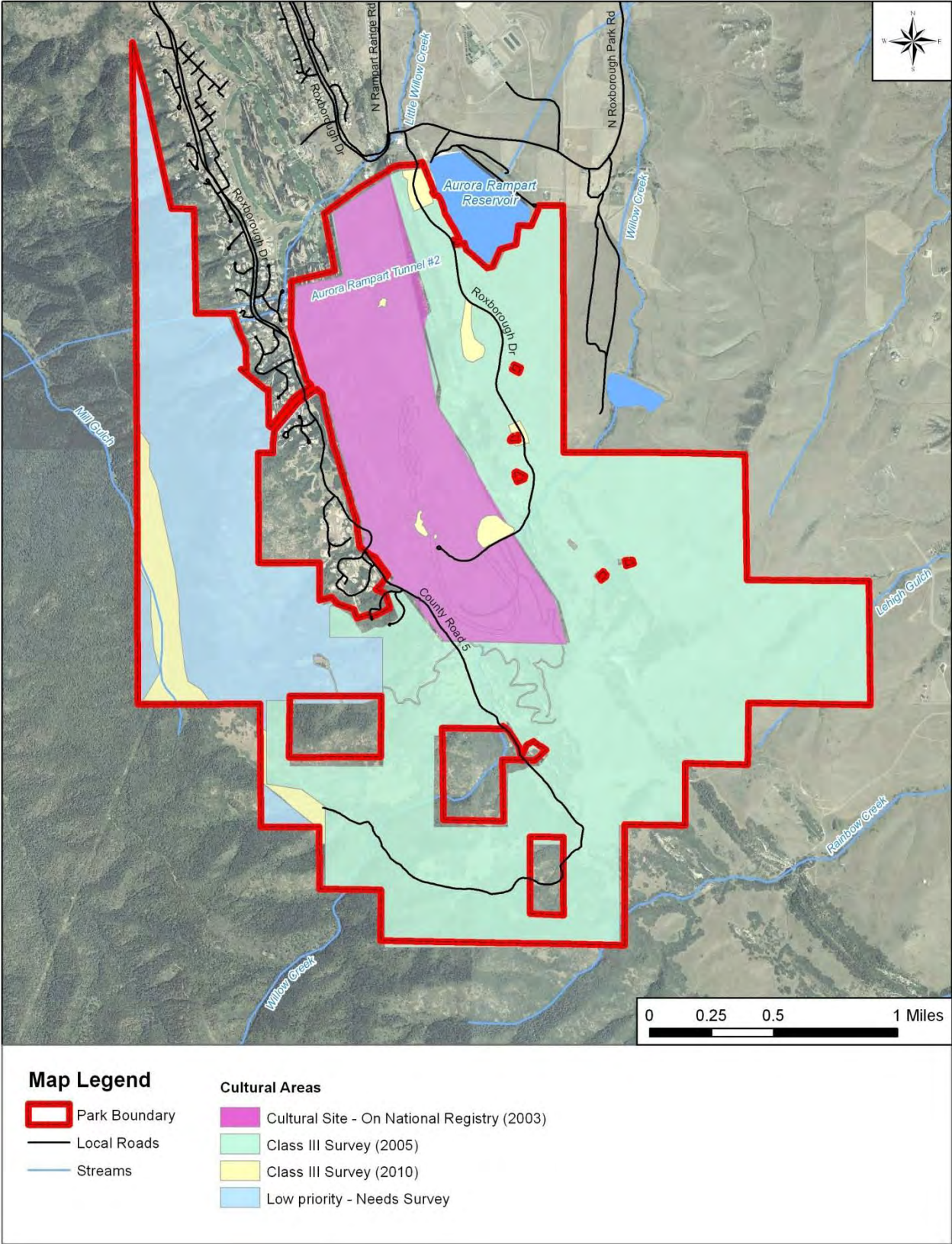
The Denver Chapter of the Colorado Archaeological Society first surveyed Roxborough State Park in 1977 (which comprised 776 acres at the time). The park was placed on the National Register of Historic Places noting the high density of sites and broad range of site types represented. The majority of the sites represented early through late Archaic and Woodland cultures and include lithic scatters, open campsites, and quarries. The open campsite and shelters are found generally on south and/or west-facing slopes or in saddles in the valley between the Lyons and Fountain formations. Most of the sites are in protected areas near water. The south and west exposures indicate possible winter use. Evidence of fire rings in some of these sites has been found but is disappearing due to severe erosion.

The six quarry sites are located on the crest and west slopes of the Dakota ridge, where materials are readily available. Most of these sites contain quartzite. Lithic scatters are dispersed throughout the park.

Paleontological Resources

Cultural surveys of Roxborough revealed several areas of paleontological importance. Surveyors documented fossil localities in four separate sections along Roxborough Drive. Three of these sites are located on the west side of Roxborough Drive towards the interior of the park and the fourth fossil site is located near the north entrance station. Several other fossil sites are located near streambeds in or adjacent to Roxborough. Fossils have been found along Lehigh Gulch in the eastern portion of the park and Little Willow Creek just outside the park's northern boundary. Because of collection concerns, these resources are not detailed in the management plan. Paleontological surveys in 2010 fully document the resources and are available to park staff only.

Map 11. Cultural Resources



Scenic Resources



Indian paintbrush

Roxborough State Park abounds in breathtaking scenery and offers a snapshot of what early settlers witnessed when they first discovered the area in the 1820s. Present day visitors will agree with Ferdinand V. Hayden, who visited the park area in 1873. He wrote:

“...the sandstone (rocks) present a more picturesque appearance than any other locality (on the Front Range) not excepting the Garden of the Gods...These fragmentary forms rise out of the grass and bushes which grow abundant all around their base. One can wind about among them like meandering the streets of some old ruined city...it is a confusion of unique forms with varieties of color, red, mottled, etc.”

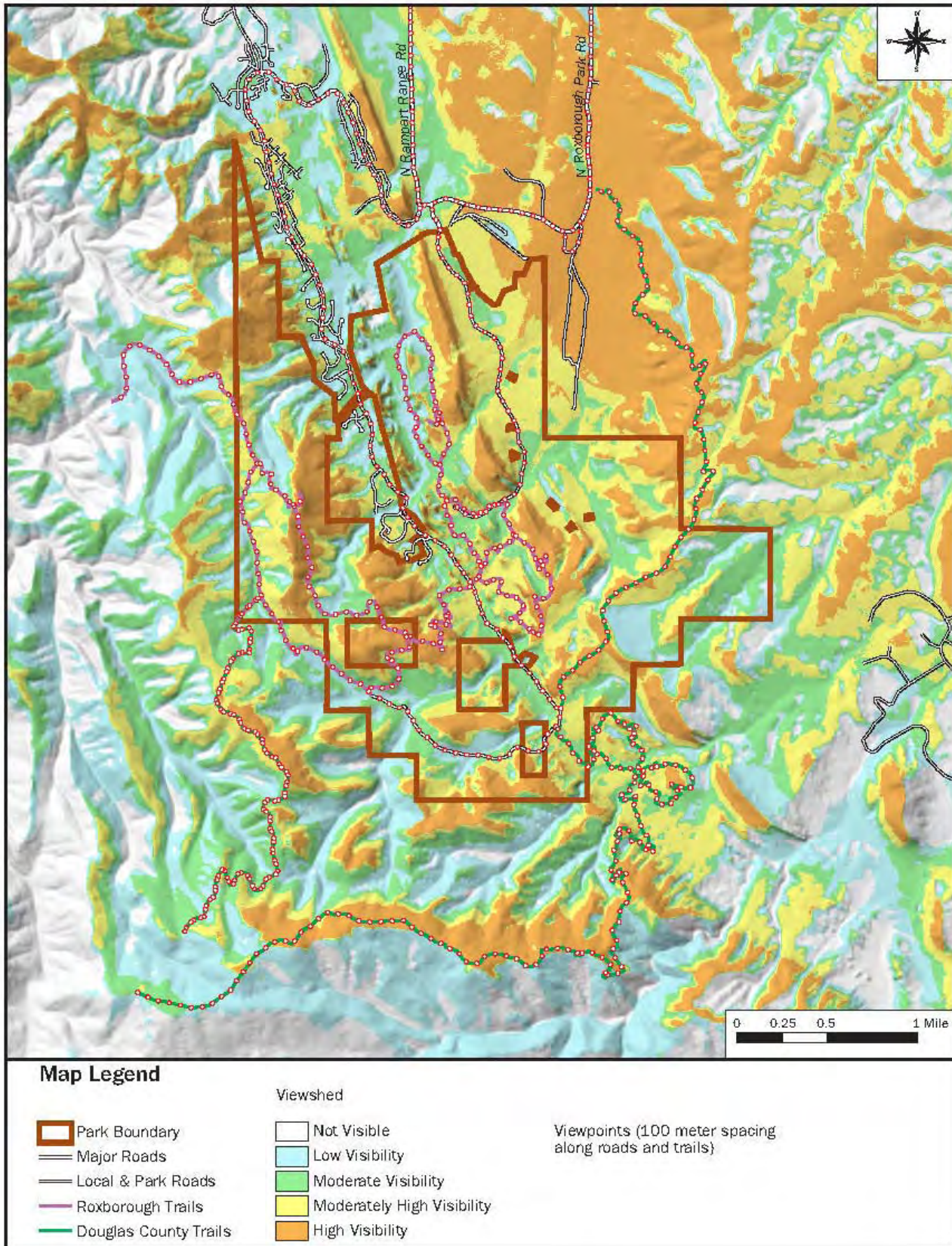
The park’s unique scenic beauty is not confined merely to dramatic geologic outcroppings. Roxborough offers visitors scenic beauty at every turn, whether it be wildflowers along Little Willow Creek, a tiny fern tucked into a crack of a rock, or the colored lichens and minerals of the sandstone surfaces. In addition, the rocks seemingly change with the time of day and with the seasons of the year. The sharp bold outlines on clear morning give way to misty distance at a rainy twilight. In the spring, the emerald green grass contrasts with the red of the rock, complimenting both, while the colors of winter dress the park in mottled, red-browns and white. The massive rocks, the secret little places, the changes of day and season, all are a part of Roxborough State Park.

In an attempt to quantify some of the scenic resources found at Roxborough State Park, and help the park preserve high quality scenic areas, the Roxborough Planning Team hired Boulder-based Computer Terrain Mapping, Inc. in 2009 to perform a digital viewshed analysis from desired observation points. These points included:

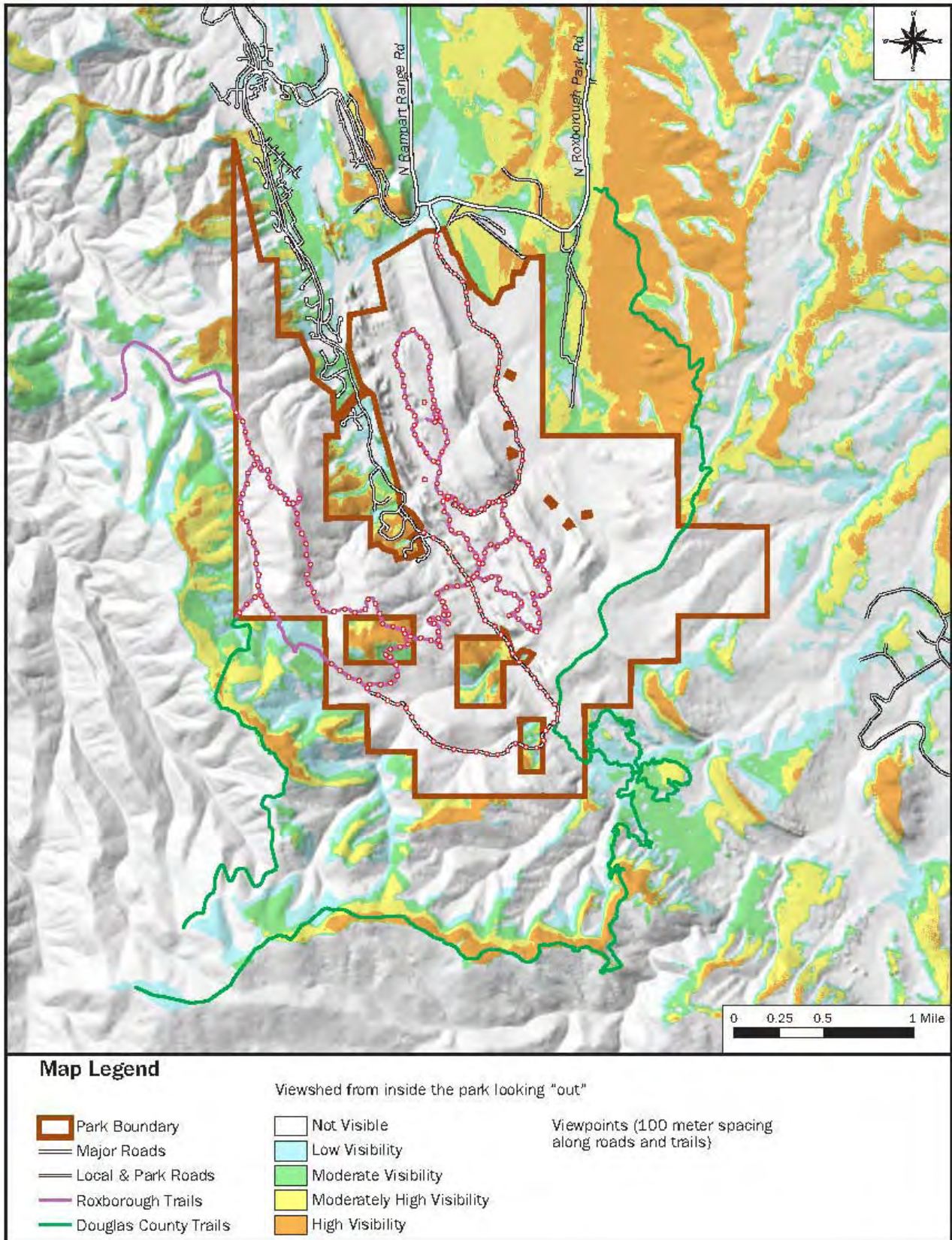
- Visibility within the Park from 715 points located along park trails and roads (both within and adjacent to the park)(Map 10).
- Visibility of areas outside the Park from those observation points within the Park (subset of the 715)(Map 11). This map highlights the areas where external development might be detrimental to Park views.
- A three-point viewshed analysis from the Visitor Center, Lyons Overlook, and the Fountain Valley Overlook (Map 12).

