

# Paint Mines Interpretive Park Management Plan



*Prepared For  
El Paso County Parks & Leisure Services*



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Prepared By  
Justin Henderson  
Natural Resource Management & Planning  
Fall 2010

# Paint Mines Interpretive Park Management Plan

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## *Executive Summary*

Paint Mines Interpretive Park is the newest addition to the El Paso County park system. Situated in the northeastern section of the county near the town of Calhan, the unique geological formations and colorful clays have been attracting visitors for thousands of years. Early archaeological evidence of Native American use at the site dates back over 9,000 years. Because of these valuable archeological resources within the park, the area is listed on the National Register of Historic Places.

In addition to these cultural resources, the Park also features many natural and recreational resources. The Badland geology of the site has led to erosive forces that have cut deep gullies in the surrounding hills, exposing clay while at the same time creating amazing geological formations called hoodoos and spires. The grasslands and prairie provide a natural setting for the Park on the Front Range, which is experiencing tremendous growth and sprawl. Through a partnership with the Palmer Land Trust, sections of the Park are protected under a conservation easement. These natural geological features and open prairie landscapes attract visitors to the Park, and are a valuable scenic as well as recreational resource for the community. Only a thirty-five minute drive from downtown Colorado Springs, Paint Mines provides a uniquely different park experience for residents of El Paso County.

The management of the Paint Mines Interpretive Park presents many challenges that must balance these cultural, natural and recreational resources while working in partnership with the Palmer Land Trust. Management decisions must be sensitive to all of these needs, while providing educational, scenic, and recreational opportunities to the residents and guests of El Paso County.

Based on goals set forth in the El Paso County Parks & Leisure Services Department Master Plan, this Plan addresses the needs and future management of the Paint Mines Interpretive Park. This Plan sets objectives and desired outcomes, evaluates existing conditions and resource significance, and develops a management direction in order to meet future goals for the Park.

# I. Introduction

## 1.1 Purpose

The Paint Mines Interpretive Park is a unique natural as well as cultural resource within El Paso County. In order to ensure the Park's best use and protection into the future, a management plan must meet the current needs of the visitor while ensuring the protection of natural and cultural resources at the site. This plan analyzes existing conditions at the Park, identifies resources of significance, recommends management directions, and outlines a vision and implementation strategy for the future of the Paint Mines Interpretive Park.

## 1.2 Objectives

Through the process of analyzing the existing conditions at the Paint Mines Interpretive Park, six primary objectives have been identified as essential to establishing a successful management plan and implementation strategy for the site. These management objectives include:

- Meet the conservation objectives of Palmer Land Trust while balancing the recreational goals of El Paso Parks & Leisure Services
- Protect the geological features and natural processes that define the landscape at Paint Mines Interpretive Park
- Create strategies to restore and promote native grass species to the Park ecosystem
- Preserve and protect the archaeological resources within the Park
- Balance interpretive programs and recreational opportunities with the stewardship of the Paint Mines Interpretive Park's natural environment
- Explore opportunities to develop a new trail system in the western section of the Paint Mines Interpretive Park boundaries

## 1.3 Desired Outcomes

In order for the Paint Mines Interpretive Park to enjoy long-term success and support, a sustainable approach should be adopted in order to achieve the desired outcomes.

Implementing various strategies that encourage ecological health, economic viability, and community support are all vital steps in creating a positive outcome for the future of the Paint Mines Interpretive Park. Desired outcomes of a sustainable approach to the site include:

- A healthy ecosystem within the Paint Mines Interpretive Park that represents the foothills grassland eco-region
- Protection and continued research on archaeological sites within the Park
- Continued educational and recreational opportunities for a diverse audience
- A strong and mutually beneficial partnership between the Palmer Land Trust and the El Paso County Parks and Leisure Services
- Greater community support and appreciation for the Paint Mines Interpretive Park and its ecology

## **II. Existing Conditions**

In order to understand the needs and pressures facing the Paint Mines Interpretive Park, an extensive survey to document existing conditions was conducted in the fall of 2010. Site visits, photo documentation, and the research and review of numerous documents related to the site were all utilized to gather data about the site.

### **2.1 Location & Regional Context**

Paint Mines Interpretive Park (the “Park”) is located at 29950 Paint Mines Road in the northeastern section of El Paso County, Colorado. With a population of 883, the Town of Calhan is the closest community to the site, approximately a mile away. Colorado Springs, the El Paso County seat, is 35 miles southwest of the Park. Highway 24 provides access to the Park from Colorado Springs. (See Figures 2.1 & 2.2)

### **2.2 Property Ownership**

Paint Mines Interpretive Park is owned and managed by the El Paso County Parks & Leisure Services. Consisting of approximately 750 acres, the Park boundaries are made



Figure 2.1 Regional Context, Front Range

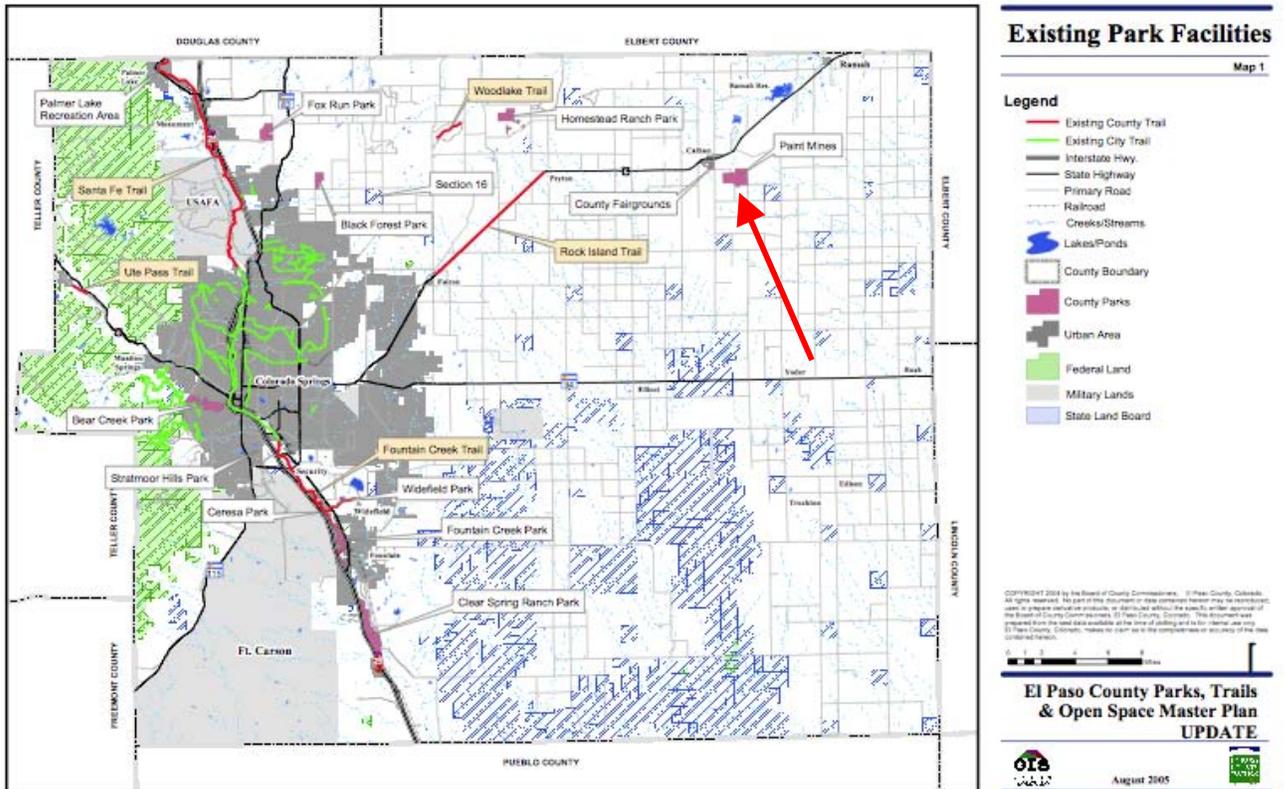
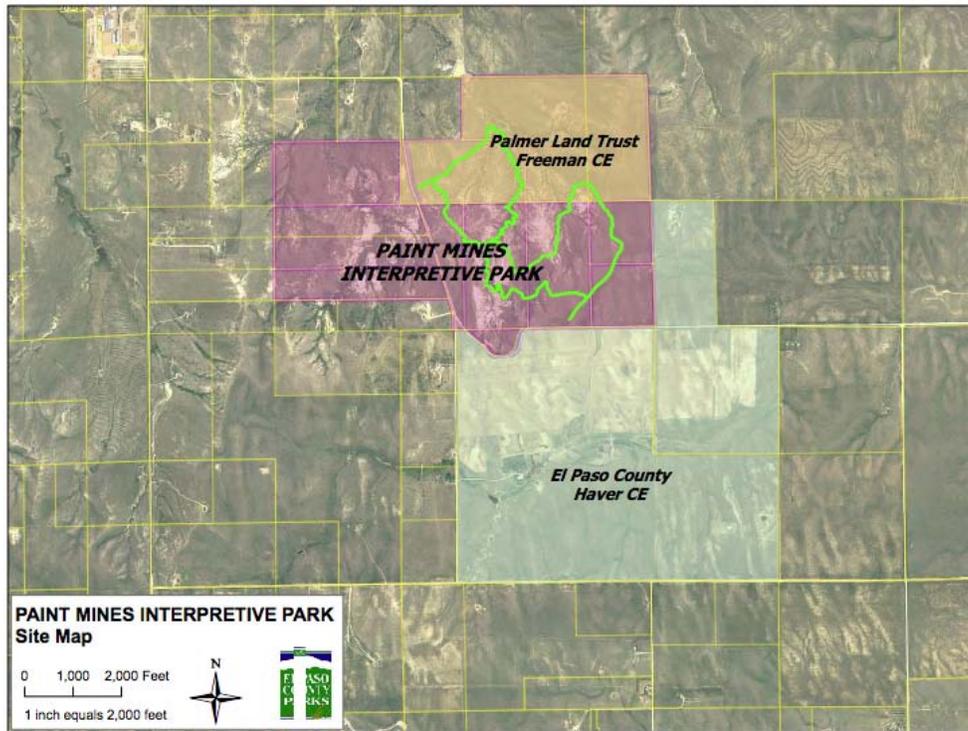