Results of this analysis revealed a high number of visually significant areas both within and immediately adjacent to Roxborough State Park. Viewshed analyses of observation points within Roxborough and from the Visitor Center, Fountain Valley Overlook, and Lyons Overlook are helpful in highlighting areas where landscape alterations outside the park (i.e. new development) may be particularly visible.

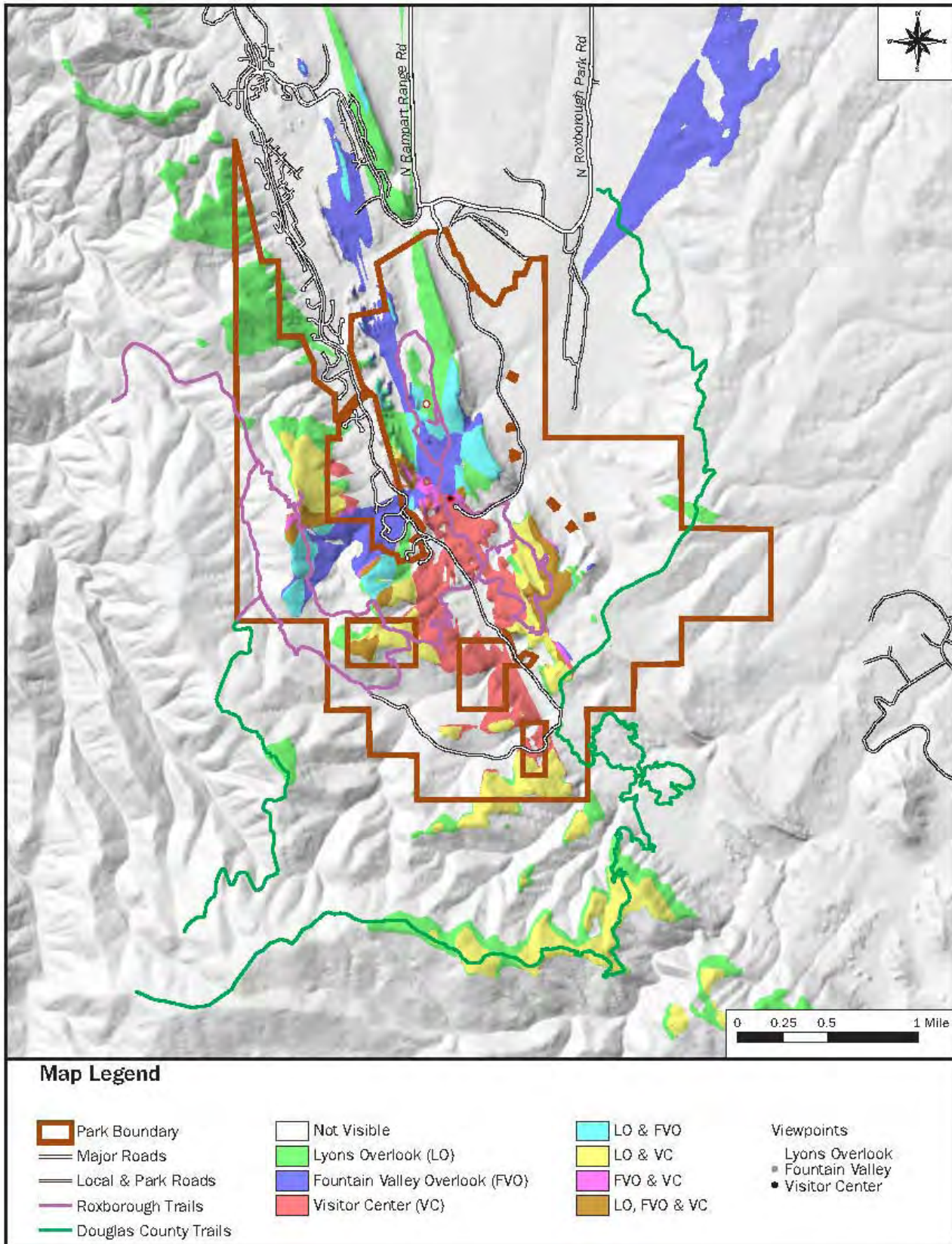
Map 12. Viewshed Sensitivity from Trails and Roads



Map 13. Viewshed Sensitivity from Inside the Park Looking Out



Map 14. Viewshed Sensitivity from Lyons Overlook, Fountain Valley Overlook, and Visitor Center



Recreation Resources






Trails







About 9.6 miles of Roxborough's 14.25 miles of trails are managed by Colorado State Parks. The remaining 4.6 miles of trails that extend through Roxborough are managed by either the U.S. Forest Service or Douglas County (also be accessed from the Willow Creek and South parking lots. Two scenic overlooks provide remarkable views of the park landscape. The Fountain Valley Overlook, which is a short walk from the visitor center—is a popular destination. The Lyons Overlook, accessible from the Fountain Valley Trail at 6,240 feet above sea level, has a wooden deck with benches giving visitors a chance to relax and enjoy the great view to the west.

Table 4). Hiking is the only permitted use on the 9.6 miles of trails administered by park staff. Roxborough's abundant scenic beauty, wildlife viewing opportunities, and quiet solitude make this park a popular destination for visitors seeking a high-quality, close-to-home hiking experience. An 80-yard surfaced walkway connects the upper parking lot to the visitor center patio. Trails administered by Roxborough are all accessible from the visitor center, the Willow Creek Trail and the South Rim Trails can also be accessed from the Willow Creek and South parking lots. Two scenic overlooks provide remarkable views of the park landscape. The Fountain Valley Overlook, which is a short walk from the visitor center—is a popular destination. The Lyons Overlook, accessible from the Fountain Valley Trail at 6,240 feet above sea level, has a wooden deck with benches giving visitors a chance to relax and enjoy the great view to the west.

Table 4. Trail Summary

Trail Name	Description	Allowed Uses	Approx. Miles
<i>Trails Administered by Colorado State Parks (hiking only)</i>			
Fountain Valley Trail	Fountain Valley Trail offers a gentle to moderate stroll through the Fountain Formation and past the historic Perse Stone House. The trail also winds through several different habitats for plants and animals, including mule deer, fox and a variety of birds. Although the trail is unpaved, most wheelchairs can ride the Fountain Valley Trail with little or no difficulty during good weather conditions. Hiking time is approximately one and one-half to two hours.		1.9
Lyons Overlook	Lyons Overlook Trail provides access to a viewing platform at the top of the Lyons Formation which offers views to the Fountain Valley.		0.2
South Rim Trail	South Rim Trail provides a moderately challenging climb to the south end of the park through the montane shrubland and along the Lyons Formation. Golden Eagles have been spotted from this trail.		1.9
Carpenter Peak Trail	Carpenter Peak Trail offers a 1,000-foot elevation gain as you hike to the granite-topped foothill on the west side of the park. Carpenter Peak's summit lies at 7,160 feet. This is the highest point in the park and provides spectacular views in all directions. The 0.7-mile Elk Valley Trail link near the beginning of the Carpenter Peak trail connects to the Douglas County Trail System via Douglas County Road 5.		3.1
Elk Valley Trail	Elk Valley Trail connects the Carpenter Peak trail Douglas County Road 5 and traverses a U.S. Forest Service inholding.		0.7

Willow Creek Trail	Willow Creek Trail is a nice trail for families due to the short length and the diversity of plants and landscapes through which it travels. The Willow Creek Trail, which is known for its abundance of wildflowers during spring and summer months. The wealth of scrub oak attracts a variety of birds and makes this trail ideal for bird watching.		1.2
Trails Administered by Other Local Governments and Federal Agencies			
Sharptail Trail – Douglas County	The 4-mile Sharptail Trail crosses rolling grasslands, home to a variety of wildlife including elk herds. The 2.5 miles of trail that extend through Douglas County Open Space has seasonal closures in the fall (Labor Day through November) to allow for hunting as regulated by Colorado Division of Wildlife.		1.5
Swallowtail Trail – Douglas County	A small segment of the Swallowtail Trail extends across Roxborough State Park – connecting Nelson Ranch Open Space with County Road 5. Swallowtail Trail features views of the fountain formation and a unique geological perspective of the hogback. This trail eventually connects with the Ringtail Trail (which is in Nelson Ranch Open Space).		0.3
Powerline Trail – U.S. Forest Service	A small segment of the Powerline Trail crosses Roxborough State Park. This trail provides connections to Indian Creek Campground to the south as well as the Waterton Canyon and the Colorado Trail to the north/northwest.		1.5
Total Miles			14.25

Mountain Biking

County Road 5, which is administered by Douglas County and bisects the park, is frequently used by mountain bikers as an access route through the park and connection to the Powerline Trail. Mountain bicycle access to the Powerline Trail is also available from U.S. Forest Service property at the Indian Creek Campground to the south and from Waterton Canyon to the north.

Horseback Riding

Horseback riding is permitted along Sharptail Trail, County Road 5, and the Powerline Trail, providing contiguous equestrian access to the Pike National Forest from Sharptail Open Space. Equestrian access to the Powerline Trail is also available from the U.S. Forest Service’s Indian Creek Campground to the south and from Waterton Canyon to the north. Most equestrians access the park via the Sharptail Ridge Trailhead, which was originally designed to specifically accommodate equestrian use.

Wildlife Viewing and Birding

Roxborough is a great place for bird watching and viewing diverse wildlife. Visitors have many opportunities for viewing an abundance of birds, fox, and mule deer. There are occasional sightings of bobcat, mountain lion, and black bear. Visitors frequently report signs of their presence on the trail.

Picnicking

Group picnicking facilities are not currently available at Roxborough. However, visitors are welcome to bring a lunch and eat at one of the benches at the Visitor Center or along park trails. Bench locations are marked on the park trail map.

Winter Activities

Cross-country skiing, snowshoeing, and sledding are permitted on all of Roxborough's trails; however, the gentle grade of the Fountain Valley Trail and beautiful winter scenery makes this route the most popular winter trail.

Rock Climbing

Rock climbing is not permitted at Roxborough by special regulation 100d3.

Camping

Roxborough is a day use park and overnight camping is currently prohibited and campfires are prohibited by special regulation 100d3.

Dogs

No dogs are permitted in Roxborough State Park by special regulation 1003d, however, dogs on-leash are permitted outside the park on numerous trails that connect to Roxborough including the Swallowtail Trail on Nelson Ranch and Indian Creek Trail via Pike National Forest.

Interpretation and Environmental Education

The primary focal points of interpretation and environmental education at Roxborough State Park include the George T. O'Malley Visitor Center, informational signage along park trails and around the visitor center, and extensive park programs to suit a variety of age groups. In addition, there are many interpretive and environmental education programs that are led by park volunteers, including volunteer naturalists.

Interpretive Facilities

Seven wayside signs on the walkway up to and around the visitor center introduce visitors to some of the special resources at Roxborough. Signs remind visitors that they are in rattlesnake, black bear, and mountain lion country. Thirty-two self-guiding interpretive trail posts help visitors locate interpretive points of interest along the Fountain Valley and the Willow Creek trails.²⁶

There have been some suggestions for a short, handicapped-accessible trail that also appeals to families. These populations may be underserved at Roxborough.

Interpretive Programs

The following is a list of interpretive programs that currently occur at Roxborough:

- Indoor ranger/naturalist talks

²⁶ Roxborough State Park Interpretive Master Plan. Colorado State Parks, Not Dated.



Interpretive panels as seen near George O'Malley Visitor Center.

- Ranger/naturalist-guided hikes
- Children’s programs
- School programs
- Scout-specific programming is geared toward the needs of each group and the badge requirements they are trying to fulfill.
- Roxborough Ride is an eight passenger golf cart driven by a naturalist around the Fountain Valley Trail. Rox Ride tours are provided two times a week, May to October.
- Historical Perse Place and Cooper cabin tours are offered two times per week, May to October.
- Junior naturalist programs (self-guided and guided) geared toward 7 to 12 year olds.
- Roving naturalists: average one hundred naturalist hours per year.
- Teacher workshop: two-day training for teachers of all levels on the special resources at this park and how to use Roxborough for an outdoor classroom. Offered through the School of Mines for graduate college credit and facilitated by park staff.

Facilities and Infrastructure

Colorado State Parks has made a significant investment in park facilities at Roxborough State Park. Recreational development at Roxborough provides for day use hiking and educational activities. Shortly after Roxborough was acquired, the Division of Parks and Outdoor Recreation contracted with a park planning and design team to prepare a basic park development plan. A plan to locate basic park development at what was then the south end of the park was produced in 1977. See Appendix E to see Roxborough’s 2010 asset inventory.

In 1979, the park road, two parking areas with a combined capacity for 100 vehicles, and the Main Loop Trail were constructed. The well and sewage systems for the visitor center were also installed. Development halted when access problems concerning the non-exclusive easement for public use over Roxborough Drive through Southdowns became apparent. In 1987, the park was opened to the public. Aside from the George T. O’Malley Jr. Visitor Center, which was renovated in 2009, all of the original park facilities remain in place.

George T. O’Malley Jr. Visitor Center & Park Headquarters

Construction of the 3,200 square foot George T. O’Malley Jr. Visitor Center, which dually serves as the park headquarters, began in July 1985 when the legal differences regarding access into the park appeared resolved. The Board of Parks and Outdoor Recreation named the building in recognition of Mr. O’Malley’s contributions to the Division while serving as Director from 1961 until 1982. Park staff moved into the building in March 1986. The George T. O’Malley Jr. Visitor Center was formally dedicated at the time of the park’s official opening.

In early 2008, Colorado State Parks secured funding to address a rodent infestation in the visitor center and the associated damage within the walls, ceiling, and electrical systems. Although rodent access points throughout the perimeter of the visitor center were eliminated, the extensive damage caused by the rodents still needed to be repaired. The 2009 visitor center renovations included:

- Removal/replacement of walls, ceiling, carpet, and insulation
- Installation of energy efficient heating, ventilation, and air conditioning (HVAC) systems
- Replacement of lighting fixtures with code compliant, energy efficient lighting systems
- Replacement of the 20+ year-old roof
- Correction of potential code violations associated with a 20+ year old building
- Renovated restroom facilities

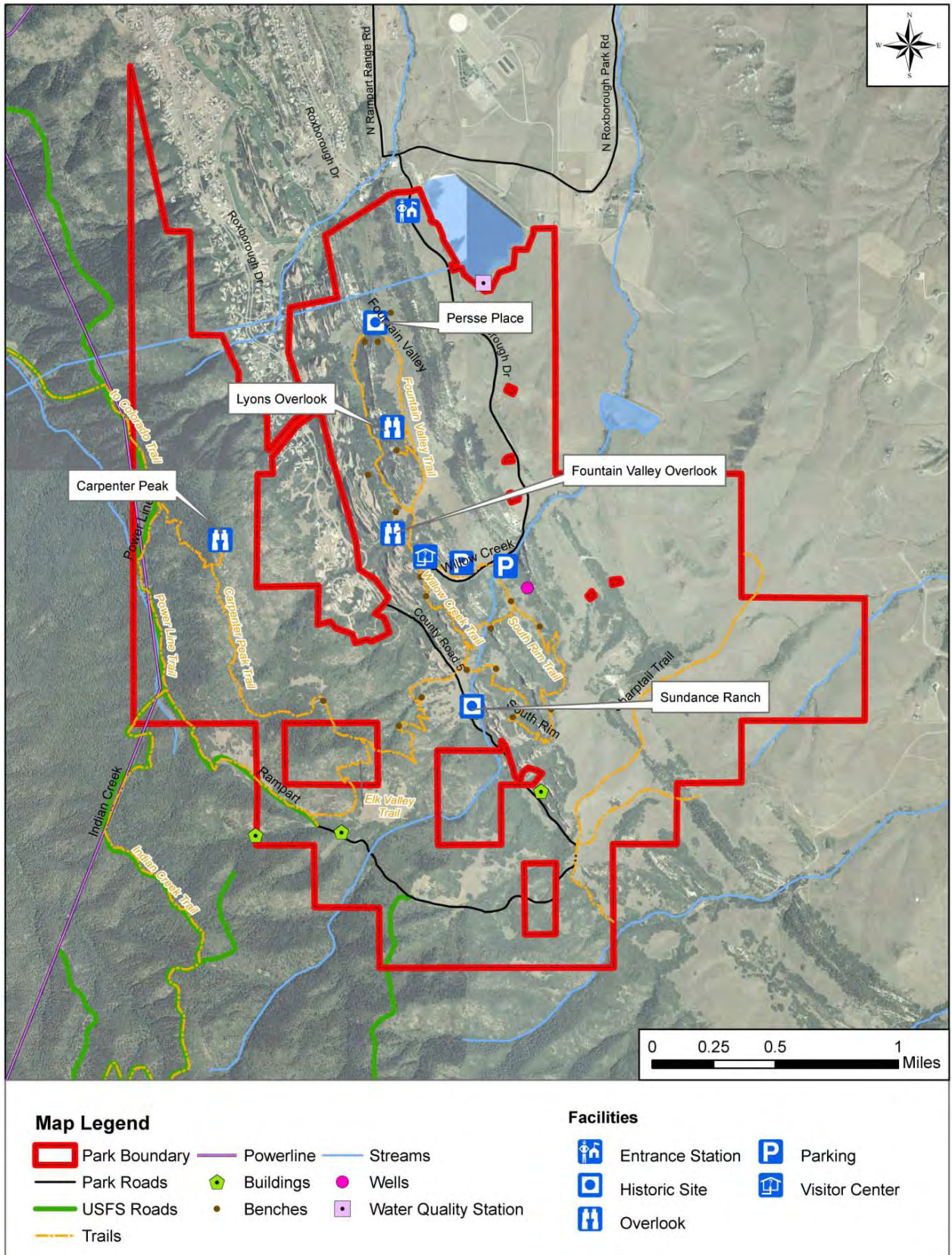


George O’Malley Visitor Center



Retail store as seen in 2010.

Map 15. Recreation and Facilities Infrastructure



Park Entrance Station

The entrance to Roxborough is a 32-year old “temporary” wooden entrance station that serves as the primary point of contact for all park visitors. The park entrance station is located at the beginning of the park entrance road near the West Metro Fire District Station 15.

Roads and Parking Areas

Roxborough’s sole access road is a 2-mile entrance road (1.3 miles is gravel and 0.7 mile is paved) that extends from the northern boundary of the park southward where it terminates at the park visitor center. The upper and lower lots have a combined capacity of 100 parking spaces. There are 5 additional spaces at the Willow Creek trailhead.



Park entrance station

Vault Toilet

A dual-use vault toilet is available to visitors using the lower parking lot.

Off-site Storage Area at Chatfield State Park

Roxborough State Park’s primary storage is located off-site at Chatfield State Park, which is about 10 miles north of Roxborough (or about 20 minutes away). A two car garage at Chatfield’s maintenance compound provides storage for seasonal items.

Trailside Benches

Twenty-three trailside benches provide hikers places to rest or enjoy a snack.

Historic Structures

The following historic structures are found at Roxborough.

- Persse Stone House (restored interior and exterior)
- Persse barn (collapsed)
- Sundance Ranch House (stabilized but not restored)
- Two shacks (standing)
- Cooper Cabins (restored interior and exterior)
- Mountain Jeannie’s Residence
- Waterhouse house (a fixer-upper)
- Mine loading dock

Visitor Orientation

Visitor orientation signs at the park entrance station and at the Visitor Center address hours of operation, pass sales, park regulations, trail orientation, trail heads, and Parks Pass purchase procedures.

Operations & Maintenance

Hours of Operation

Roxborough State Park is a day-use only park. The hours of operation reflect day light hours. Park hours are posted on Roxborough’s web site and highlighted in the park activity calendar, the Roxborough Rambles. Hours are also posted at all of the park trailheads. Listed below are

the current hours of park operation. The hours of operation for the park and its facilities outlined here are contingent upon the continuation of work program funding.

- November- February 8 am – 5 pm
- March –April 8 am – 7 pm
- May 1-May 30 8 am – 8 pm weekdays; 7am-8 pm weekends
- June 1 – July 30 8 am – 9 pm weekdays; 7 am-9 pm weekends
- August 1 – August 31st 8 am – 8 pm weekdays; 7 am-9 pm weekends
- September (after Labor Day) 8 am – 8 pm
- October 8 am – 6 pm

The park also strives to accommodate park visitors wishing to access the park earlier than regularly scheduled hours. Early morning openings are scheduled at least once per month from April to September.

The O’Malley Visitor Center is open year round. Hours vary from 9 am to 4 pm on weekdays. Summer weekend hours are extended to 9 am to 8 pm.

Information Technology

Much of the parks’ day to day business is currently conducted via web-based programs linked to external servers for various reporting functions, which require fast, stable internet connections. These reporting functions include revenue collection, visitation counts, budgeting and accounting, law enforcement queries, payroll and personnel management. Most of these administrative tasks are completed by staff working out of the Visitor Center & Park Headquarters, which is adequately served by a T-1 line that is part of the State’s MNT broadband network.

Computer hardware at the park consists of six stand-alone desktop computers and two laptops with standard network capabilities. The computers are linked to three printers. According to IT staff, six computers are due for upgrades. The remodeled O’Malley Visitor Center auditorium offers internet access via a network connection.

Utilities

Electrical Service

Electricity in and around Roxborough State Park is provided by the Intermountain Rural Electric Association (IREA). IREA is a member-owned electric distribution cooperative that serves 5,000 square miles of territory to the east, west, and south of metro Denver.

Domestic Water Supply

The current domestic water system consists of a well, ultraviolet disinfection, storage, and booster pumping system. Roxborough State Park currently treats its water by ultra-violet radiation and has been granted a waiver to do so. The Colorado Department of Public Health and Environment will require the park to treat the water supply with chlorination in the future. The park is planning to construct a new water treatment facility to meet this impending need.

Wastewater Treatment

The current domestic wastewater treatment system consists of two septic tanks, a dosing chamber and an absorption bed. In 2008, the second septic tank and the dosing chamber were replaced. The tanks are pumped yearly for optimum function.

Propane

One new liquid propane (LP) tank was installed as part of the Visitor Center Restoration Project. The new 1,000 gallon LP tank serves two 93% efficient furnaces in the remodeled Visitor Center. The LP tank is installed in the scrub oak grove north of the Visitor Center, next to the garage.

Circulation

Access to and from the park is provided by a single, two-lane road that connects the park entrance station with Roxborough Park Road (which is just outside the park boundary). The first 1.3 miles of road is composed of gravel, with paved road that extends the remaining 0.7 miles to the visitor center.

The park entrance station is a key component to the park's visitor service operations. The entrance station is staffed on weekends and holidays year round. It is also staffed on weekdays, permitting staff availability. Volunteers frequently assist with manning the entrance station. Visitors at this location are directed to purchase a parks pass or provide payment via a self-service station if an attendant is not present. Park passes are also available for sale at the Visitor Center.

All trail and road intersections are signed. Park speed limits are posted and monitored by park rangers as needed.

County Road 5, which is owned and managed by Douglas County, bisects the park and connects with the Roxborough Park subdivision located northwest of the park. This road is closed to vehicles; however, several landowners with private in-holdings within the park are permitted to use this road. Roxborough State Park is responsible for maintaining the gated entrance. Mountain bikers and hikers (primarily from the Roxborough Park Subdivision) are permitted to use County Road 5 and access the park.

Visitation

Visitor Demographics

Roxborough State Park attracts approximately 115,000 visitors annually. A 2009 Park Visitor Intercept Survey, conducted by Denver-based Corona Insights, provided a wealth of visitation data for Roxborough State Park. Roxborough State Park staff and volunteers collected 328 completed surveys between June 2008 and May 2009, the second highest survey sample among the other State Parks. The survey results provided a rich dataset representing a wide population of park visitors. Some of the key findings outlined in the Corona Insights Visitor Intercept Survey are provided below:

Age

- *53% of visitors are ages 35 to 54 (compared to 44% Division wide)*

- *Most Roxborough visitors appear to be in good physical condition and generally fall in young to middle-aged age brackets. The Visitor Intercept Survey indicated that Roxborough had a higher than average numbers of children aged 0 to 5 years, lower than average numbers of children and young adults ages 6 to 24 years, and higher than average numbers of adults ages 25 to 44 (in each reported visitor group). Percentages of visitors reporting one or more people in their visitor group aged 45 to 64 years were consistent with Division-wide averages. Lower than average numbers of people age 65 and up were reported at Roxborough State Park (90% of groups reported having no members of their group that were over age 65).*

Ethnicity

- *90% of visitors are Caucasian (compared to 83% Division wide)*

Gender

- *Among the individuals responding to the survey, about 60% were female and 34% were male. However, among all individuals in all visitor groups, respondents reported near equal numbers of male and female. 18% of visitor groups were all female and 12% were all male. Statewide, roughly the opposite was found, 11% of all groups were all female and 19% were all male.*

Transportation

- *98% of park visitors access the park via personal vehicle*

Group Size

- *The typical group size is 2.71 people per vehicle (compared with 2.69 Division wide)*

Distance from Home

- *91 % of visitors are Colorado Residents*
- *66% of visitors are from within 25 miles of the park*

Type of Entrance Pass Used

- *Most visitors (64 percent) access the park via purchase of a daily pass. About 36 percent use an annual pass (Figure 2).*

Visitation Trends

Annual Visitation

Since 2003, visitation trends fluctuated on an annual basis at Roxborough, but averaged to slightly less than 90,000 visitors per year at the park (Figure 3). Calendar year 2005 had the highest number of visitors (116,278 people) and the following calendar year 2006 had the lowest annual visitation (63,313 people) during this time period.²⁷ The low visitation in January and February in 2007 was attributed to a blizzard which closed the park for an extended time at the end of the year.

²⁷Visitation was determined based on reported values in the PARKS system.