Figure 2.2 County Context, Paint Mines Interpretive Park

up of two distinct areas, the Paint Mines Interpretive Park and the Palmer Land Trust Freeman Conservation Easement. (See Figure 2.3)



**Figure 2.3 Paint Mines Interpretive Park & Freeman Property Boundaries**

A section of the Park, known as the Freeman Property consisting of 275.32 acres, is under a conservation easement with the Palmer Land Trust. Founded in 1977, the mission of the Palmer Land Trust is to guarantee that open lands remain a part of southeastern Colorado's heritage. In 2003, as part of this conservation easement, a five-year management plan for the Park was developed. As part of this Deed of Conservation Easement, certain conservation values were established for the site and must be considered in any future management planning decisions.

El Paso County Parks & Leisure Services  
2002 Creek Crossing  
Colorado Springs, CO 80905  
(719) 520-7529

Palmer Land Trust  
PO Box 1281  
Colorado Springs, CO 80901  
(719) 632-3236

[www.palmerlandtrust.org](http://www.palmerlandtrust.org)

## 2.3 Topography & Geography

The significant and character defining features of the Paint Mines Interpretive Park are its unique geological formations. With the Park's location on the eastern prairies of Colorado, the site's topography consists primarily of rolling hills and large open flat areas punctuated by steep, narrow gullies created by erosion. The southern border of the Park sits at an elevation of approximately 6,800 feet above sea level with the northern edge of the site at 6,600 feet above sea level.<sup>1</sup> This difference in elevation creates a downward slope towards the north and allows for water runoff that plays a major role in the erosive forces that have created the geological formations found within the Park boundaries.

According to soil mapping conducted by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service, the Park primarily consists of the Badland soil type. (See Figure 2.4) Badland is made up of shale, sandstone, and siltstone. This soil type is very vulnerable to rapid storm water runoff, and the dangers of erosion are high. Badland generally leads to the formation of steep gullies, much like the ones found throughout the Park.

Soil Type
4 – Badland
22 – Cushman Loam, 1 to 5 percent slopes
23 – Cushman Loam, 5 to 15 percent slopes
31 – Fort Collins Loam, 3 to 8 percent slopes
97 – Truckton Sandy Loam, 3 to 9 percent slopes
99 – Truckston – Dresser complex, 5 to 20 percent slopes

**Figure 2.4 USDA Natural Conservation Service – Site Soil Types<sup>2</sup>**

In Paint Mines Interpretive Park, the erosion and gullying created by the Badland soil has exposed layers of selenite clay and jasper, which has led to the creation of unique formations called 'hoodoos' and spires.<sup>3</sup> The exposed clay deposits of the Park define the geological character of the site. The varying quantities of iron oxides in the clays give them a red to yellow, or gray to purple hue.<sup>4</sup> These geological features play a vital role in the history and future use of the Park.



### **Site Photos of Gullying & Rock Formations**

Geological erosion is an important factor to keep in mind when considering management plans and decisions for the future of the Paint Mines Interpretive Park. There is some historic evidence of earthen features used in the 1930's by ranchers to try and mitigate soil erosion in the area.<sup>5</sup> The natural processes of erosion are an important component to the ecology and natural environment of the site. Allowing these processes to continue in their natural state is vital to the integrity of the Park.

#### **2.4 Watershed**

The Paint Mines Interpretive Park is located in the Big Sandy Creek watershed that feeds into the Arkansas River. Storm runoff on the property flows from south to north and has created drainage gullies. Because the clay deposits slow down water absorption, small perennial pools have been known to form, but none were observed during site visits in the fall.<sup>6</sup> Records indicate a regional annual rainfall in the area of 13.85 inches.<sup>7</sup> Water not only plays a key role in the geological formations at this site but also has a direct impact on the plant and animal species found in the Park.

#### **2.5 Ecology & Plant Communities**

Listed by the Environmental Protection Agency as the 26-Southwestern Tablelands / 26j-Foothill Grasslands eco-region, the Paint Mines Interpretive Park is made up of short, mid, and tall prairie grasses.<sup>8</sup> Common plant species like buffalo grass and blue grama are found throughout the park. Some of the other plant species identified during

the Freeman Property study include: sideoats grama, purple threeawn, prairie Junegrass, western wheatgrass, western yarrow, pasture sage, purple locoweed, scarlet globemallow, and broom snake wood.<sup>9</sup> Many of these species are commonly found in the rangelands of eastern Colorado. (See Appendix G: Plant & Animal Species)



**Site Photos of Prairie Grasses**

Shrubs were observed along the sides of many of the drainage areas in the park. Species identified in the Freeman Property study include: western snowberry, prairie rose chokecherry, and coyote willow.<sup>10</sup> These areas rely on rainwater runoff and provide protection and habitat for many small mammals and bird species, demonstrating they are a vital part of the eco-system.

In 2001, El Paso County adopted the Weed Management Plan for North District County Regional Parks, which includes the Paint Mines Interpretative Park.<sup>11</sup> Knapweed and Canadian thistle were among the noxious weeds found in the park, with Cheatgrass identified as the most common non-native grass species and was found mostly along the roadside.<sup>12</sup> With the Park's close proximity to Highway 24 and the Paint Mines road running through the site, careful consideration needs to be given to the future management and mitigation of noxious weed species.

## 2.6 Wildlife

The mix of short, mid, and tall grass prairies provide year round habitat for various animal species one would expect to find in the 26-Southwestern Tablelands/26j- Foothill

Grasslands eco-region.<sup>13</sup> Mule deer and pronghorn can be found in the area, as well as smaller mammals like coyote, rabbits, and burrowing rodents. Because of this habitat type and region, there is the possibility of the Preble's meadow jumping mouse in the region.<sup>14</sup> Because this mouse is listed as a threatened species, special consideration must be given to any management decisions that could impact its habitat.



**Preble's Meadow Jumping Mouse**

The Paint Mines Interpretive Park provides habitat for regional bird species like the mountain plover and the lark bunting. Various raptor species common to this eco-region have been observed in the Park as well. The site also provides habitat for migratory birds.<sup>15</sup> The Park supports a complex grasslands eco-system. (See Appendix G: Plant & Animal Species)

## 2.7 Existing Infrastructure & Trails

Currently, the Paint Mines Interpretive Park consists of two looping trails that are linked together. The first loop covers approximately 1.6 miles, exposing visitors to the ecology of the site. The second loop is approximately 2.3 miles long, allowing visitors to explore the unique geological features of the park. Four interpretive signs are found along this trail system that explain the ecology, history, and geology of the park. Three fixed park benches are also found along the trail, which allow visitors to rest and enjoy scenic views of the park and surrounding prairies. Overall, the trails are well maintained although there are some signs of erosion along the sides of the trail system. (See Figure 2.5)

There are two main entry points into the Paint Mines Interpretive Park. The primary entry is at the western parking lot along Paint Mines Road. This gravel parking lot has ample space for parking and is equipped with a vaulted unisex toilet facility. Two interpretive signs welcome visitors to the Park and provide a list of Park rules. Another large gravel parking lot can be found on the southern border of the Park and provides a second access point for the Park and trail system. The same two interpretive signs