Figure 2. Type of Entrance Pass Used

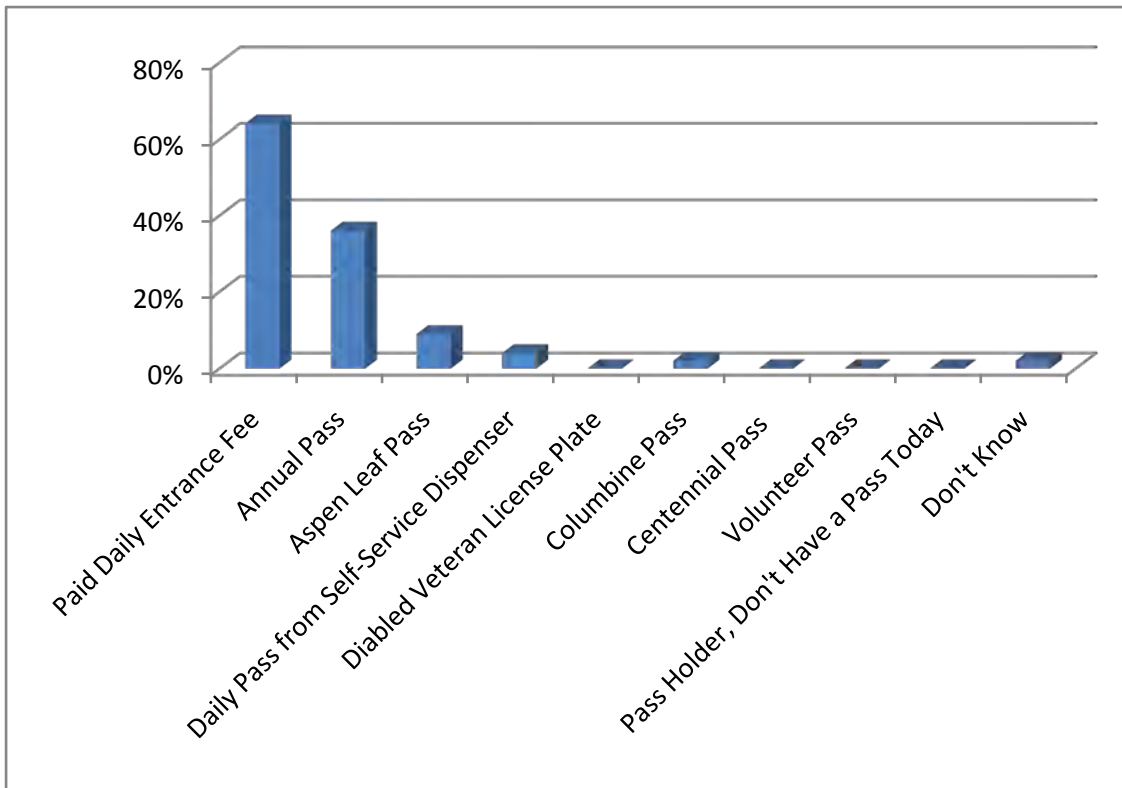
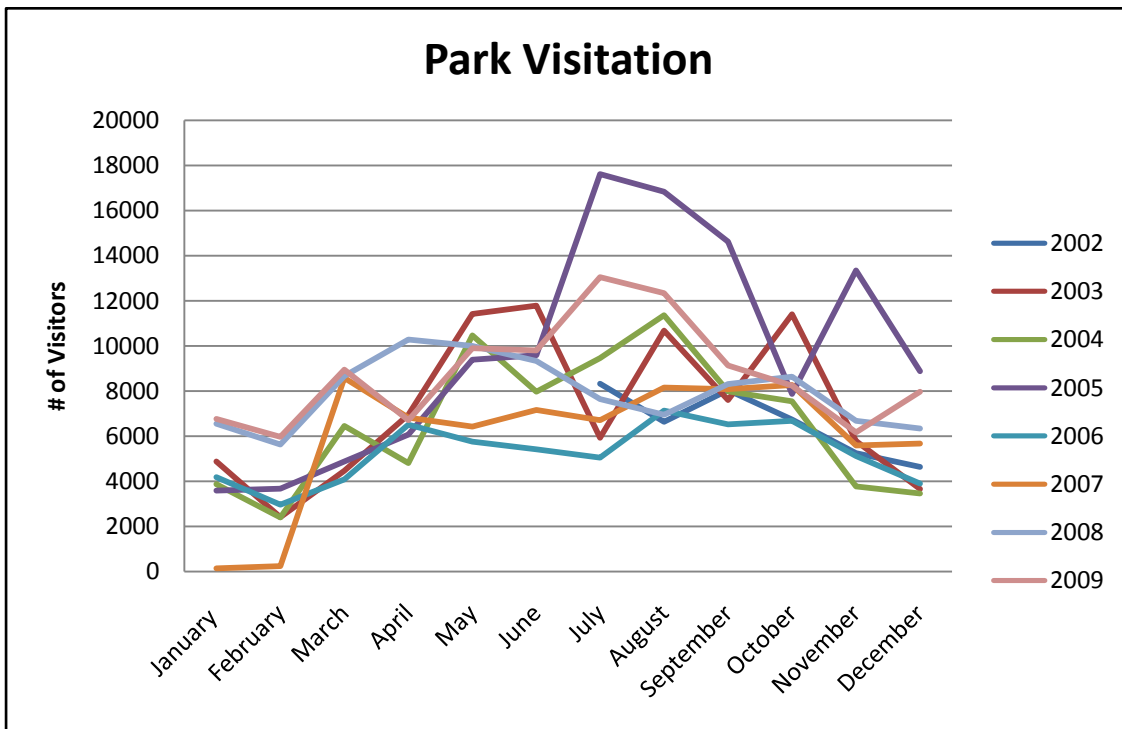


Figure 3. Annual Visitation Trends (2003-2009)



Peak Visitation Times

Visitation is typically highest during May and October, but remains steady throughout the year. During 2009, the parking lots at Roxborough reached capacity on an estimated 15 days.²⁸ Winter holidays are also a busy time for the park as many local visitors bring guests from out of town to enjoy the park’s dramatic scenery, or take advantage of cross-country skiing on the Fountain Valley Trail. The park has reached capacity on pleasant days in each month of the year. This differs from many state parks whose visitation spikes in the summer months.

Importance of Park Features

Visitors surveyed in 2002 and 2009 consistently ranked important park features over time (Table 5). Scenery, cleanliness, and trails ranked in the top three for both years. Park programs, recreational activities ranked the lowest in both years, reflecting the value of conservation in Roxborough’s mission and permitted uses.

Table 5. Importance of Park Features 2002-2009 (Very Important/Somewhat Important)

Park Feature	2002 (%)	2009 (%)	Rank
Scenery	100	100	1
Cleanliness	100	99	2
Trails	99	98	3
Informational Signage	92	92	4
Facilities & Equipment	80	91	5
Safety	85	88	6
Customer Service	70	78	7
Park Programs	61	63	8
Recreational Activities	42	39	9

Sources: Price Waterhouse Coopers *Market Assessment Study* (2002) and Corona Insight *Park Visitor Intercept Survey* (2009).

Visitor Preferences

In addition to visitor trend data, the 2009 *Park Visitor Intercept Survey* conducted by Corona Insights provided details about visitor preferences. Several key findings about visitor preferences at Roxborough are outlined below:

- Almost 80% of survey respondents described the overall quality of experience at Roxborough as excellent (ranked 2nd out of 44 state parks).
- 97% of survey respondents indicated that scenery and surroundings were a very important component of visiting Roxborough State Park (ranked 1st out of 44 state parks).
- About 90% of survey respondents indicated that they were very satisfied with Roxborough State Park’s trails (ranked 1st out of 44 state parks).
- 82% of survey respondents indicated that they were very satisfied with Roxborough State Park’s information and signage (ranked 2nd out of 44 state parks).
- Although almost two-thirds (63%) of survey respondents indicated that park programs were very or somewhat important, less than half (42%) of respondents were very satisfied with park programs. Nonetheless, Roxborough ranked 3rd out of all state parks for receiving the highest visitor satisfaction with park programs.

²⁸Knopp, Amy. Park Ranger, Roxborough State Park. Personal communication. February 1, 2009.

Visitation Capacity

Managing Roxborough's visitation at a level which will not seriously affect natural and cultural resources is critical to the park's existence. Any additions to parking capacity should be carefully evaluated for their potential impacts to the resources. When at capacity, Roxborough's parking areas can accommodate 105 vehicles, or an estimated 286 persons.²⁹ If maximum capacity is reached, park staff temporarily close Roxborough to additional visitors, and let one vehicle in the park as soon as another exits. The park currently reaches capacity an estimated 15 times/year.

Park Administration and Special Functions

Full Time and Temporary Staffing

Roxborough is staffed with three full time positions that include a Park Manager, Ranger, and Volunteer and Interpretive Service Coordinator (Appendix F). Temporary employees serve as entrance station attendants, seasonal park rangers, maintenance workers and Visitor Center tourist assistants. Frequently, the Roxborough State Park Manager relies on Chatfield State Park Maintenance staff to help address maintenance and operating issues that require additional technical expertise.

Volunteers

Roxborough State Park has one of the largest committed groups of volunteers, most of which have been involved with the park for many years and are of retirement age or older. Volunteers help with a variety of park operations including: guiding scout, school, and other special groups; providing outreach programs, interpretive programs, administrative support, resource management assistance, maintenance project assistance, noxious-weed control, information services, and roving interpretation.

Roxborough has an active cadre of Volunteer Naturalists who provide a variety of interpretive programs for school children, scouts and park visitors. The Volunteer Naturalists contribute approximately 8,000 hours annually, which is equivalent to almost 4.0 full time staff.

Roxborough has a strong stewardship program involving scouts, community and court assigned volunteers. These groups assist the park with trail maintenance, weed removal, re-vegetation, and other projects.

The Friends of Roxborough State Park is a 501(C)(3) not-for-profit organization whose mission is to protect the boundaries of the park and to enhance the park's environmental education program. The organization consists of approximately 300 members. The Friends have played a remarkable role in the land acquisition program and support the park's interpretive efforts and Volunteer Naturalist program.

Enforcement, Public Safety, & Emergency Response

Enforcement issues at Roxborough State Park are not nearly as significant as they are at other larger parks that accommodate overnight use. In Fiscal Year 2007-2008, Roxborough issued a



One of many committed volunteers that make Roxborough a leader in volunteer outreach.

²⁹ Based on average of 2.71 persons per vehicle as shown in the 2009 Corona Insights Visitor Intercept Survey.

total of 10 citations. For comparison, only four other parks that are open to the public issued fewer citations. Just a few miles away, Chatfield issued 747 citations. When enforcement is necessary, park rangers' actions are guided by three priorities (ranked highest to lowest):

- Ensure the safety and well-being of the public
- Protect personal property and the park's natural and man-made resources
- Enforce administrative functions, such as issuing fees or permits

The two most common enforcement issues at Roxborough concern include enforcing Roxborough's no dog rule and park entry without purchase of a parks pass.

In terms of medical assists and/or injuries, Roxborough is traditionally lower than many other parks. The park had two medical assists in FY 2009. No medical assists occurred in FY 2007.

Rattlesnake Encounters

Sightings of rattlesnakes are fairly common at Roxborough so care is taken to minimize the danger of rattlesnake encounters. Signs in the parking areas inform visitors that rattlesnakes inhabit the park and request visitors stay on established park trails. Records are kept of rattlesnake sightings. Interpretive programs and park literature discuss what action a visitor should take if encountering a rattlesnake.

Encounters with Black Bear or Mountain Lion

Information signs are posted at the trailheads informing visitors of the precautions to take in the event of an encounter with a bear or mountain lion. Sighting records are posted at the Visitor Center.

Contact with Lightning

Educational messages at the entrance station and Visitor Center address the hazards of lightning strikes during periods of thunderstorm activity.

Contact with Poison Ivy

Park visitors are warned that poison ivy grows in Roxborough and are requested to remain on established park trails. Educational exhibits and signs illustrate poison ivy and its seasonal color changes.

Emergency Response

The most likely emergencies to occur at Roxborough include medical emergencies, search and rescue operations, rock rescue operations, and wildfires threatening structures or natural resources. Park rangers are trained in cardio-pulmonary resuscitation, first aid and emergency response. They provide emergency assistance until the paramedic staff from West Metro Fire Department arrives. Table 6 outlines staff emergency procedures in the event of a life-threatening or non-life-threatening incident at the park.

Table 6. Emergency Response Protocol

Emergency	Contact	Staff Procedure
Medical Emergency	West Metro Fire Station 15 at the intersection of Roxborough Park Road and the park entrance road.	Radio or telephone West Metro Fire Department and request medical assistance
Search and Rescue	Douglas County Sheriff's Department	Contact Douglas County Sheriff's Department and assist search coordinator in rescue operation
Rock Rescue	Douglas County Search and Rescue Team	Notify Douglas County Sheriff's dispatch center and request assistance of Douglas County Search and Rescue Team.
Wildland or Structure Fire	West Metro Fire Station 15 at the intersection of Roxborough Park Road and the park entrance road	Radio or telephone West Metro Fire Department and assist wildland fire coordinator in fire suppression

Partnerships

Roxborough State Park is fortunate to have one of the single strongest “friends” groups along the Front Range. The *Friends of Roxborough* is a non-profit organization that protects the scenic beauty of the park from visual encroachment by residential development and support educational opportunities at Roxborough. Specifically, this group fosters educational opportunities that help visitors of all ages discover Roxborough’s unique resources and helps acquire additional land to preserve Roxborough and its special nature.

Other partners that Roxborough State Park staff work with on an on-going basis include local, state, and federal governments, quasi-governmental entities, and foundations (Table 7).

Table 7. Roxborough State Park’s Partnerships

Partner	Nature of Partnership
LOCAL	
Aurora Water	Water and land use issues related to adjacent Aurora Reservoir and the Rampart Pipeline
Douglas County Historic Preservation Board	Cultural resource issues
Douglas County Open Space	Management of adjacent open space
Douglas County Sheriff's Department	Local law enforcement issues
Douglas County Search and Rescue	Search and rescue matters
One Roxborough	Community advocacy group for the 80125 zip code
Roxborough Park Foundation	Local homeowner issues
West Metro Fire Department	Wild land fire and emergency services issues
Local School Districts: Douglas County, Jefferson County, Littleton, Englewood, Denver, Aurora	Educational and volunteer programs coordination

Partner	Nature of Partnership
STATE	
Colorado Division of Wildlife, Wonders in Nature Program	Wonders in Neighborhoods program, Watchable Wildlife program, and wildlife management related issues
Colorado Board of Land Commissioners	Management of Stewardship Trust parcels adjacent to Roxborough
Colorado Historical Society and Colorado Historical Fund	Cultural resource issues
Colorado State Forest Service	Wild land fire matters
Colorado State Patrol	Law enforcement and emergency dispatch
FEDERAL	
U.S. Forest Service, South Platte District	Resource management and recreational issues along our common boundary
U.S. Department of the Interior	National Park Service Land and Water Conservation Fund and National Natural Landmark program administration
U.S. Fish and Wildlife Service	Endangered species management

Park Budget and Finances

Roxborough relies on annual appropriations for “personal services” funding and for three other annual budget allocations to manage the park (i.e., operating, utilities, and temporary worker allocations). Larger expenditures for items such as road repairs, facility upgrades, capital equipment, and other enhancements must be requested annually through the High Plains region’s “Major Repairs and Minor Improvements” budget line (currently referred to as LSP allocations), which compete with similar requests from other parks in the region on a priority basis.

Sections below highlight FY 2009 budget expenditures for each of the primary budget category. It should be noted that FY 2009 was a financially challenging year for the Division due to the single largest recession in recent history, which led to a \$3 million reduction in Colorado State Parks General Fund support (taxpayer dollars). All parks and programs made subsequent reductions to operating budgets, including Roxborough. Therefore, some of the reported expenditures may be lower than in years past.

Personal Services

Personal services accounts for the single largest component of Roxborough’s operating budget. In FY 2009, Roxborough expended \$184,048.83 for “professional services”, which covers direct costs associated with three FTE, including benefits.³⁰

³⁰ Provided by Olga Ivanova via DataWarehouse report, Colorado State Parks Budget Analyst. October 2009. For several years prior to FY 2005, Roxborough was operating with two FTE and managed by the Chatfield or Castlewood Canyon State Park Managers. This was not deemed to be effective, many volunteers assisted in jobs and tasks that were typically overseen by permanent staff, and resources were allocated to restore the park manager position. Additional inefficiencies associated with travel between parks and lack of sufficient, dedicated, park staff attention were reported. In FY 2009, Roxborough was one of several parks considered for consolidating park management with a neighboring park (Chatfield) due to significant budget shortfalls and a reduction of \$3.0 million in General Fund

Operating Budget

Roxborough’s operating budget covers the day-to-day expenses associated with maintaining the park’s facilities, and managing various functions associated with the work unit. For FY 2009 Roxborough’s allocated operating budget was \$25,646. Vehicle expenses and building and grounds maintenance expenses together account for about 47percent of all operating costs. A detailed breakdown of FY 2009 operating expenditures is provided below.

Table 8. FY 08-09 Operating Expenditures

Expenditure	Amount	% of Total
Administration, misc.	\$214.34	0.9%
Alarm / Alarm Service	\$564.00	2.3%
Bldg. & Grounds	\$4,374.29	17.6%
Computers / IT	\$846.31	3.4%
Copy Machine	\$143.63	0.6%
Education	\$804.31	3.2%
Clothing & Uniforms	\$296.33	1.2%
Equipment	\$1,438.29	5.8%
Field supplies	\$184.76	0.7%
Food / Food services / Drinking Water	\$586.74	2.4%
Janitorial	\$1,664.56	6.7%
Office Supplies, misc.	\$1,385.49	5.6%
Phone	\$2,573.52	10.3%
Safety	\$1,895.69	7.6%
Training	\$438.00	1.8%
Vehicle supplies	\$121.03	0.5%
Vehicles	\$7,169.43	28.8%
Water Testing/Permits	\$218.00	0.9%
Total	\$24,918.72	100%

Source: Margaret Taylor, February 2010. Park records.

“Vegetation management” is another park operating expenditure administered through the Resource Stewardship and Natural Areas Program. These dollars are typically expended on weed management, fuels mitigation, and other expenses tied to vegetation management. In FY 2009, the Resource Stewardship and Natural Areas Program allocated \$8,000 in vegetation management to Roxborough. In FY 2009, this amount was increased to \$9,500.³¹

Utilities

FY 2009 utility allocations amounted to \$12,737. Roxborough’s “Utilities” budget covers the annual costs for electricity and toilet pumping as well as toilet rental for the port-o-let located at the park entrance (Table 9). Roxborough staff operated out of a trailer for much of the year

(taxpayer) support. This was not carried through, primarily due to other aggressive operating budget reduction measures undertaken throughout the State Parks.

³¹ Billerbeck, Rob. 2010. Personal email communication to S. Babcock. June 28, 2010.

while the Visitor Center was upgraded. Thus, utility expenditures for FY 2009 were significantly lower than average.

Electricity consumes the majority of the park's Utilities budget. Upon completion in 2009, the Visitor Center will use propane as its heating source instead of electricity. The new 800 gallon LP tank will serve two 93% efficient furnaces in the remodeled Visitor Center. Several smaller buildings, including the entrance station and garage will continue to be powered by electricity.

Toilet pumping costs include the annual pumping of the vault toilets and primary septic tanks. Toilet pumping accounts for about 6 percent of the park's Utilities budget.

Table 9. FY 08-09 Utilities Expenditures

Expenditure	Amount	% of Total
Electricity	\$5,998.00	78%
Port-o-let Rental	\$1,204.00	16%
Toilet Pumping	\$500.00	6%
Total	\$7,702.00	100%

Additionally, The Roxborough Park Foundation allows Roxborough State Park to use their trash and recycling facilities without charge.

Temporary Workers

Roxborough was allocated \$60,708 in temporary worker funding in FY 2009. The Colorado State Parks Volunteer Program contributed \$8,200 in funding from Great Outdoors Colorado in FY 2009 towards the hiring of a visitor center attendant, which is in addition to the original temporary staff allocation. In addition to the park's three full-time employees, Roxborough hires an additional 10 temporary employees during the summer months to work as entrance station attendants, park rangers, maintenance workers, and Visitor Center tourist assistants (Table 10).

Table 10. FY 2009 Temporary Employee Expenditures³²

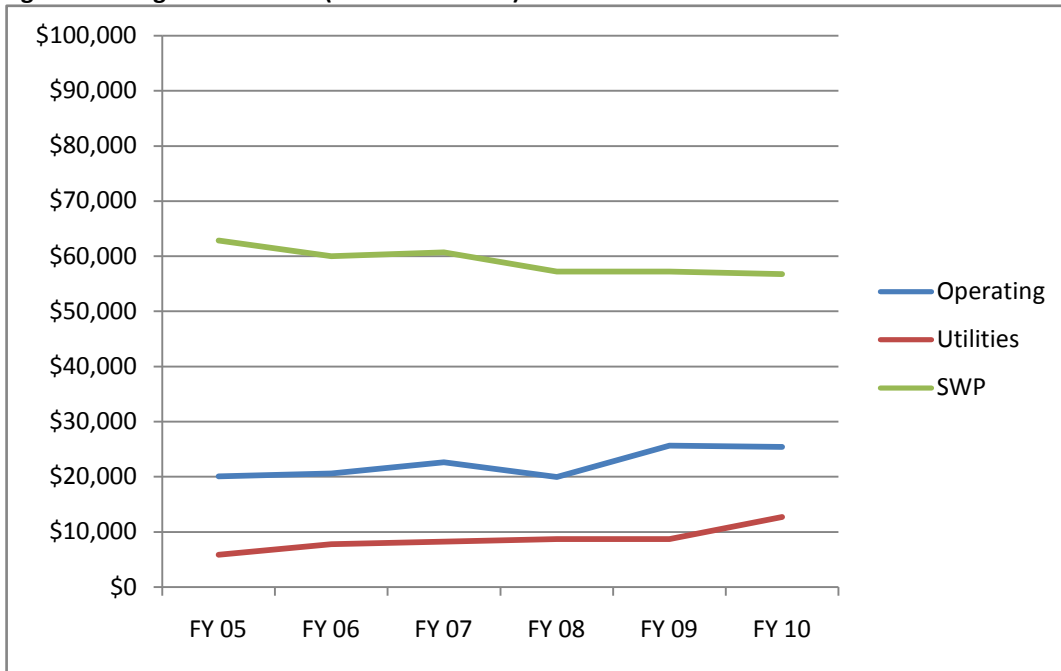
Position	Amount	% of Total
Gate Attendant	\$2,085.00	4%
Maintenance	\$3,472.00	6%
Visitor's Center Attendant	\$24,156.00	42%
Rangers	\$27,036.99	48%
Total	\$56,749.99	100%

Overall Budget Trends

The park utilities budget increased from \$5,865 in FY 2005 to \$12,737 in FY 2010 (117 percent) and operating budgets increased from \$20,071 to \$25,398 (27 percent) between the same period (Figure 4). Temporary staff budget allocations decreased slightly from \$62,845 to \$53,400 (about a 15 percent decrease) since FY 2005.

³²Reported Temporary Employee Expenditures figures provided by Margaret Taylor, Roxborough State Park Manager, February 2010.

Figure 4. Budget Allocations (FY 2005-FY 2010)



Revenue Trends

State Parks is required by C.R.S. 33-12-100.2 to be financially self-supporting to the extent possible.³³ This has implications not only for any new venture or facility, but also existing operations. Consequently, State Parks monitors park self-sufficiency over time. At Roxborough State Park, the overall self-sufficiency level (revenue divided by operating, utility and temporary staff expenditures) was approximately 62% for FY 0009.³⁴

Increasing Importance of Volunteers

Tight budgets and funding limitations for important park services increasingly require creative ways to maintain and improve park resources. This has led to an increasing reliance at many parks on volunteer services. At Roxborough State Park, 317 volunteers contributed 8,792 volunteer hours in 2009, amounting to over \$178,038 in paid labor (according to the Independent Sector Rate of \$20.25 per hour).³⁵

³³ C.R.S. 33-12-100.2 state specifically that... “Because of the nature and operation of such state parks and recreation areas, the system can be largely self-supporting, and the users of such resources can help fund the system’s operation and maintenance. The General Assembly declares and intends that as a matter of state policy the system of state parks and state recreation areas should be financed as much as reasonably possible through revenues derived from the users of such system.”

³⁴ Total self-sufficiency is based on direct and allocated indirect operating expenses from all sources, and total revenue from direct and allocated revenue sources.

³⁵ “Value of Volunteer Time” 10 Feb. 2010

<http://independentsector.org/programs/research/volunteer_time.html>.

Figure 5. Revenue by Fiscal Year.

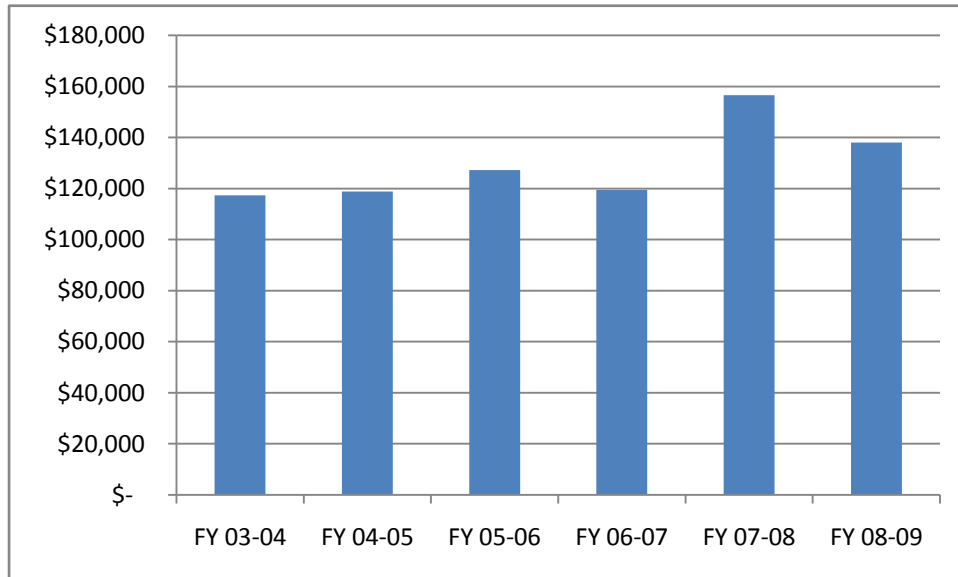
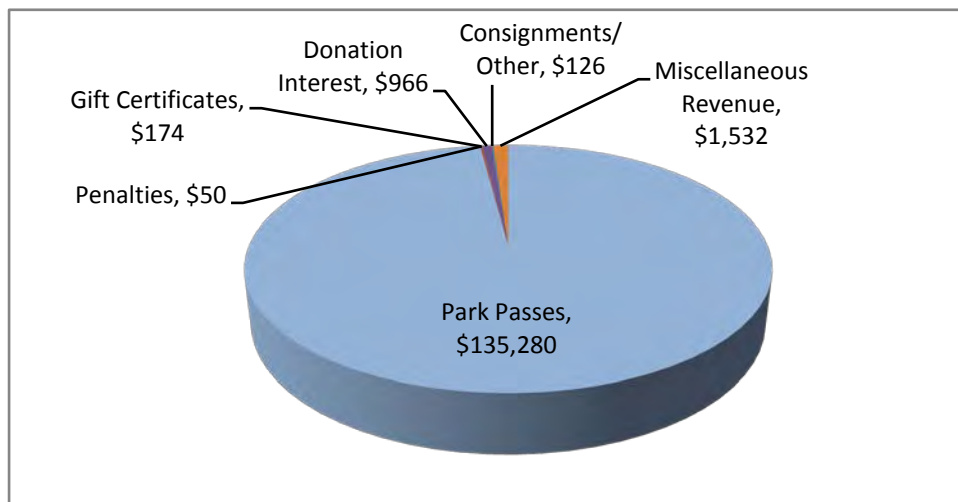


Figure 6. Revenue by Source



Source: Park Manager Report for FY 2009

Economic Value

Roxborough State Park has a positive impact on the economy of neighboring communities such as Roxborough Park, Highlands Ranch, Castle Rock, and into metro Denver. Annual salaries associated with the park’s three full-time and 10 seasonal temporary employees contributes over \$243,000 to the local economy in direct payroll. Additionally, a large percentage of the park’s overall operating budget is spent locally.

According to the 2009 Corona Insight *Visitor Spending Analysis Report*, local and non-local visitors to Roxborough spent over \$1.1 million within 50 miles of the park. The average amount of money spent per vehicle amounted to \$33.22. This is relatively consistent with

visitor spending at other day use parks but substantially lower than visitor spending per vehicle at overnight parks. [Overall, the Division-wide average visitor spending per vehicle within 50 miles was \$125.17.] Also important to note is that 91 percent of Roxborough's visitors are local residents who drive less than 50 miles to visit the park. The average per vehicle spending for visitors traveling from outside 50 miles to Roxborough was significantly higher (\$116.80).

4.0 MANAGEMENT ZONING

Methodology for Determining Management Zones

The management zoning scheme adapted specifically for Colorado State Parks provides a framework to identify areas that provide an array of visitor experiences and recreation opportunities, based on the resource constraints that occur within the park (Table 11). Within each management zone, suitable types of facilities and land uses are also identified, along with the suggested visitor experience and management focus.