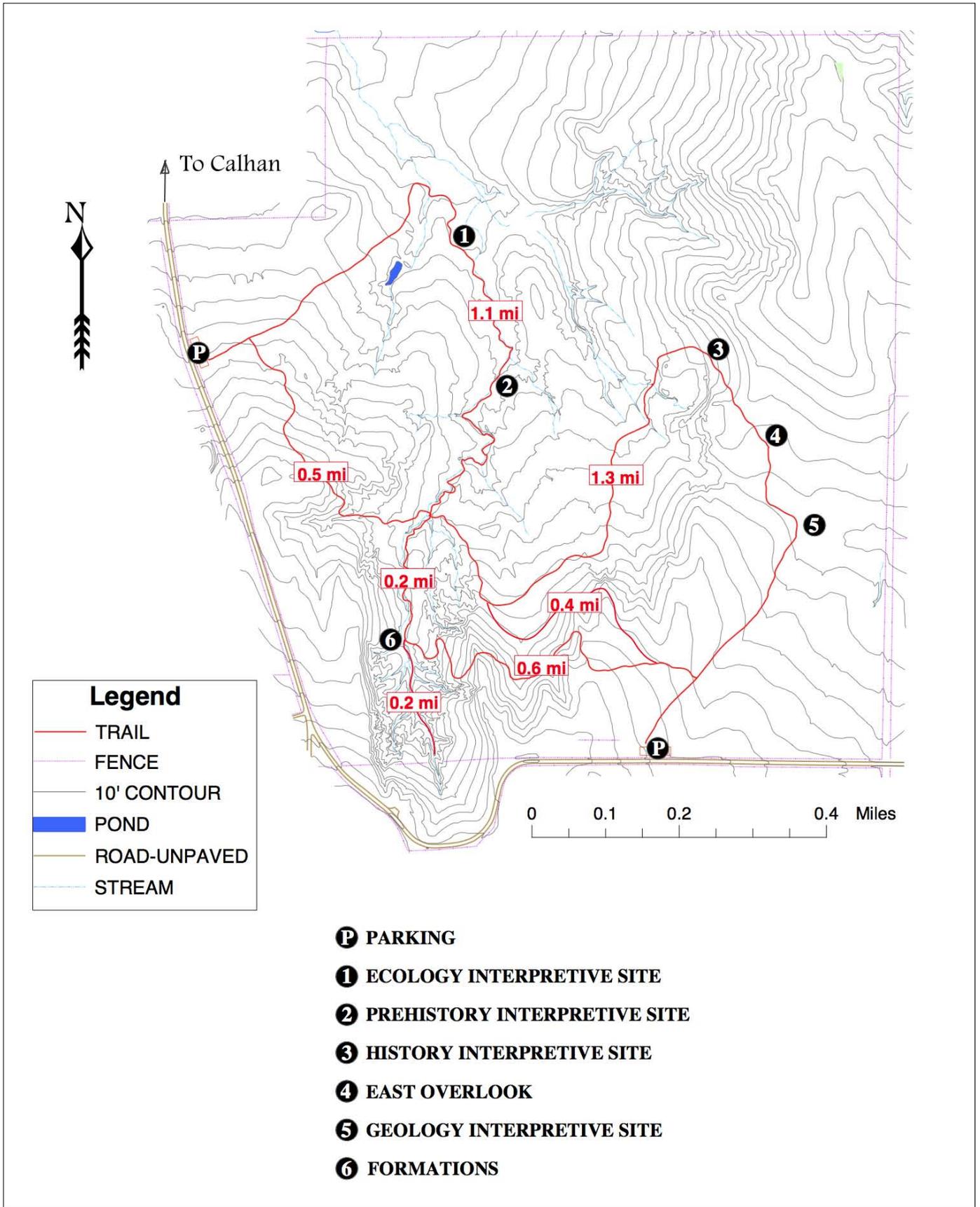


Figure 2.5 Paint Mines Interpretive Park Trails & Signage

welcoming visitors can also be found at this location. This second area provides access for guests unable to walk up the relatively steep elevation gain, giving them an opportunity to experience the views from this part of the Park. A third small parking area can be found between the two main parking lots and provides an over look of one of the major gullies and Badland formations at the Park. The trails and facilities provide easy and safe access to the geological resources of the Park.



**West Parking Lot**



**Unisex Toilet**

### **III. Resource Significance**

Three key resources (natural, cultural, and recreational) were considered in the development of the management recommendations for the future of the Paint Mines Interpretive Park.

#### **3.1 Natural Resources**

*Rangeland* – The ecology of the Paint Mines Interpretive Park provides an opportunity for grazing land for domestic herds. These prairie grasslands can provide forage not only for native animal species but could be utilized for cattle and domesticated herds as well. Three key soil types (the two Cushman Loams and the Fort Collins Loam) identified by the USDA Natural Resources Conservation Service were utilized in the Freeman Property study to identify possible rangeland use and ecosystem degradation. The predominance of blue grama and prairie Junegrass within the Park were identified

as signs of past over grazing in the area and rangeland deterioration.<sup>16</sup> Recognizing this past rangeland deterioration and developing rangeland management strategies to protect and restore native plant communities should be considered in future management plans.<sup>17</sup>

*Clay Deposits* – As the name implies, Paint Mines Interpretive Park has served as a natural source of clay since prehistoric times. As with any extractive industry, mining is a nonrenewable practice that can have severe and long lasting impact on the natural environment.<sup>18</sup> Because of these clay resources, the site and surrounding environment have experienced human habitation dating back to approximately 8,100 BC. The clay deposits within the Park represent the only documented prehistoric clay source found in the Colorado Great Plains.<sup>19</sup> A U.S. Geological Survey Bulletin printed in 1910 stated that the clay is of “good grade, is easy to access, and can readily be worked in open pits”, indicating historic use of the site for extracting clay.<sup>20</sup> The role that clay played as a natural resource for the area has led to the site’s importance as a cultural resource.

### 3. 2 Cultural Resources

*Archaeological* - The Paint Mines Interpretive Park site has a long history of human interaction with the natural environment. Nominated to the National Register of Historic Places on July 14, 2000, the Calhan Paint Mines Archaeological District, which is within the Park boundaries, was recognized as having national significance and worthy of federal designation. The Paint Mines met the fourth criteria of the National Park Service for consideration onto the National Register as a site “that ha[s] yielded, or may be likely to yield, information important in prehistory or history.”<sup>21</sup> The potential archaeological knowledge on the Park site is a valuable resource that must be protected.

In order to receive nomination to the National Register, investigative archaeological work was conducted by Powers Elevations and reviewed by the Colorado Historic Preservation office, which prepared the site nomination for the register. Preliminary archaeological work at the site identified over forty-six contributing sites, which contained hearths, bison bones, stone tools, arrowheads, and ceramic artifacts. Estimates of human habitation at the site date as far back as 8,100 BC, providing vital information on Palo-Indian life on the Colorado Great Plains region.<sup>22</sup> Future excavations and clay

analysis studies could provide a wealth of information to researchers about Native American use of the site. The delicate nature of these cultural resources and the fear of artifact hunters will have a direct effect on visitor access and management decisions.

*Landscape* - The archaeological sites are not the only important cultural resource to consider in management decisions. The vernacular landscape itself should be viewed as an important cultural resource that needs both planning and protection. “Landscapes are defined not by natural resources, not by economic uses, not by social values, not by psychological values, but by the relatedness of all these...”<sup>23</sup> The open prairies, ranching communities, and regional views provided at the Park create a unique sense of place that is vital to the visitor and how they interact with the natural environment.

### 3.3 Recreational Resources

*Interpretation & Education* - The interpretive walking tour and signage are a key piece to the recreational experience at the Paint Mines Interpretive Park. This trail system takes visitors through the Park’s fragile geological resources while providing educational opportunities. Park staff guided tours are also available on the site during the summer months. “Good interpretation encourages a greater sensitivity to one’s surroundings, a heightened ecological and cultural awareness, and a meaningful link to the past and future.”<sup>24</sup> Education and appreciation for the natural formations and history of the site are important resources that should be cultivated to create a valued recreational experience. By fostering this sense of value through interpretation, support of the Park will empower future management decisions.



**Bench & Signage at Overlook**



**Visitors on the Interpretive Trail**

*Scenic* – The eroded Badland soil formations provide a unique recreational experience for visitors to the site and create an identity for the Paint Mines Interpretive Park. These scenic qualities have added value to the area and strengthened efforts to preserve the site and surrounding prairies. Future support and success for the Park centers on protecting these visitor experiences while enhancing their appreciation for the site.



**Scenic Views of the Paint Mines Interpretive Park**

## **IV. Management Direction**

Specific strategies to protect the key resources of the Paint Mines Interpretive Park were created by identifying threats and stressors to the Park and determining where to focus conservation efforts. Implementation methods and monitoring of these strategies were then outlined and developed in order to meet the needs of the Park.

### **4.1 Threats & Stressors**

*Development & Sprawl* - As Colorado's population continues to grow, urban development and sprawl have put additional stress on open spaces and threaten parks throughout the Front Range. According to U.S. Census data from 2009, El Paso County is Colorado's second most populated county with a population of 604,542.<sup>25</sup> This steadily growing population will not only add to the number of people using the county's park system, but will also create a need for more housing. This, in turn, puts pressure on traditionally rural areas like Calhan and the Paint Mines Interpretive Park region. (See Appendix C: El Paso County High Growth Areas.) In developing management

plan strategies for the future of the Park, the pressure of population growth on the county must be considered.