By providing specific zones that account for resource constraints and are established to meet different types of visitor experiences and recreation opportunities at Roxborough State Park, visitors can select areas that most closely meet their desires and expectations, and minimize long-term impacts to the resources. In addition, management zoning helps park managers avoid conflicts amongst visitors seeking different types of activities, identify management needs, sustainably manage the unique resources at the park, and more effectively plan future park development.

For the first step in establishing management zones at Roxborough State Park, members of the park management planning team along with State Parks GIS staff, whom were familiar with Roxborough and had expertise in park zoning, compiled all of the mapping data necessary to establish management zones. Specific maps used in the mapping overlay process included: 1) Ecological Sensitivity Zone map (from the Roxborough Park Stewardship Plan); 2) Land Ownership (Map 5); 3) Recreation Infrastructure and Facilities Map (Map 15); 4) Cultural Resource Occurrence Map (Map 11); and; 5) Engineering Suitability Map (Map 16) that depicts development suitability based on soils, slope, floodplains, and access to utilities.

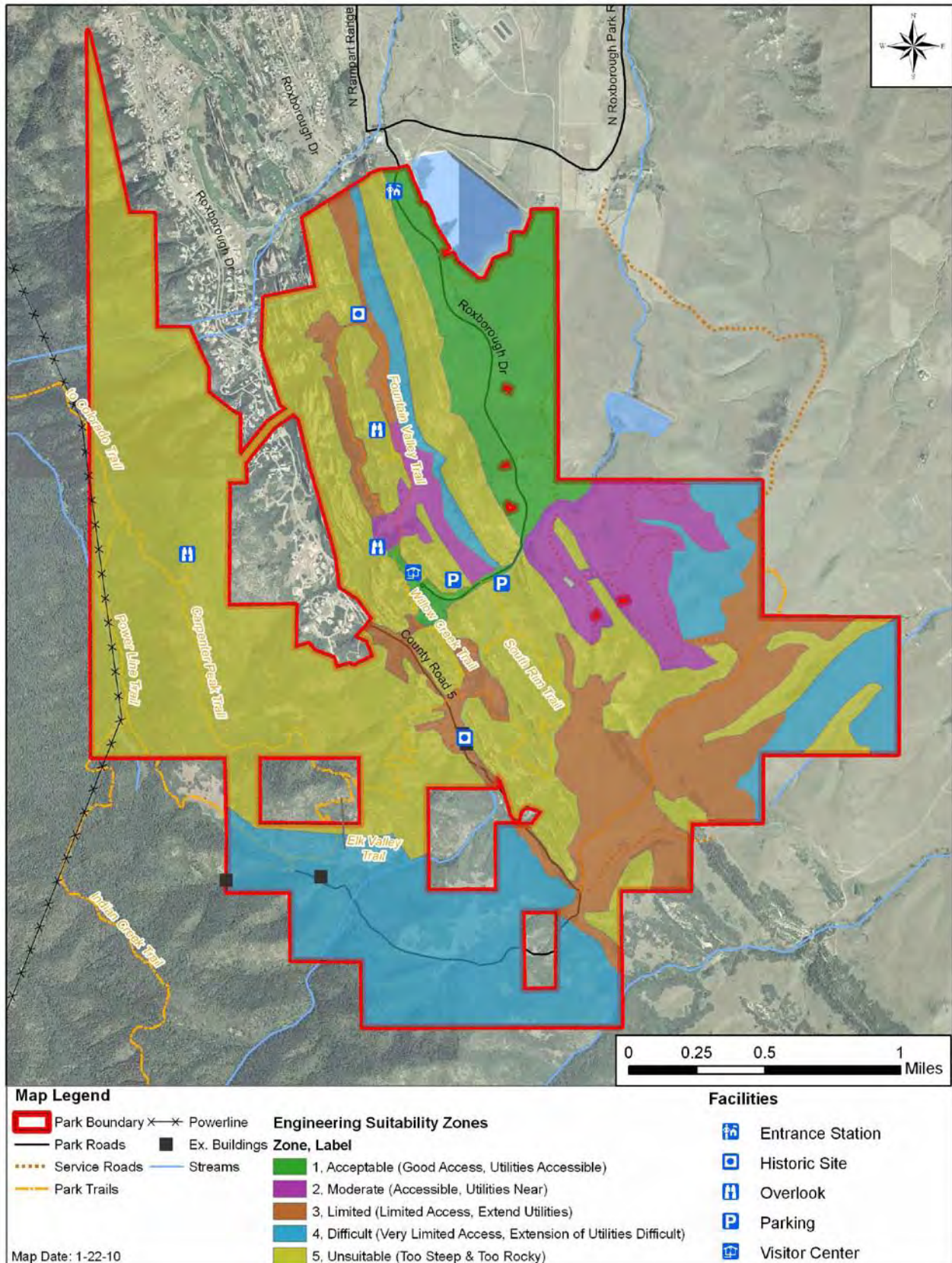
Description of Management Zones

Using the above zoning scheme, a zoning map was developed for Roxborough State Park that identifies appropriate management zones (Map 17). Most of the areas zoned “Development” are located near the park entrance, along the entrance road, and in the vicinity of the George O’Malley Visitor Center. These areas generally experience the highest concentration of visitors and/or offer the greatest potential for additional uses or facilities that are consistent with the Development zone. The “Passive Recreation” zone is concentrated throughout much of the South Downs Area along existing service areas and along the Sharptail Trail. Other Passive Recreation areas serve as transition zones between developed and natural zones. Areas zoned “Natural” dominate much of the Roxborough, which is consistent with the park’s Colorado Natural Area Designation and abundant natural and scenic resources.

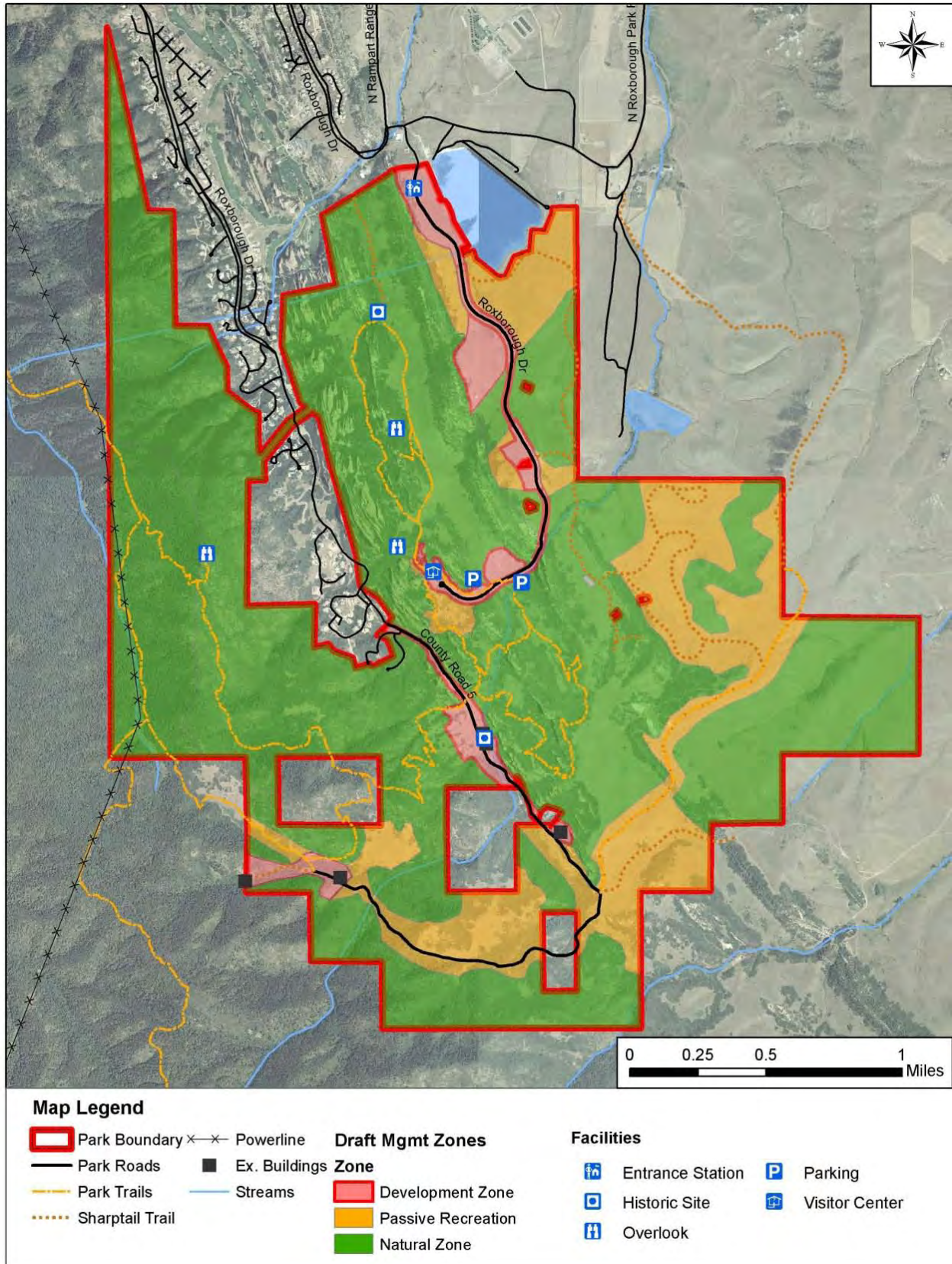
Table 11. Management Zone Classification Scheme and Characteristics

Zone Classification	Visitor Experience	Recreation Opportunities	Potential Facilities	Management Focus
Development	<ul style="list-style-type: none"> ▪ High social interaction ▪ Low opportunity for solitude ▪ Low opportunity for challenge 	<ul style="list-style-type: none"> ▪ High-density recreation ▪ Emphasis on providing opportunities that rely on motor vehicle access via roads such as picnicking, and at some parks could include RV and tent camping, and potentially motorized uses in designated areas. ▪ Some fishing, boating, equestrian use, mountain biking, hiking, and watchable wildlife may occur in this zone. 	<ul style="list-style-type: none"> ▪ Typically parking areas, paved or high-use roads, utilities, group picnic areas, visitor services, restrooms, concessions, interpretive facilities and at overnight parks, developed camping areas. ▪ Less typically this could include marinas, motorized use areas, and dog off leash areas at some parks. 	<ul style="list-style-type: none"> ▪ Intense management needs ▪ Manage to provide sustainable recreation and aesthetic qualities ▪ Prevent weed spread, erosion, or other degradation ▪ Intense fire prevention mitigation ▪ Revegetate with natives where possible or with non-invasive landscaping
Passive Recreation	<ul style="list-style-type: none"> ▪ Moderate social interaction/low opportunity for solitude ▪ Moderate degree of interaction with the natural environment ▪ Moderate opportunity for challenge 	<ul style="list-style-type: none"> ▪ Medium-density recreation ▪ Emphasis on providing hiking, fishing, equestrian use, mountain biking and other dispersed recreation. ▪ Some picnicking or backcountry camping, canoeing and other non-motorized boating, watchable wildlife, interpretive opportunities are likely to occur in this zone 	<ul style="list-style-type: none"> ▪ Typically trails and interpretive facilities and individual picnic areas. ▪ Less typically this could include dirt roads or light use roads, limited motorized uses (in larger parks only), hike-in campgrounds, or yurts ▪ Minimize utilities to the extent possible 	<ul style="list-style-type: none"> ▪ Moderate to High management needs ▪ Manage to maintain the natural character and provide sustainable recreation ▪ Actively manage weeds in order to eradicate or suppress, and prevent erosion or other degradation ▪ High level of fire prevention ▪ Revegetate with native species
Natural	<ul style="list-style-type: none"> ▪ Low social interaction/moderate opportunity for solitude ▪ High degree of interaction with the natural environment ▪ Moderate to high opportunity for challenge 	<ul style="list-style-type: none"> ▪ Medium- to low-density recreation. ▪ Emphasis on providing low impact, non-motorized and dispersed recreation. ▪ All recreation opportunities in the Passive Recreation Zone are likely to occur here with the exception that there be more of an emphasis on providing non-motorized dispersed recreation. ▪ Hunting also permissible at some parks 	<ul style="list-style-type: none"> ▪ Primarily trails and some interpretive facilities ▪ Minimize utilities to the extent possible 	<ul style="list-style-type: none"> ▪ Moderate to low management needs ▪ Manage to maintain the natural character, the native flora, the wildlife habitat, and the ecological functions ▪ Actively manage weeds for eradication, prevent erosion or other degradation ▪ Moderate to high level of fire prevention ▪ Revegetate with native species
Protection	<ul style="list-style-type: none"> ▪ Typically unmodified natural environment 	<ul style="list-style-type: none"> ▪ None, or heavily restricted 	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ Least intense management needs ▪ Preservation of very sensitive resources or restriction of visitor use for legal or safety reasons.

Map 16. Engineering Suitability



Map 17. Management Zoning



Area Descriptions that Influence Park Zoning

In addition to natural resource, land ownership, and engineering suitability mapping, other factors influencing park zoning included historical activities, established land uses, and acquisition history. At Roxborough State Park, three distinct areas were identified in the plan (these are depicted on Map 2). A brief summary of these areas and key considerations that were taken into account during the park zoning process are highlighted below:

Inner Sanctum — The Inner Sanctum area corresponds to much of the original “core” of Roxborough State Park, which today includes the Visitor Center and hiking trails that extend between the Dakota Hogback to the Fountain formations. This area experiences the highest concentration of visitors and includes the most dramatic natural and scenic park features.

Western Foothills — The Western Foothills occurs within the highest elevation area of the park along a transitional vegetation zone that features upland mesic oak thicket and Douglas fir forest. The highest peak in the park (Carpenter Peak) is located in this area, which offers unparalleled views of the park below and much of the Front Range. Much of Roxborough’s designated Colorado Natural Area Boundary is included in this area.