Rank	Geographic area	Population Estimates									
		July 1, 2009	July 1, 2008	July 1, 2007	July 1, 2006	July 1, 2005	July 1, 2004	July 1, 2003	July 1, 2002	July 1, 2001	July 1, 2000
	Colorado	5,024,748	4,935,213	4,842,259	4,753,044	4,660,780	4,569,681	4,548,775	4,504,265	4,433,068	4,328,070
	<b>COUNTY</b>										
1	Denver County	610,345	593,086	578,789	568,692	561,323	558,506	558,351	561,072	564,411	556,094
2	El Paso County	604,542	595,359	585,518	579,710	567,103	558,680	551,129	544,815	535,549	519,463
3	Arapahoe County	565,360	554,372	543,414	532,347	525,293	519,785	514,406	509,598	502,810	491,701
4	Jefferson County	536,922	533,295	528,396	524,507	522,007	522,899	526,426	529,191	529,690	526,471
5	Adams County	440,994	429,597	419,607	409,532	397,463	386,683	378,785	371,781	360,348	350,981
6	Boulder County	303,482	300,452	295,691	291,449	288,545	284,815	282,126	281,941	278,981	271,689
7	Larimer County	298,382	292,689	286,927	281,215	275,477	271,830	268,671	265,659	260,746	253,152
8	Douglas County	268,225	261,138	271,955	259,881	246,058	234,810	221,976	210,037	197,344	180,311
9	Weld County	254,759	248,852	242,250	234,387	225,856	217,706	210,635	203,570	193,060	183,045
10	Pueblo County	157,224	156,009	154,348	151,814	149,677	148,578	147,931	146,735	144,130	141,839

**Figure 4.1 US Census Data: Colorado's 10 Most Populated Counties 2000-2009<sup>26</sup>**

*Noxious Weeds / Invasive Plant Species* - In 2001, the El Paso County Natural Resources and Environmental Services Department conducted an extensive survey of the North District County Regional Parks and developed a five year weed management plan. The focus of the plan was, *“to control, reduce or eradicate weeds on the property and to maintain a diverse and rich plant and wildlife environment.”*<sup>27</sup> This plan included work at the Paint Mines Interpretive Park, identifying Diffuse Knapweed as the primary noxious weed at the site and a top priority for treatment.<sup>28</sup>

More recently, the Freeman Property Management Plan of 2003 identified a greater prevalence of Canada Thistle in the Park.<sup>29</sup> Both of these reports illustrate the importance of addressing noxious weeds in a timely fashion and the need for a current, comprehensive plan for dealing with such invasive plant species. Because of the location of Paint Mines Road through the middle of the site, Paint Mines Interpretive

Park is particularly vulnerable to the spread of noxious weeds from automobile traffic passing through the Park. An updated Weed Management Plan for the North District County Regional Parks that focuses on the goals stated earlier is recommended.

*Erosion of the Trail System* - During site visits to Paint Mines Interpretive Park, the evidence of erosion on steeper sections of the trail system was observed at various locations. An extensive system of drainage culverts placed under sections of the existing trail helps to mitigate some of these trail erosion issues while maintaining an accessible trail path and incline. However, this leads to the channeling of rain water run off and could have an adverse effect on the natural processes of erosion at the site that have led to the unique geological features in the park. Trail design is a complex process that must take into account water run off and erosion. Any future trail systems considered for the Park will have to address the stresses caused by water run off and the long-term geological processes of erosion that the trails will impact.



**Trail Erosion**



**Culvert Channeling**

*Artifact Hunters* - Because of the unique cultural and archaeological resources within the Paint Mines Interpretive Park, artifact hunters are a threat to the Park. With its listing on the National Register of Historic Places and promotion as an historic interpretive site, the Park could be a potential target for amateur archaeologists and those interested in looking for arrow heads. Park rules clearly state that it is illegal to remove historic

artifacts from the site, and as a site on the National Register, it is given some federal protection. (See Appendix A: Paint Mines Interpretive Park Rules) Still, enforcement and site protection is costly and not feasible. Educating visitors about the importance of protecting these historic cultural resources for future generations and encouraging self-policing is a vital strategy in the success of a management plan that addresses these threats to cultural resources within the Paint Mines Interpretive Park.

#### 4.2 Resource Conservation & Protection

*Natural Resource Protection* - Two key areas of natural resource significance – rangelands & clay deposits – were identified and are important factors in landscape zoning strategies developed for the management of the Paint Mines Interpretive Park. The natural environment of the Park is critical to the visitor experiences, site context, and identity of the Park. Recognizing and promoting the natural systems at work within the Park while minimizing the impacts of human activity on the site is essential to the long-term health and sustainability of these natural resources. The rangelands provide a unique tall to short grass prairie ecosystem that is particularly susceptible to noxious weeds. Adopting strategies to mitigate the spread of the invasive species while promoting native grasses is needed in order to conserve the natural ecosystem. The natural process of erosion that has molded the clay deposits and Badlands geology of the Park for centuries also needs to be considered in strategies for park management.



**Natural Resources: Rangelands and Clay Formations**

*Cultural Resource Protection* - The archaeological resources and the cultural landscape are vital areas that need protection within the Paint Mines Interpretive Park. A key strategy to the long-term protection of these resources is the education of the public about their value. The listing of the site in the National Register of Historic Places in 2000 is an important step in recognizing the legitimacy and importance of this archaeological site.<sup>30</sup> Interpretive efforts at the Park and other strategies that continue to inform visitors of the site's significance can lead to more protection and overall public support. Balancing public interest and exposure to the site while not encouraging over use requires the implementation of strategies that meet long-term goals for the Park.

*Recreational Resource Protection* - Protecting the recreational resources while being sensitive to the conservation of both natural and cultural resources requires a long-term strategy for visitor use at the Paint Mines Interpretive Park. The interpretive trail system provides access to the Park's natural and cultural resources while creating a unique educational experience with great vistas of the region to visitors. These trails help to limit human impact on the natural environment and make the park resources accessible to visitors, but they also have a negative impact on the natural drainage of the site which affects vegetation. These recreational experiences are vital to developing Park support but are also dependent on the natural and cultural resources. Monitoring the success of these strategies on all three resources is essential to their conservation.

#### 4.3 Landscape Zoning

Land use zoning and design regulations are powerful tools that can be used for natural as well as cultural resource protection. Regional zoning and existing conservation easements, as well as possible adoption of view shed overlay zoning and landscape zoning, are all strategies that should be considered in order to meet the goals and objectives of this management plan.

*Regional Zoning* - The area surrounding the Paint Mines Interpretive Park is currently zoned for agriculture. Keeping this area zoned for agricultural use is an important strategy for preserving and protecting the regional context of the Park and maintaining the scenic prairie views in and around the Park. Because of this agricultural buffer

around the site, the Park is insulated from future growth in Calhan which helps to maintain the open space around the site.

*Conservation Easement* - Zoning recommendations for the Paint Mines Interpretive Park need to consider the conservation easement on the Freeman Property that is part of the Park. The Freeman Property is owned by the William J. Palmer Parks Foundation Inc. better know as the Palmer Land Trust and was incorporated into the Park through a conservation easement that protects the site while making it accessible to Park visitors. This easement outlines an agreement between the Trust and the El Paso County Parks and Leisure Services, and a management plan for the Freeman Property was developed in 2003. The easement put limitations on the types of recreation allowed at the site, primarily limiting recreation to hiking.<sup>31</sup> These restrictions should be implemented throughout the Park in order to avoid visitor confusion and prevent any conflicting uses within sections of the site. Incorporating the Trust's conservation goals into the recommended landscape zoning strategy is vital to the success of this partnership.

*View shed overlay* - Additional considerations should be given to developing design guidelines and additional regulations for properties around the Park to ensure that the prairie views and scenic vistas remain intact. Currently, a power line right of way runs along the South border of the Paint Mines Interpretive Park. Such man-made structures detract from the scenic views of the area and have a negative impact on the visitor experience at the Park. Establishing regional overlay zoning regulations that protect sight lines and view corridors are another way to ensure a quality recreational experience that meets the expectations of visitors to the site.

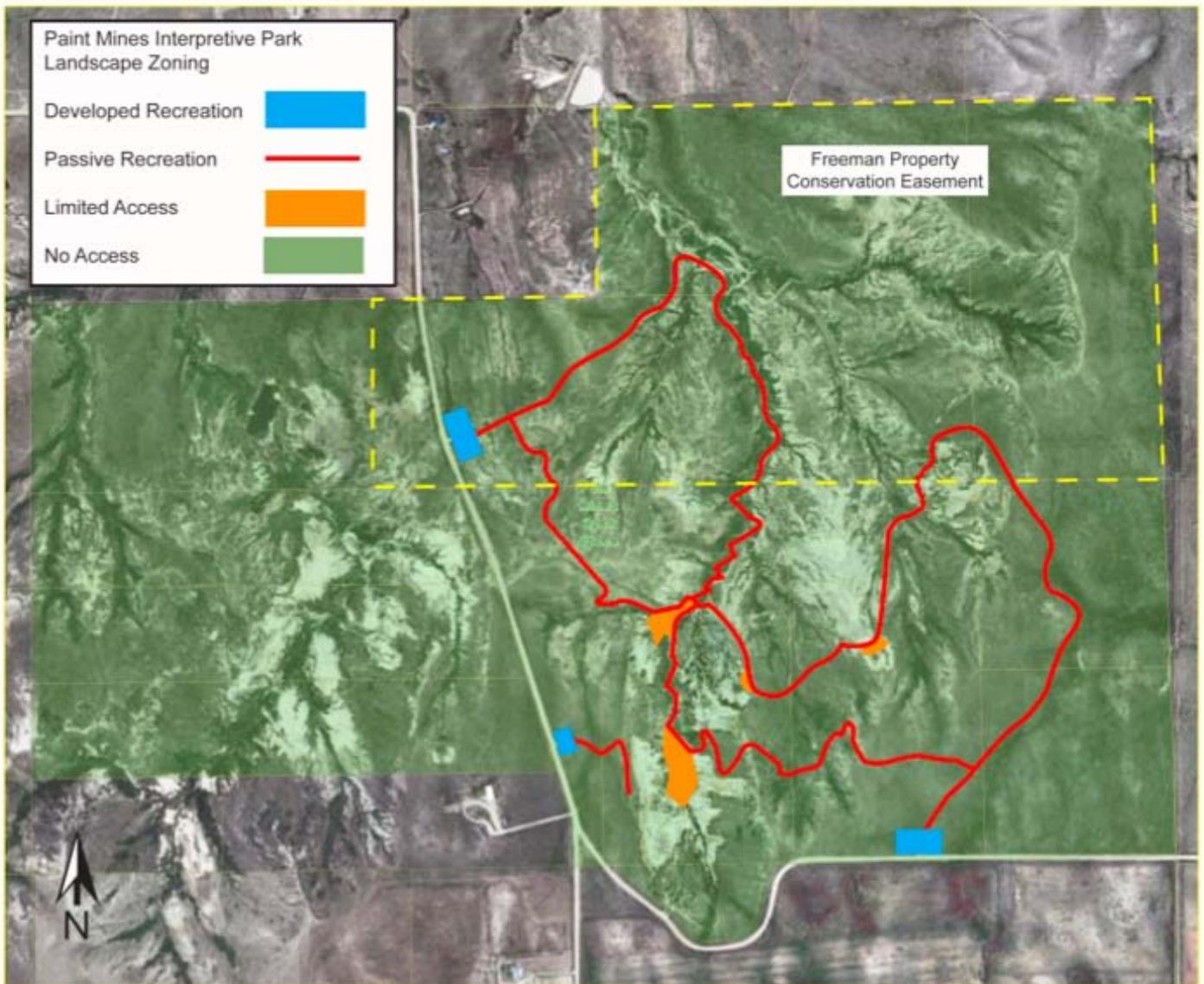


**Power Lines on Southern Border of the Park**

*Landscape Zoning* - A landscape zoning strategy for the Paint Mines Interpretive Park that takes into account the site's natural and cultural resources while allowing for appropriate recreational opportunities will ensure the best use and protection of the Park's resources. Four land use zoning types are recommended for the Park and include:

1. **Developed Recreation:** The focus of this zone is to provide an orientation for visitors with signage and to meet visitors' physical needs through restrooms and parking facilities. The developed recreation zone serves as the gateway to the Park and prepares visitors for the interpretive experience at the site.
2. **Passive Recreation:** Established hiking trails, limited signage, and minimal benches provide visitors with passive recreational opportunities and exposure to the Park's resources. The passive recreation zone is focused on providing a safe and educational experience for the visitor while protecting the natural and cultural resources.
3. **Limited Access:** Allowing visitors additional exposure to areas of interest, these areas are less established than the passive recreation areas. The limited access zone does not encourage use but does not restrict it either, allowing visitors to explore on their own while limiting over development or structured trails.
4. **No Access:** Visitors are not allowed in these areas of the Park, and natural and cultural resources should be considered the top priority in these zones. No access zones are designed to provide maximum protection to the natural ecology of the site.

By identifying appropriate areas of use through landscape zoning, conservation goals will be achieved while educating and exposing the public to the Park's resources. Adopting this landscape zoning strategy on the established Eastern section of the Paint Mines Interpretive Park will ensure the best recreational and conservation uses within the Park. (See Figure 4.2) If future use and growth of the Western section of the Park becomes a priority, a comprehensive vision using the same landscape zoning strategy should be implemented.



**Figure 4.2 Landscape Zoning Map**

Careful consideration needs to be given to opening the Western section of the Park to visitors. The development of additional trails and a full loop may not be necessary to expose visitors to the resources within this section of the Park. Opportunities to develop a short trail with an over look of the gullies and Badlands geology should be considered as a viable alternative to the creation of an extensive looping trail system. Utilizing existing parking and facilities in the developed zone on the eastern section of the Park is another key strategy to

decreasing the environmental impact on this portion of the site. Keeping areas of the Park natural is essential to the over all ecological health of the site and should be considered a priority.

#### 4.4 Implementation

The implementation of park management strategies takes both time and a commitment of public resources. Over the years, El Paso County Parks and Leisure Services has demonstrated their commitment to fulfilling the agency's mission of "*enhancing the quality of life and well being of the citizens of El Paso County*" by:

- a) acquiring, developing, maintaining and preserving regional parks, trails and open space for outdoor recreation and leisure opportunities;*
- b) providing responsible resource management and protection of large preserves of public lands characterized by unique and outstanding natural environments and geologic features; and*
- c) providing natural and cultural history interpretation, education and information services to visitors.*<sup>32</sup>

In 1997, the *El Paso County Parks, Trail and Open Space Master Plan* identified areas of high priority for land conservation. The Paint Mines were listed as a priority in this plan. The plan also identified strategies for funding and implementing such acquisitions.<sup>33</sup> Through working with the Palmer Land Trust, these strategies were successfully implemented, and Paint Mines Interpretive Park was created in 2001. This investment illustrates El Paso County's commitment to the Park, and through the implementation of a comprehensive Park Management Plan, the county can continue to build on this success.

Because the boundaries of the Paint Mines Interpretive Park incorporate the Freeman Property open space held by the Palmer Land Trust, special consideration needs to be given to how these strategies and their implementation will work with the goals and objects of the Trust. In 2003, a *Paint Mines-Freeman Property Management Plan* was created to help guide management decisions regarding the conservation easement for the property between El Paso County and the Palmer Land Trust. This plan developed management goals and actions for the Freeman Property related to: geology and soils,

vegetation resources, wildlife resources, scenic resources, cultural resources, open space resources, and land use.<sup>34</sup> The Plan also made recommendations on the monitoring and evaluation of resources. These goals and actions provided guidance to the process and formation of the strategies recommended in this management plan. Through the implementation of this management plan, the objectives and goals that the Palmer Land Trust set for the Freeman Property will be incorporated as part of a larger strategy for the management of the entire Paint Mines Interpretive Park.

Public involvement and engagement is a vital method to the successful implementation of many of these recommended strategies. Civic engagement, respect for the natural and cultural resources of the Park, and developing a vested public are vital to any self-policing efforts at the site. Park Rules and Regulations are posted at both entry points, but these signs do little good if the public using the park resources does not understand their value. (See Appendix A: Paint Mines Interpretive Park Rules) The success of implementing a management plan for the Park revolves around public education and involvement. Because the Paint Mines Interpretive Park focuses primarily on natural and historic interpretive themed recreational opportunities, it plays a vital role within the El Paso Park System as an educational site. Through education, Park rules and values can be shared with the public and implemented at the site.

In order to meet the goals of implementing these strategies, the issue of staffing must be addressed. Budgets and funding limitations will inevitably be a factor in any long-term management plan for the Park. Currently, El Paso County Parks and Leisure Services has an extensive volunteer program and an Adopt-A-Park/Trail Program. Opportunities to use this program to develop more volunteer programs at the Paint Mines Interpretive Park should be explored. Through volunteer programs, issues of enforcement can be addressed while creating more opportunities for civic engagement and public support. The implementation of new park management strategies can often be labor intensive, but utilizing volunteers from the community is a method that can achieve these goals.

#### 4.5 Monitoring

When managing natural resources like the Paint Mines Interpretive Park, it is vital to keep in mind that these are natural systems that will inevitably change and adapt over time. Therefore, any management plan needs to be adaptable and change to meet new

challenges that will occur in the future. In order to identify and meet these challenges, continued environmental monitoring of the Park is needed. This monitoring also serves to evaluate the success or failure of implementation methods and planning strategies on the health and sustainability of the Park. If these strategies are not meeting the needs of the Park, they should be adapted to better address future challenges. Key areas for evaluating and monitoring Park health include:

- Noxious weeds and invasive plant species
- Trail erosion and maintenance
- Development of social trails
- Periodic inventory of observed species diversity
- Park attendance and visitor surveys

As mentioned earlier, El Paso County Parks and Leisure Services has an extensive volunteer program and an Adopt-A-Park/Trail Program which could also play a key role in the monitoring of ecology and recreational use at the Park. Many of El Paso County's parks have been adopted by local non-profit organizations that have volunteered many hours to help with trail maintenance and monitoring. Investing in volunteers can be a valuable strategy in providing needed Park staffing. Initial volunteer training may seem time consuming at first, but these programs can lead to long-term success and sustainable engagement from the public while helping to protect the future of the Park.

Another key component to Park monitoring is the evaluation of visitor experiences and attendance at the site. Providing educational and recreational opportunities that meet and exceed visitor expectations is essential to the future success and support for the Park. Seeking feedback from visitors on the Internet, through evaluation forms available at the site, and from volunteer interaction with visitors are all strategies that should be implemented to gain a better understanding of how the Park is used by the public. Monitoring the Park's parking lots is another strategy for understanding Park attendance and quantifying overall park use by recording the number of cars at the site. Documenting and understanding the public use of the Park is an important monitoring strategy that is vital for future financial support and public funding. In order to have a sustainable future, the Park must prove its value to the citizens of El Paso County that pay for its operation.