Southdowns Area — The Southdowns Area generally includes lands occurring along the eastern one-third of the park, and is comprised of Roxborough State Park’s most recently acquired lands (1997). Presently, little if any park visitation occurs in the Southdowns area. The Sharptail Trail, which is a Douglas County trail that extends through Roxborough, is the only trail currently situated in this portion of the park. Much of the Southdowns area features mixed grass prairie with rolling hills topped with scrub oak thicket.

5.0 PARK ENHANCEMENT OPPORTUNITIES & INITIATIVES

Enhancement Opportunities

Park enhancement opportunities include significant park improvements or efforts that are needed to help each park fulfill its full potential (as defined in the park vision and park goals). Some enhancement opportunities include park improvements that are significant in terms of their spatial scale and effort needed to implement them, and some may warrant considerable financial resources. Enhancement opportunities are also substantial enough to warrant supporting documentation and discussion to help better understand their rationale, potential contribution, and value to the park.

Park enhancement opportunities for Roxborough State Park were developed based on suggestions from the public, professional knowledge and experience learned from operating other parks, and discussions with key stakeholders like the Roxborough Park Advisory Council. Park enhancements include: 1) major rehabilitation or improvements to existing facilities and infrastructure; 2) new facilities and infrastructure; 3) rehabilitation efforts and natural resource restoration projects that will help achieve the goals outlined for the park and 4) management initiatives critical to the long-term operational success of the park. Enhancement opportunities that may impact park visitation, operations, and/or revenues are evaluated in the *Roxborough State Park Financial Assessment* in Appendix G, which highlights estimated capital expenditures, operating costs, and associated revenues (if any).

Based on information provided in Section 3.0, there are a number of enhancement opportunities proposed at Roxborough State Park (Map 2 in Executive Summary). This section provides detailed information on recommended park enhancements, notes their relative priority level, and also discusses relevant design parameters and potential funding strategies. It is important to note that park enhancement opportunities and initiatives are not necessarily “commitments.” Also, new development should be balanced with maintaining and preserving what we already have and major new facility investments should be balanced with resource enhancements. Finally, implementation is contingent on the park securing adequate financial and human resources and must be considered or weighed within the context of other Division-wide needs.

Regardless of whether the Division secures funding for park enhancements, Roxborough is fortunate to have the Friends of Roxborough, an extensive volunteer group, and other stakeholders that have the capacity to generate significant financial resources. These factors should be considered for many of the park enhancement listed below, along with other management priorities highlighted in Section 6.0.

Existing Facilities & Infrastructure

EO1. Stabilize Park Entrance Road (priority level = High). About 1.3 miles of the park entrance road is gravel. This portion of the road is regularly graded (6x/year) and gravel is reapplied annually. The road is nearing the 200 vehicle per day threshold for asphalt paving, but for now, continued stabilization of the road base with gravel (with dust abatement such as MgCl) is recommended, with the exception of 0.12 miles of road extending from the park entrance, to the Roxborough Entrance Station. This

section is one of the steepest sections of road, and generally requires more extensive maintenance needs. Periodic vehicle counts should also be conducted to determine if/when the 200 vehicle threshold is reached and for the length of duration that this occurs. A more accurate determination for paving the remainder of the park entrance road can be made at that time.

EO2. Improvements to Park Entrance Station (priority level = High). The entrance to Roxborough is a 32-year old “temporary” wooden entrance station and serves as the primary point of contact for all park visitors. A newly-renovated entrance facility would provide light, heat, and possibly sanitary facilities (or “port-o-let”), which would improve the overall functionality of the entrance station and revenue generation capability. It would also comply with current entrance station safety standards and would provide employees with a more functional workspace. Using the old Roxborough Park Neighborhood entrance station may be a cost effective solution.³⁶

EO3. Stabilize and Interpret Historic Structures (priority level = High). Roxborough is home to several historic buildings (i.e., the Sundance Ranch, Head Cabin, and Treece Cabin) that, once stabilized, would offer unique interpretive and recreational opportunities for park visitors.³⁷ This will require partnering with the Colorado Historical Society to prepare a historic structures evaluation and plan for stabilization.

Once these properties are stabilized, interpretive signage should be placed near the facilities to educate visitors about early “pioneers” in the area. Group tours and picnic tables at these sites (along with the Persse Place), would expand interpretation opportunities and serve as another value-added park attraction. More extensive renovation for more intensive overnight or day use is not recommended at this time.

New Facilities & Infrastructure

EO4. Water Treatment Facility (priority level = High). Roxborough State Park currently treats its water by ultra-violet radiation and has been granted a waiver to do so. The majority of water treatment is done through chlorination. The Colorado Department of Health and Environment may require the park to treat the water supply with chlorination in the future. When this occurs, the park will have to construct a facility to do this, likely near the existing wellhead adjacent to the Willow Creek Trailhead and parking area. The building will be approximately 20’ x 20’ and would house the chlorination equipment, storage tanks and electronics necessary for treatment of the domestic water.

EO5. Add Picnic Tables (priority level = High). Picnicking already occurs at Roxborough, despite an absence of picnic tables. An additional four (4) to six (6) picnic tables at Roxborough State Park (separate from those included in other park enhancement opportunities), should be placed at the Visitor Center Courtyard and other strategic locations such as near Persse Place, renovated historic structures (Mt. Genie, Sundance House, and Treece Property), near trailheads and parking lots. Visitors need

³⁶ In summer 2010, Roxborough Park neighborhood mentioned that reusing (and moving) the old neighborhood entrance station may be an option.

³⁷ The required capital investment to restore the Sundance house (along with well and septic) and other historical structures to a point suitable for habitable use would be extensive and is not recommended at this time.

to be notified upon their arrival to the park that all picnic items must be packed out, as installation of remote trash receptacles are not a viable management option.

EO6. Environmental Education/Event Facility Shelter (EE/EF shelter) (priority level = High).

Event Facility Shelters are popular amenities at many state parks, and if the frequent usages of these facilities at neighboring state parks are any indication, such an amenity would likely be popular at Roxborough as well. An Event Facility Shelter site would generate additional visitation and revenue for the park, and expose new visitors to what Roxborough has to offer. The two areas that have been considered for this use are depicted on Map 16.



Example of a possible environmental education/event facility shelter (Chief Ouray Shelter from Cherry Creek SP).

Currently, two different EE/EF shelter concepts have been considered at two different sites (one site immediately north of the Visitor Center and another site just north of the Willow Creek Trailhead). For the purposes of this planning effort, it is assumed that the two different concepts could be equally applied at either site.

Moderate Amenity Concept. This EE/EF shelter concept is a more modest concept that would provide a moderate level of amenities such as a slightly smaller 1,500 square foot shade structure that includes a vault toilet (CXT), electricity, and gas grill, but no running water. This concept includes asphalt parking for 30 vehicles across from the Willow Creek Parking lot for both EE/EF shelter locations. [Note: Current financial concerns within Colorado State Parks make the Moderate Amenity Concept a more desirable alternative than a more expensive Full Amenity counterpart.]

Full Amenity Concept. This EE/EF shelter concept is essentially consistent with similar event facilities recently developed at Cherry Creek and Chatfield, which provide full-service amenities such as a 2,000 square foot shade structure that includes bathrooms with running water, electricity, and a gas grill. This concept includes asphalt parking for 40 vehicles just north of Willow Creek parking lot for both EE/EF shelter locations. However, the southernmost site would also include a stand alone wedding ceremony site.

EO7. Southdowns Trailhead and Interpretive Hiking Trails (priority level = Medium). As part of this enhancement, two alternative parking areas have been evaluated that would accommodate an additional 22 or 32 vehicles (Appendix H). In addition to parking, the trailhead would include a shade pergola and restroom and interpretive displays (possibly overlooking the prairie dog town and their significance as a “keystone” species).

The 625-acre Southdowns area features a rolling, open grassland ecosystem with scattered rock outcroppings that traditionally has not been accessible to park visitors. About 3.2 miles of proposed hiking trails would extend southward across Willow Creek, where a small stream crossing would be provided (a ford with some improvements or a small bridge). A proposed interpretive 1.8-mile interpretive hiking trail and 1.4-mile spur trail would provide excellent opportunities to educate visitors about the mixed grass prairie ecosystem and the unique geologic history of the Front Range. Hikers could connect to the Sharptail Trail or the South Rim Trail for additional hiking and interpretive opportunities from this new trail if desired. A small bridge linking the trail over Willow Creek may be necessary, along with carefully placed interpretive signage along the trail. [Note: It is assumed that improvements to existing trails outlined in the Roxborough Trails Plan would be addressed prior to implementing

this park enhancement (Appendix H). Also, Great Outdoors Colorado (GOCO) would need to be consulted prior to implementing this recommendation].

- EO8. New Maintenance Building/Compound (priority level = Medium).** A small, one bay garage was constructed as part of the Visitor Center during the Roxborough's initial development. The park currently operates from this same garage as well as another storage facility located at the Chatfield State Park maintenance compound. The one bay garage is too small to hold all of Roxborough's maintenance equipment (e.g., snow plow, tractor/OHV, fencing, weed management equipment, and various tools) and the drive time from the Roxborough Visitor Center to the Chatfield compound is 20 minutes. In order to have maintenance equipment on site and expand park efficiencies, a new three-bay Maintenance Garage and compound is proposed near the park entrance. By locating a maintenance garage in the area shown on Map 2, long-term efforts to consolidate park offices with the park entrance and maintenance facilities is more feasible given the added space that is available at this site.
- EO9. Vault Toilet Adjacent to Persse Place (priority level = Medium).** The Persse Place is located at the north end of the main loop trail which accommodates the majority of visitor use. In addition, when the Persse Place is open for visitation the closest restroom facility is two miles away. A vault toilet is needed at this location, particularly as more visitors access this popular park destination over time. It is recommended that this vault toilet be designed to be aesthetically compatible with the Persse Place.
- EO10. Sensory Trail near the Visitor Center (priority level = Low).** Roxborough's unique natural, cultural, and geologic history offer rich opportunities for educating not only healthy, active visitors, but also individuals with disabilities. A short 0.1-mile sensory trail would provide another amenity for these visitors and would meet the latest Americans with Disability Act requirements.

Rehabilitation & Restoration Efforts

- EO11. Prairie/Grassland Restoration (priority level = High).** This would be an intensive series of projects over several years to restore quality grasslands in particular areas of the park. These projects would involve a combination of intensive noxious weed work and reseeding with native grasses and forbs to restore these grassland patches. Many sub areas have been identified and could be prioritized, likely starting with the areas closest to the visitor center. These projects would likely help these areas be more resistant to invasive species and would likely reduce the cost of treating noxious weeds. See the Stewardship Plan for more details.
- EO12. Prescribed Burning for Ecological Restoration (Priority level = High).** Prescribed burning would be considered only on the eastern side of the park in the grassland areas. USFWS consultation for Preble's Meadow Jumping Mouse (PMJM), and public meetings would be required prior to conducting this operation. If properly conducted, this burning could improve the competitive advantage of native grasses over exotic species. See the Stewardship and Forest Management plans for more details.

Management Initiatives

- EO13. Acquisition of Key Inholdings and/or Protection of Buffer Parcels (*Priority level = High*).** Many of Roxborough’s acquisition priorities have been realized thanks to successful partnerships with the Douglas County Open Space Program, the Colorado State Land Board, Friends of Roxborough State Park, and other private philanthropic organizations. The Great Outdoors Trust Fund, the Douglas County Open Space sales tax, and the efforts of the Friends of Roxborough State Park have played a major role in financing these projects. Acquisition of several remaining key inholdings and buffer parcels from future development will help preserve natural resources, and likely expand recreation opportunities. If purchase is not feasible, it is suggested that Colorado State Parks partner with Douglas County Open Space and other conservation partners to protect these lands via conservation easements. A land trade with Pike National Forest to secure management of the inholding along the Carpenter Peak Trail is also desirable.
- EO14. Continue to Build Partnership with the Friends of Roxborough State Park (*Priority level =High*).** The Friends of Roxborough State Park have played an important role in establishing Roxborough State Park as well as helping to implement and support key park operations including environmental education. Roxborough staff should continue to build on this important relationship and leverage support of the Friends’ group to help implement key park enhancements.
- EO15. Continue to Operate and Maintain a Successful Volunteer Program (*Priority Level = High*).** Roxborough State Park has one of the strongest, longest running volunteer programs within Colorado State Parks. Roxborough State Park staff should continue to build and maintain the program, as it enhances all aspects of park operations including: interpretation and environmental education, customer service, revenue collection, grounds and facility maintenance and natural resource protection.
- EO16 Expand Interpretation of the Park’s Geological, Cultural & Paleontological Resources (*Priority Level = High*).** Roxborough’s scenic beauty and abundant natural resources are Roxborough’s primary park attractions. However, Roxborough’s rich geological, cultural and paleontological resources are an untapped asset that are worthy of interpretation. With the help of additional interpretive signage and careful interpretive planning (e.g., being sensitive to providing quality information, but not in a way that would jeopardize a feature), park visitors will have the opportunity to leave the park feeling not only refreshed and enlivened from a hike, but also enlightened with a unique understanding of the area’s unique geologic formations, as well as human and paleontological history, all within just a short distance of the Metropolitan Denver Area.
- EO17. Walk-In Fee (*Priority Level = Medium*).** As Douglas County’s population increases and trails through Sharptail and Nelson Range Open Space become even more popular, it is in the park’s long-term best interest to manage and control access via a walk-in fee. Such a fee should apply not only to the park’s main entrance, but other more remote access points (possibly with use of an iron ranger or self-serve station). There are significant logistical challenges with enforcing a walk-in fee at more remote access points, but these challenges must be met to ensure that trail use from outside the park’s boundaries does not deleteriously affect Roxborough’s unique resources.