## V. Vision & Goals

### 5.1 Resource Values & Goals

In 2005, the El Paso County Parks and Leisure Services updated their department Master Plan to better meet the needs of their growing county. At that time, key goals were identified as essential values to the success of the El Paso County Parks system. Those goals were:

- Provide a coordinated system of parks, trails and open space that is equitably distributed and serves the needs of county residents.
- Protect and enhance El Paso County's legacy of unique natural features and open and natural areas.
- Create a continuous system of regional trails.
- Provide high quality and safe recreational and educational experiences for users of county park facilities.
- Acknowledge the importance of parks and open space in El Paso County by providing adequate funding to develop, operate and maintain these resources at a level commensurate with their importance.<sup>35</sup>

The implementation of long term resource planning is an important step in achieving these goals. Because the Paint Mines Interpretative Park is a valuable natural as well as cultural asset within the El Paso County Parks system, it requires a well-developed management strategy that will ensure its enjoyment for future generations.

### 5.2 Future Research

As this management plan looks to the future of the Paint Mines Interpretive Park, it is vital that additional research continues to evolve and adapt to the site's needs. As new information and technologies on park management become available, they should be taken into account. Areas of future research that could impact the site include:

- Continued monitoring and changes in existing ecological conditions

- Shifts in demographic trends in the Park Audience
- Developments in the field of ecosystem management
- Continued archaeological research and excavations on the site
- Future population growth in El Paso county

The ability to respond to change and adapt to new research findings should be considered as an important part of any long-term management strategy for the Park.

### 5.3 Summary

The implementation and monitoring of the recommendations outlined in the management directions of this plan for the Paint Mines Interpretive Park will lead to a successful and sustainable future for the site. This management plan presents a balanced strategy that takes into account the natural, cultural, and recreational resources at the Paint Mine Interpretive Park that will meet the objectives and desired outcomes for site conservation as well as the values and recreational goals established by the El Paso County Parks and Leisure Services.

## 6:1 ENDNOTES

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- <sup>1</sup> Stewart Environmental Consultants, Inc. 1997. *Report of a Phase 1 Environmental Site Assessment at the Paint Mines Site, Calhan, Colorado.* at page 4.
- <sup>2</sup> LREP, Inc. 2003. *Paint Mines, Freeman Property Management Plan.* at page 4.
- <sup>3</sup> LREP, Inc. at page 4.
- <sup>4</sup> LREP, Inc. at page 4.
- <sup>5</sup> Power Elevation Co. Inc. 1998. *National Register of Historic Places Nomination Form for the Calhan Paint Mines Archaeological District.* at page 24.
- <sup>6</sup> LREP, Inc. at page 5.
- <sup>7</sup> National Oceanic & Atmospheric Administration. “National Weather Service – Data from Colorado.” 1 Nov. 2010.  
<<http://www.weather.gov/view/states.php?state=CO>>
- <sup>8</sup> Environmental Protection Agency. “Western Ecology Division.” 26 Oct. 2010.  
< [http://www.epa.gov/wed/pages/ecoregions/co\\_eco.htm](http://www.epa.gov/wed/pages/ecoregions/co_eco.htm)>
- <sup>9</sup> LREP, Inc. at page 5.
- <sup>10</sup> LREP, Inc. at page 5.
- <sup>11</sup> El Paso County Department of Natural Resources and Environmental Services. 2001. *Weed Management Plan for North District County Regional Parks (Fox Run, Black Forest, Paint Mines, Homestead).*
- <sup>12</sup> LREP, Inc. at page 6.
- <sup>13</sup> Environmental Protection Agency
- <sup>14</sup> US Fish & Wildlife Service. “Mountain-Prairie Region Endangered Species Program.” 1 Nov. 2010. < <http://www.fws.gov/mountain-prairie/species/mammals/preble/>>
- <sup>15</sup> LREP, Inc. at page 6.
- <sup>16</sup> LREP, Inc. at page 6.
- <sup>17</sup> Chiras, Daniel, and John Reganold. Natural Resource Conservation 10<sup>th</sup> Edition. San Francisco: Benjamin Cummings, 2010. at page 362.
- <sup>18</sup> Chiras. at page 549.
- <sup>19</sup> Powers Elevation Co. at page 27.
- <sup>20</sup> Stewart Environmental Consultants. at page 8.

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- <sup>21</sup> Murtagh, Williams. Keeping Time, The History and Theory of Preservation in America. Hoboken: John Wiley & Sons, Inc. 2006.at page 181.
- <sup>22</sup> Powers Elevation Co.
- <sup>23</sup> Buggy, Susan and Nora Mithcell. "Cultural Landscapes, Venues for Community-Based Conservation". Cultural Landscapes. Longstreth. Minneapolis: University of Minnesota Press. 2008.at page 169.
- <sup>24</sup> Beck, Larry and Ted Cable. Interpretation for the 21<sup>st</sup> Century. Champaign: Sagamore Publishing. 2002. at Page 3.
- <sup>25</sup> US Census Bureau. " Colorado by County Population Estimates". 1 Sept. 2009.  
< [http://factfinder.census.gov/servlet/GCTTable?\\_bm=y&-context=gct&-ds\\_name=PEP\\_2009\\_EST&-box\\_head\\_nbr=GCT-T1-R&CONTEXT=gct&-mt\\_name=PEP\\_2009\\_EST\\_GCTT1R\\_ST2S&-tree\\_id=4001&-rdoLog=false&-geo\\_id=04000US08&-\\_sse=on&-format=ST-2S&-\\_lang=en](http://factfinder.census.gov/servlet/GCTTable?_bm=y&-context=gct&-ds_name=PEP_2009_EST&-box_head_nbr=GCT-T1-R&CONTEXT=gct&-mt_name=PEP_2009_EST_GCTT1R_ST2S&-tree_id=4001&-rdoLog=false&-geo_id=04000US08&-_sse=on&-format=ST-2S&-_lang=en)>
- <sup>26</sup> US Census Bureau
- <sup>27</sup> El Paso County Department of Natural Resources and Environmental Services. at page 11.
- <sup>28</sup> El Paso County Department of Natural Resources and Environmental Services. at page 10.
- <sup>29</sup> LREP, Inc. at page 6.
- <sup>30</sup> Powers Elevation Co. at page 1.
- <sup>31</sup> Deed of Conservaton Easement. 2001. Board of County Commisioners of El Paso County & William J. Palmer Park Foundation Inc. # 201189660.
- <sup>32</sup> El Paso County Parks & Leisure Services. 2005. El Pas County Parks & Leisure Services Department Master Plan. at page 1-2.
- <sup>33</sup> El Paso County Parks & Leisure Services. 1997. El Paso County Parks, Trails, and Open Space Master Plan. at page 4-8.
- <sup>34</sup> LREP, Inc. at pages 8-13.
- <sup>35</sup> El Paso County Parks & Leisure Services. at page 1-3.

# Appendices

## Appendix A: Paint Mines Interpretive Park Rules

### Park Rules

This fragile environment requires many years for nature to restore it once the vegetation and soil have been damaged. These rules have been established for your safety and enjoyment and for the protection of this unique resource.

- Park Hours: Dawn to Dusk
- All plants, wildlife, rocks, minerals, and historic artifacts within park boundaries are protected by law. Do not remove, destroy, or disturb any of these features.
- Pets, horses, and bicycles of any kind are prohibited.
- Please stay on designated trails at all times.
- Entering the Paint Mines formations is prohibited. Avoid gulches and gullies during wet weather. Climbing is prohibited.
- Motorized vehicles must remain in the parking area.
- Overnight parking is prohibited.
- Please remove your own trash and litter.
- Alcoholic beverages and glass containers are prohibited.
- Discharge of guns, BB guns, pellet guns, or paintball guns is prohibited.
- Fireworks and explosives are prohibited.

# Appendix B: Eco-Regions of Colorado

Provided by the Environmental Protection Agency

## Ecoregions of Colorado

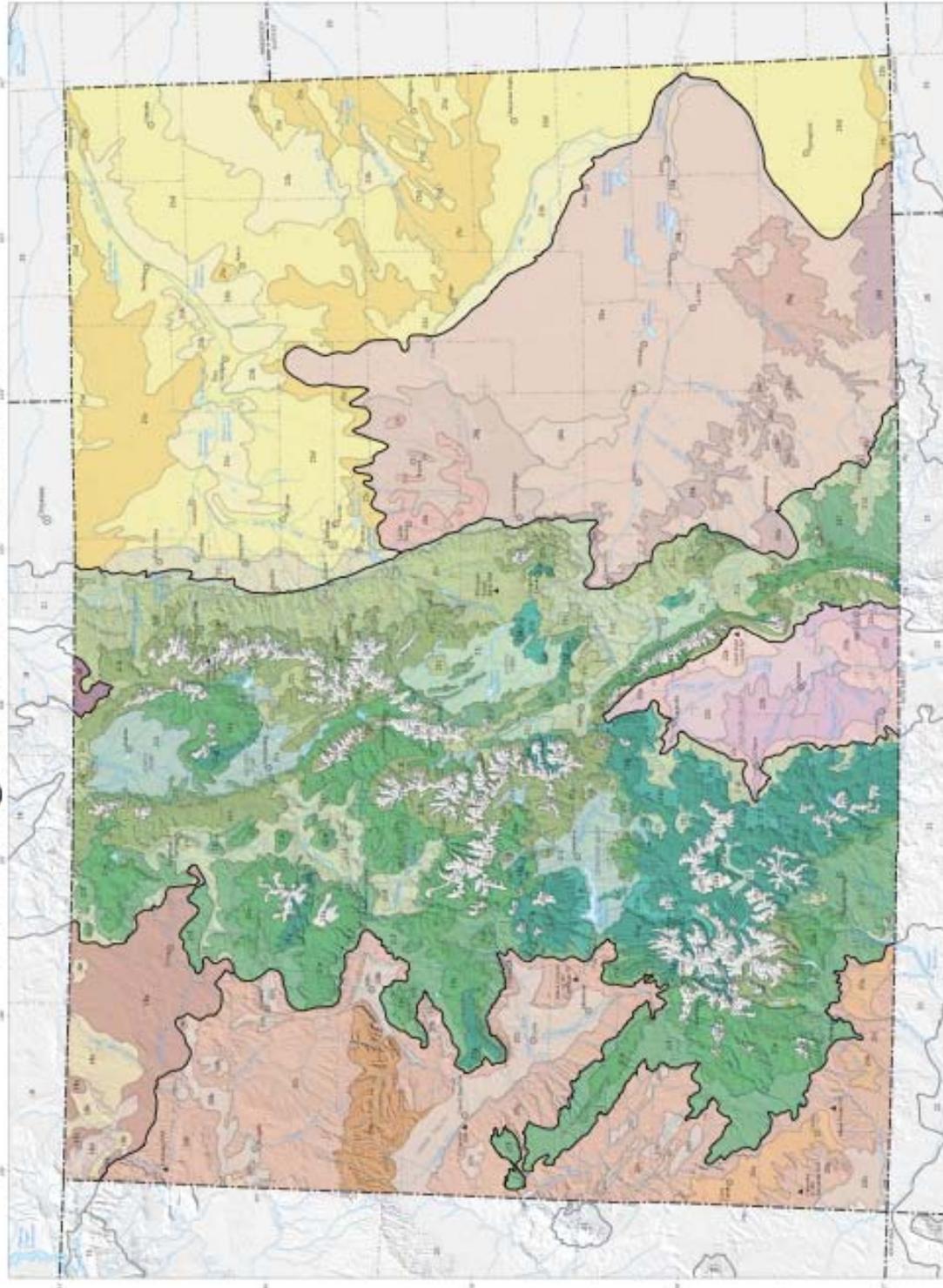
**PRINCIPAL AUTHORS:**  
 Shannon S. Chapman  
 (Dynamic Corporation),  
 Glenn E. Griffith  
 (Dynamic Corporation),  
 James M. Omerik  
 (USGS), Alan B. Price  
 (NRCS), Jerry Frossof  
 (NRCS), and Donald L.  
 Schupp (CO Department  
 of Wildlife (CDDOW)).

**COLLABORATORS AND  
 CONTRIBUTORS:** Tony  
 Sells (USEPA), Shannon  
 Albers (CDDOW), Sandy  
 Bryce (Dynamic  
 Corporation), Ed Rumbold  
 (BLM), Tom Wether  
 (NRCS), Carol Dowson,  
 (BLM), Eric Waller  
 (CDDOW), Christy Pickens  
 (CDPHE), Brian Moran  
 (Gades Corporation), John  
 Hutchinson (Science  
 Applications International  
 Corporation), and Jack  
 Wilmara (USGS).

**REVIEWERS:** Patrick  
 Come (NaturServe), Alisa  
 Gallant (USGS), Tom  
 Huber (University of  
 Colorado, Colorado  
 Springs), and Ron West  
 (CO State Parks).

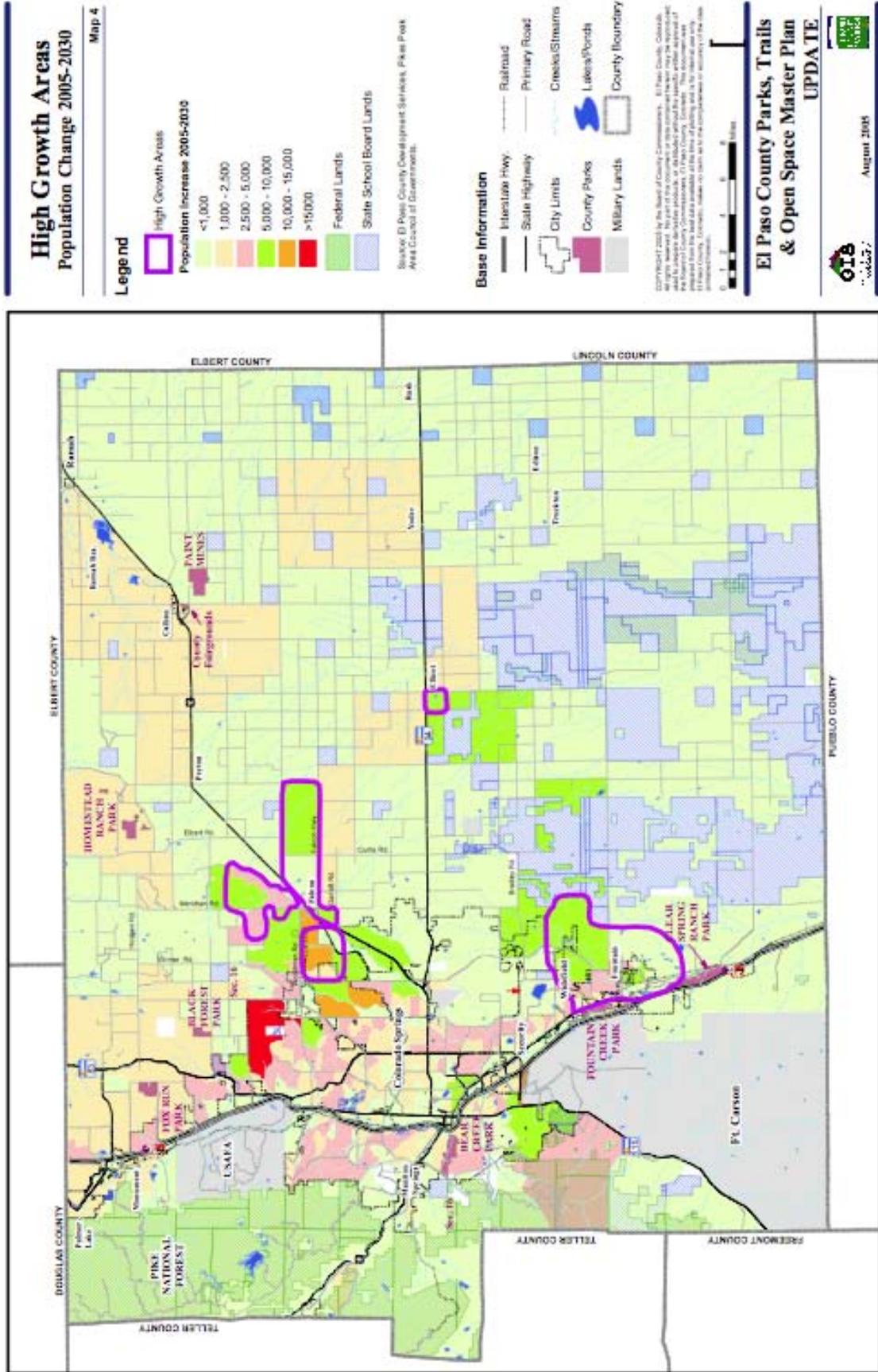
**CITING THIS POSTER:**  
 Chapman, S.S., Griffith,  
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 A.B., Frossof, J., and  
 Schupp, D.L., 2008,  
 Ecoregions of Colorado  
 (color poster with map,  
 descriptive text, summary  
 tables, and photographs);  
 Reagin, Virginia, U.S.  
 Geological Survey (map  
 scale 1:1,200,000).