EO18. Formalize Multi-use Trail Connection to Nelson Ranch (*Priority Level = Low*). Nelson Ranch Open Space, which is directly southwest of Roxborough, currently permits hiking, mountain biking, and equestrian use on Swallowtail Trail. About 0.3 miles of Swallowtail Trail extends between County Road 5 and the southwest boundary between the park and Nelson Ranch Open Space. As trail users enter Roxborough, permitted trail uses are not clearly delineated. It is recommended the 0.3 miles of Swallowtail trail through Roxborough formally permit hiking, mountain biking, and equestrian access into Roxborough via the Nelson Ranch (all of which are uses that currently occur in this area).

6.0 IMPLEMENTATION PRIORITIES

This section highlights management actions that have been established by the Roxborough Planning Team to help address important needs and issues at Roxborough State Park, effectively plan future park development, and help protect and maintain Roxborough State Park's unique resources. Implementation priorities are based on park goals, influences on park management, and other management considerations identified in Section 1.0. This section also includes park enhancement opportunities discussed in Section 5.0. All stated management actions have been reviewed and are supported by Division Leadership.

Table 12, provided on the following page, is intended to serve as a quick reference for the park manager and staff responsible for implementing this plan. Included in Table 12 is a breakdown of each management action, the "category" or type of management action, applicable management zone, applicable Enhancement Opportunity numbers (as reflected in Section 5.0) and corresponding priority level. Criteria for determining priority levels are as follows:

High priority actions are considered extremely important to maintaining the quality of recreation and protecting natural resources in the park. These actions are central to preserving, maintaining, and enhancing park resources.

Medium priority actions are considered important, but not urgent, and meet a combination of other resource goals and objectives. Many park enhancements that include new capital infrastructure are assigned medium or low priority status.

Low priority actions are considered important, but not critical. Low priority actions do not need to be completed in the immediate future. Many park enhancements that include new capital infrastructure are assigned medium or low priority status.

Implementation Considerations

Implementation priorities are a reflection of Roxborough's greatest needs as of Summer 2010, and the respective "level of priority" for each management action may change over time depending on a variety of factors. Also, implementation priorities highlighted in this section should be viewed in the context of Roxborough only, and any actions that are dependent on additional funding or staffing must first be considered or weighed within the context of other Division-wide needs with the help of Colorado State Park Leadership. Effective implementation of the priorities listed in Table 12 is contingent on the park maintaining adequate financial and human resources necessary to initiate and follow through with recommendations outlined in this section.

Using the Implementation Plan

The implementation priorities will be used by park staff as a guide for the future management of Roxborough State Park. The plan will be reviewed by the park manager and other park staff annually to evaluate and monitor implementation progress. Specifically, park staff will refer to the plan to:

- Guide future park budget allocations and annual funding requests.

- Guide overall park management planning, including management of existing resources and possible upgrades to or the creation of new park facilities, improvements to recreation infrastructure, etc.
- Guide development of annual work plans. By tasking specific park staff with implementation of various management plan actions in annual work plans, and tracking implementation over time through regular performance reviews, the plan provides a useful accountability tool for park managers.

Table 12. Priority Management Actions at Roxborough State Park

PRIORITIES	Category	Applicable Management Zones	Priority (high, med, low)	Enhancement Opportunity Number (if any)	Date Completed or Timeframe (if recurring)
LAND OWNERSHIP					
Acquire key in-holdings and/or protection of strategic land buffer parcels before they are developed (e.g., Follow up on Goodwin, “kiln property” and “Preshaw” interests)	Land Ownership	NA	High	EO13	
Once or twice annually, check in with Sterling Ranch LLC to discuss the latest updates and issues associated with the Sterling Ranch development.	Land Ownership	NA	High		
NATURAL RESOURCES					
Protect rare plant species.	Vegetation	All	High		
Carry out recommendations for weed control per specifications outlined in weed plan.	Vegetation	All	High	EO11	
Monitor changes from weed control and revegetation projects.	Vegetation	All	High	EO11	
Protect high quality and diverse vegetative communities in the park.	Vegetation	All	High	EO11	
Protect high quality wildlife and rare species of animals at the park including the extensive butterfly populations, the amphibian species, the bird and raptor species as well as the variety of mammals.	Wildlife	All	High		
Monitor Prairie Dog colony densities to track any movement / changes in current habitat via photo-monitoring, population estimation counts during April or May each year, or some other measure.	Wildlife	All	Med		
Protect wetland features important to the park for wildlife, diversity of vegetation communities, as well as other important functions served by wetlands.	Water	All	High		
Monitor any visitor impacts to vegetation and check for soil erosion along park trails. Use native vegetation species in all revegetation projects.	Vegetation	All	High	EO11	
Partner/communicate with the Roxborough Park neighborhood during weed mitigation efforts along shared boundaries.	Vegetation	Natural	High	EO11	
Schedule weekly/monthly “Weed Warrior” workdays	Vegetation/ Volunteer	All	High	EO11	
Implement prairie/grassland restoration projects per Stewardship Plan.	Vegetation	All	Med	EO11	
Implement prescribed burning for ecological restoration per Stewardship Plan.	Vegetation	All	Med	EO12	

PRIORITIES	Category	Applicable Management Zones	Priority (high, med, low)	Enhancement Opportunity Number (if any)	Date Completed or Timeframe (if recurring)
CULTURAL RESOURCES					
Protect all important historical and archeological features at the park.	Cultural	All	High	EO3	
Protect all significant geological and paleontological features at the park.	Paleontological	All	High	EO16	
SCENIC RESOURCES					
Encourage adjacent landowners to pursue conservation easements to protect viewsheds.	Scenic	NA	High	EO13	
Employ context sensitive design practices along with any new park development.	Scenic	NA	High		
RECREATION RESOURCES					
Meet 2X annually (per MOU) with Douglas County Open Space to discuss any maintenance and patrol issues along County trails in Roxborough State Park (e.g. Sharptail and Swallowtail trails).	Trails	Passive Rec; Natural	High		
Monitor and track park capacity and parking trends throughout the summer.	Parking	Developed	High		
Implement <i>Ongoing Trail Management Recommendations</i> and <i>Suggested Improvements for Existing Trails</i> (see Roxborough Trail Management Plan).	Trails	All	High		
Work with volunteers and youth crews to maintain existing trails.	Trails	All	High	EO14, EO15	
Implement proposed South Downs trailhead and interpretive trail area (see Section 5.0 and Roxborough Trail Management Plan).	Trails	Passive Rec; Natural	Med	E07	
Consider entering into MOA with Douglas County to preclude mountain bike access on Sharptail Trail from Sharptail Trailhead. CDOW will likely rescind restrictions on mountain bicycling on Sharptail Open Space once Sterling Ranch is developed they make a formal determination that grouse reintroduction NE of the park is not viable.	Trails	NA	High		
Patrol trails as needed to encourage visitors to follow park regulations and minimize visitor impacts on park resources.	Trails	All	High		

PRIORITIES	Category	Applicable Management Zones	Priority (high, med, low)	Enhancement Opportunity Number (if any)	Date Completed or Timeframe (if recurring)
INTERPRETATION AND ENVIRONMENTAL EDUCATION					
Continue to offer interpretive programs and implement priority interpretive recommendations highlighted in the 2001 Interpretive Master Plan.	Interp	All	High		
Formally institute a walk-in fee at park entrance and other remote access points such as Sharptail Trail and Swallowtail Trail.	Trails	Passive rec; Natural	Med	EO17	
Formalize multi-use trail connection to Nelson Ranch along Swallowtail Trail.	Trails	Passive rec, natural	Low	EO18	
Coordinate and lead school/scout/outreach programs	Env. Ed	All	High		
Continue to provide and publicize public interpretive programs, concerts, and moonlight hikes.	Interp	NA	High		
Work with the Volunteer Program to create and offer Jr. Ranger Program	Env. Ed	All	High		
Seek funding and support for sensory trail near visitor's center.	Interp/Trail	Natural	Med	EO10	
Take a leadership role in CAEE, NAI and other interpretive groups	Env. Ed	All	Med		
Take a leadership role in FTE interp training	Interp	All	Med		
Interpret prairie dog colony and raptor nesting interpretation (from Sundance Trailhead parking lot)	Interp/Trail	All	Med		
Seek funding and support for Environmental education group activity area (near Visitor Center).	Interp	Natural/ Developed	Med	EO6	
Construct Interpretive walking trail via the South Downs trailhead if/when constructed	Interp/Trail	Passive rec, Natural	Med	EO7	
Expand interpretation of the park's geological, cultural & paleontological resources (along existing trails and .	Interp	Passive rec, Natural	Med	EO16	
Develop targeted marketing materials for kids and parents.	Env. Ed	NA	Med		
Consider expanding the Rox Ride to other locations in the park.	Interp	Developed/ Natural/Passive rec	Low		

PRIORITIES	Category	Applicable Management Zones	Priority (high, med, low)	Enhancement Opportunity Number (if any)	Date Completed or Timeframe (if recurring)
FACILITIES AND INFRASTRUCTURE					
Stabilize park entrance road and regularly monitor for numbers of vehicles traveled per day to assess if/when paving is necessary.	Exist. Facilities/ Infrastr	Developed	High	EO1	
Develop new water treatment facility.	Ops & Maint	Developed	High	EO4	
Add picnic tables near popular destinations including Persse Place, renovated historic structures	New Facilities/ Infrastr.	All	High	EO5	
Seek funding and support for new Environmental Education/Event Facility Shelter.	New Facilities/ Infrastr.	Developed	High	EO6	
New maintenance building/compound.	New Facilities/ Infrastr.	Developed	Med	EO8	
Seek funding and support for Persse vault toilet.	New Facilities/ Infrastr.	Natural	Med	EO9	
Improvements to park entrance station.	Exist. Facilities/ Infrastr	All	Med	EO2	
Stabilize and interpret historic structures .	Exist. Facilities/ Infrastr	Natural/ Developed	High	EO3	
Establish additional parking along shoulder of main park entrance road just past turnoff to upper parking area. This would require an additional gate and approval from the Douglas County Fire Dept. This area could provide an additional 6 to 8 parallel parking spaces.	Improve Access and Opportunity; Improve Efficiency	Developed	Med		
Consider electrical power to Persse House for evening, holiday events, etc.	New Facilities/ Infrastr.	Natural	Low		
Expand signage that explains rules and benefits to the rules (e.g. no dogs, why to stay on trail, etc.). Consult a signage specialist.	New Facilities/Infras tr	All	High		
Incorporate additional bear-proof trash cans where needed.	Ops/Maint	All	High		

PRIORITIES	Category	Applicable Management Zones	Priority (high, med, low)	Enhancement Opportunity Number (if any)	Date Completed or Timeframe (if recurring)
VISITATION					
Make sure that park visitation tracking equipment is operating appropriately and be use the most reliable techniques available	Visitation	NA	High		
Establish a walk-in fee concurrent with approval of Multi-Use trail.	Revenue Enhancement	NA	High	EO17	
PARK ADMINISTRATION AND SPECIAL FUNCTIONS					
Distribute regular newsletters and emails to keep volunteers informed.	Volunteers	NA	High		
Continue to partner closely with Friends of Roxborough State Park by coordinating with Friends on the Annual meeting, special event fundraisers, newsletter publications, etc.	Park Admin	All	High	EO14	
Continue to operate and maintain a successful Volunteer program by recruiting groups wanting to participate in volunteer activities, coordinating special events for volunteers, and providing appropriate supervision, tools and materials.	Volunteer	All	High	EO15	
Maintain radios and first aid kits for emergency readiness	Public Safety	All	High		
PARK BUDGET AND FINANCES					
Train staff to handle and report revenue accurately to ensure that CUR revenue reports and PARKS data entries are accurate.	Revenue Enhancement	NA	High		
Consider working with neighboring communities, including Roxborough Park neighborhood, to include an annual Park's Pass in neighboring HOA fees.	Revenue Enhancement	NA	High		
Consider other funding sources for implementing park enhancements and needed improvements (i.e. GOCO, Friends of Rox, private donors, historical society, etc.)	Revenue Enhancement	Varies	High		
Consider increasing fee from \$5 per bus to \$2.50 per child for school groups.	Revenue Enhancement	NA	Low		

7.0 CONCLUSION



Fountain formation in winter.

Roxborough State Park is an irreplaceable treasure within the Colorado State Park System. Few other parks engender the sense of wonderment and beauty of this park, and only a handful of other parks benefit from the level of support and interest from neighboring communities. The park serves the people of Colorado as a premier site for environmental education and resource stewardship, and few equivalent opportunities exist to showcase and educate visitors about the unique natural, cultural, and paleontological resources found in this area.

Over time, as Douglas County continues to grow and planned development such as Sterling Ranch come to fruition, Roxborough is likely to experience continued pressure to expand recreation use and opportunity. Park management should remain sensitive to these challenges, but focus on preserving and maintaining current park resources while simultaneously balancing outdoor recreational use. Suggested park enhancements and implementation priorities included in this management plan will help to achieve this goal.

Recreation opportunities at Roxborough have changed little since the park's inception on May 15, 1987. However, the park has more than doubled in size from 1,499 acres to 3,299 acres, thanks in part to strategic land acquisitions made possible by Great Outdoors Colorado in the mid-1990s. As the park has expanded over time, many of the original facilities remain the same. Parking has not expanded, and few, if any visitors have had the opportunity to access some of the more newly-acquired lands in the Southdowns area due to the lack of trail access. Today, opportunities exist to extend recreation and interpretive opportunities within this portion of the park. Other suggested park enhancements, such as an Environmental Education and Event Facility shelter, would help introduce new visitors to the park and generate additional revenue without diminishing Roxborough's unique resources.

Regardless of whether financial resources are secured in the future to implement proposed park enhancements in this plan, Roxborough staff will continue to provide outstanding interpretive and educational opportunities, maintain exceptional public relations with neighbors in Roxborough Park and Roxborough Village, and garner strong public support through Roxborough Volunteers, the Friends of Roxborough, compassionate visitors, and partnering agencies. Roxborough is a significant place with many compelling stories to share. The staff and volunteers of Roxborough desire to bring the visitor closer to these stories and qualities while preserving the very resources that make Roxborough a special place to visit. At the same time, we hope to make visitors aware of their role and responsibility in the preserving the unique resources featured at this park.