SCALE 1:500,000

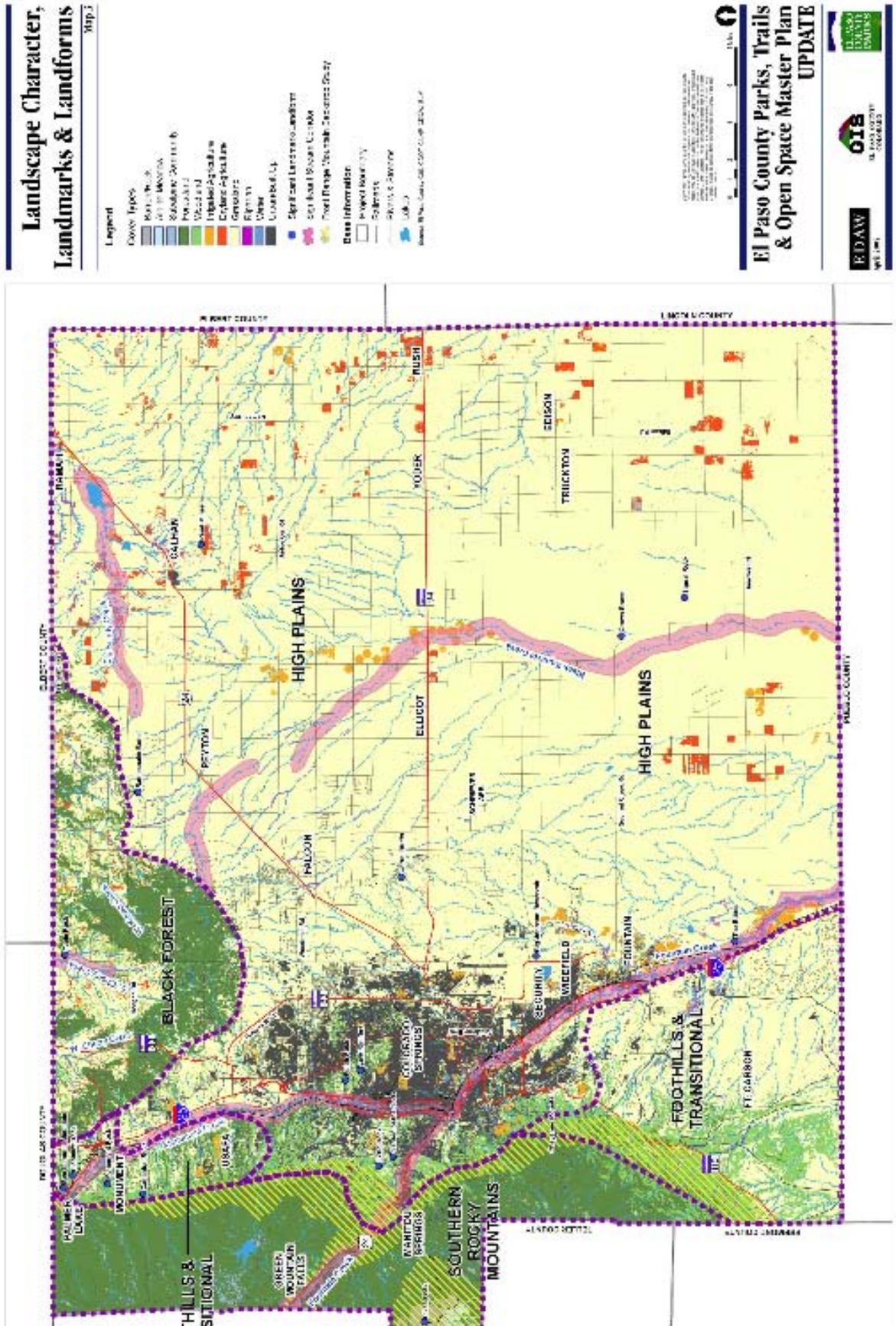


- 18 Wyoming Basin**  
 18a Rolling Sagebrush Steppe  
 18b Foothill Shrublands and Low Mountains  
 18c Salt Desert Shrub Steppes  
 18d Lowland Basin
- 19 Colorado Plateaus**  
 19a Monticito-Coneo Uplands and Saguero Valley  
 19b Sand Dunes and Subterranean Basins  
 19c Semiarid Shrublands and Canyonlands  
 19d Arid Canyonlands  
 19e Escarpments  
 19f Ultra-Dry Basin Floor
- 20 Southern Rockies**  
 20a Alpine Zone  
 20b Capitaline Subalpine Forests  
 20c Capitaline Mid-Elevation Forests  
 20d Foothill Shrublands  
 20e Subterranean Subalpine Forests  
 20f Subterranean Mid-Elevation Forests  
 20g Volcanic Subalpine Forests
- 21 Volcanic Mid-Elevation Forests**  
 21a Sagebrush Parks  
 21b Grassland Parks  
 21c Arizona/New Mexico Plateaus  
 21d San Luis Shrublands and Hills  
 21e San Luis Alluvial Fans and Wetlands  
 21f Salt Flats  
 21g Sand Dunes and Sand Sheets
- 22 High Plains**  
 22a Rolling Sand Plains  
 22b Moderate Inland Plains  
 22c Flat to Rolling Plains  
 22d Prairie Rangelands
- 23 Southeastern Tablelands**  
 23a Piedmont Plains and Tablelands  
 23b Mesa de Mayo/Black Mesa  
 23c Pinyon-Juniper Woodlands and Canyons  
 23d Piceo-Oak Woodlands  
 23e Foothill Grasslands  
 23f Sand Sheets

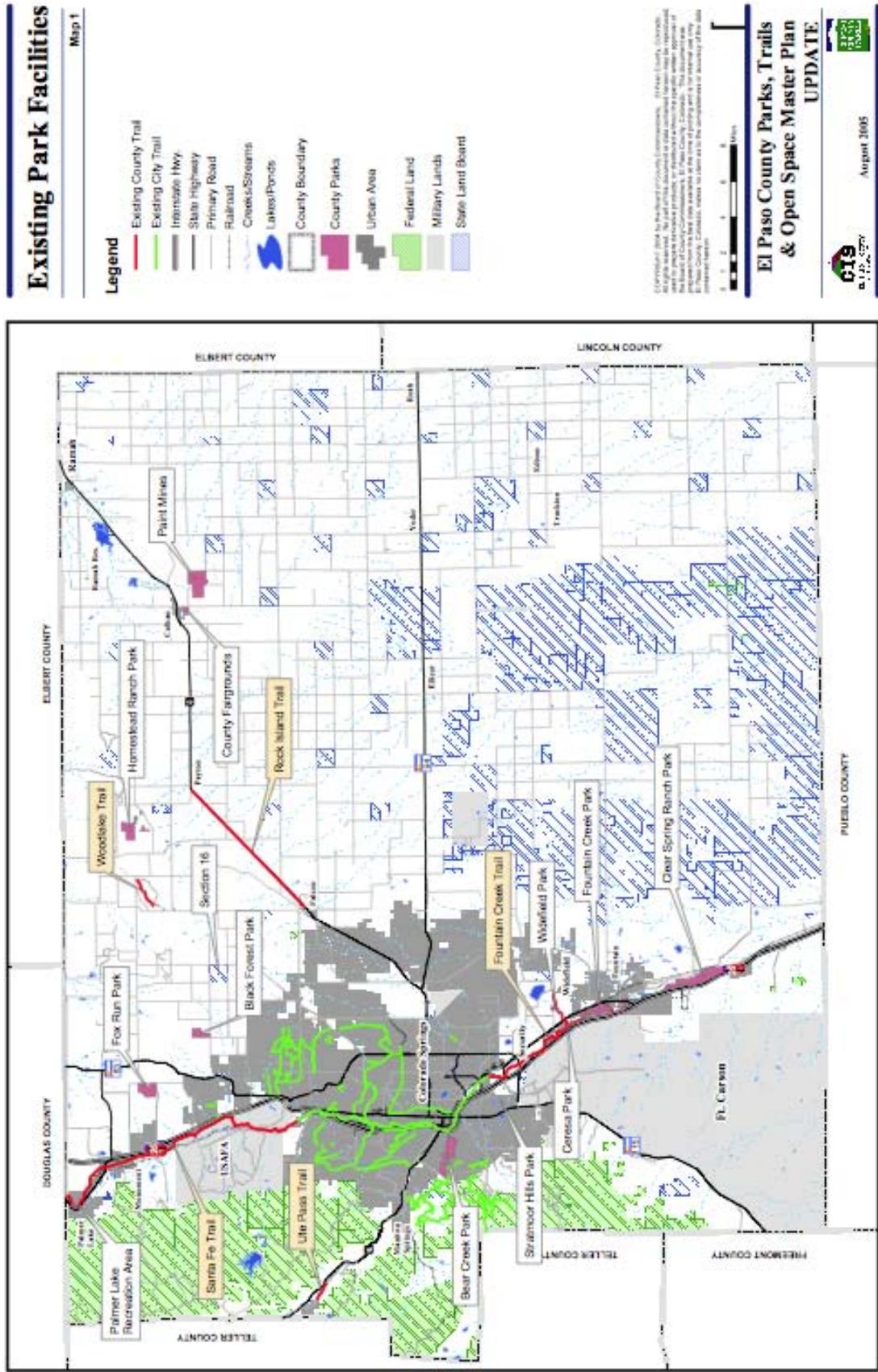
# Appendix C: El Paso County High Growth Areas



# Appendix D: El Paso County Landscape Character, Landmarks



# Appendix E: El Paso County Existing Park Facilities



Appendix F: Paint Mines Plant & Animal Species List

**Plant Species**

Blue Grama  
Bluestem  
Broom Snakeweed  
Cheatgrass  
Chokecherry  
Curlycup Gumweed  
Hairy False Goldenaster  
Pasture Sage  
Prairie Junegrass  
Prairie Rose  
Purple Locoweed  
Purple Threeawn  
Scarlet Globemallow  
Sideoats Grama  
Smooth Brome  
Western Wheatgrass  
Western Yarrow  
Western Snowberry

**Animal Species**

Burrowing Rodents  
Coyote  
Lark Bunting  
Migratory Birds  
Mountain Plover  
Mule Deer  
Pronghorn  
Rabbit  
Raptors  
Short-Horned Lizard

Plant Identification Provided by:  
Paint Mines Freeman Property Management Plan

Animal Identification Provided by:  
Paint Mines Freeman Property Management Plan &  
Report of a Phase 1 Environmental Site Assessment

## Appendix G: Reference Materials

- Beck, Larry and Ted Cable. Interpretation for the 21<sup>st</sup> Century. Champaign: Sagamore Publishing. 2002
- Buggey, Susan and Nora Mithcell. "Cultural Landscapes, Venues for Community-Based Conservation". Cultural Landscapes. Longstreth. Minneapolis: University of Minnesota Press. 2008.
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