PAINT MINES INTERPRETIVE PARK

MASTER PLAN

December 2024

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El Paso County, CO
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RESOLUTION NO. 24-508

BOARD OF COUNTY COMMISSIONERS
COUNTY OF EL PASO, STATE OF COLORADO

RESOLUTION TO APPROVE THE
PAINT MINES INTERPRETIVE PARK MASTER PLAN

WHEREAS, the 2022 El Paso County Parks Master Plan recommends development of site-specific master plans for County park properties and regular updates of existing plans to guide capital improvements, support third-party funding requests, and to continue to provide the facilities and services that citizens value; and

WHEREAS, the El Paso County Strategic Plan supports the development of master plans and the continued improvement of park facilities and recreation opportunities; and

WHEREAS, the Parks and Community Services Department initiated the development of a master plan for the continued management, enhanced protection, and future development of Paint Mines Interpretive Park in January 2024; and

WHEREAS, the County used a multi-pronged planning process that included the collaboration of internal and external team members, two public open houses, multiple stakeholder and neighborhood interviews, a dedicated project webpage, a two-week public master plan review, and review and approval by the Palmer Land Conservancy, and citizens, special interest groups, and governmental agencies have overwhelmingly expressed their support for the Paint Mines Interpretive Park Master Plan; and

WHEREAS, the El Paso County Park Advisory Board endorsed the Paint Mines Interpretive Park Master Plan at their meeting on December 11, 2024; and

WHEREAS, the Paint Mines Interpretive Park Master Plan was presented to the Board of County Commissioners for review and approval on December 17, 2024.

NOW, THEREFORE, BE IT RESOLVED, the Board of County Commissioners of El Paso County, Colorado, hereby approves the Paint Mines Interpretive Park Master Plan.

DONE THIS 17th DAY OF DECEMBER, 2024 at Colorado Springs, Colorado.

BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO

ATTEST:

By: _____
County Clerk and Recorder

By: _____
Carrie Geitner, Chair

Palmer
LAND CONSERVANCY

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Colorado Springs, CO 80901

December 6, 2024

Ross Williams, Park Planner
El Paso County Parks and Community Services
2002 Creek Crossing
Colorado Springs, CO 80905

Re: Paint Mines Interpretive Park Master Plan

Dear Mr. Williams:

Thank you for the opportunity to review and comment on the Paint Mines Interpretive Park Master Plan ("PMIP Master Plan"), which includes the Freeman parcel of land subject to a Deed of Conservation Easement entered into by El Paso County and Palmer Land Conservancy ("Palmer") on December 26, 2001 (the "Conservation Easement"). We are confident that the level of care and attention exhibited in this Master Plan will be reflected in the County's continued management of the Property. We have reviewed the December 2024 version of the PMIP Master Plan which is scheduled to be presented to the El Paso County Parks Board on December 11, 2024, and find that it is consistent with the Conservation Easement.

Section 4 of the Conservation Easement requires to prepare a Master Plan and submit it to Palmer for approval. The proposed Master Plan contemplates several improvements to the North Trailhead Parking Lot located on the Freeman parcel, including paving and striping the current footprint of the existing parking lot, signage, drainage improvements, fencing, a new interpretive plaza, and other related design features. Although Section 5(g) prohibits paving on the Freeman parcel without Palmer's advance written permission, we find that paving of the existing parking lot will not diminish or impair the Conservation Values protected by the Conservation Easement. Similarly, the other parking lot improvements will enhance the visitor experience and facilitate continued recreational use of the property.

The proposed Master Plan also describes components associated with the existing trails on the Freeman parcel. One new trail which has been designed to avoid culturally and environmentally sensitive areas will be constructed, and one existing trail will be moved out of the drainage to a more sustainable location next to the drainage. Other improvements contemplated by the Master Plan include new signs, benches, and a viewing platform. We find that these improvements are authorized by Section 5(g) of the Conservation Easement because they will not diminish or impair the Conservation Values and will enhance the recreational user experience. We trust that the County has designed and will construct the trail improvements in a sustainable manner and will mitigate any impacts that may result from the construction of such trails.

The activities proposed in this Master Plan appear to be consistent with the Paint Mines Conservation Easement. After thorough and careful review, Palmer has determined that the PMIP Master Plan complies with the terms of the Conservation Easement. The County clearly took great pains to involve the public and community stakeholders in the development of the Master Plan. For these reasons, Palmer approves the PIMP Master Plan.

If any changes to the Master Plan are made between the date of this letter and its approval by the Board of County Commissioners, please submit the revised Master Plan to our office for further review. Thank you again for providing us with the opportunity to participate in this process. We look forward to continuing our land preservation partnership with El Paso County.

Very truly yours,

Stephen D. Harris
Land Stewardship Director

PAINT MINES INTERPRETIVE PARK MASTER PLAN

ACKNOWLEDGMENTS

El Paso County Board of County Commissioners

Carrie Geitner – Chair
Cami Bremer – Vice-Chair
Stan VanderWerf – Parks Liaison
Holly Williams
Longinos Gonzalez, Jr.

Bret Waters – County Administrator
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El Paso County Parks Master Plan Team

Todd Marts – Parks and Community Services Director
Brian Bobeck – Park Operations Manager
Theresa Odello – Recreation and Cultural Services Manager
Jason Meyer – Park Planning Division Manager
Ross Williams – Park Planner
Adam Baker – East District Supervisor
Dana Nordstrom – Community Outreach Coordinator
Nancy Prieve – Environmental Specialist
Veronica Cid – Senior Engineer, Public Works

Master Plan Consultant Team

DHM Design – Ashleigh Quillen, Project Manager
DHM Design – Bill Neumann, Principal-In-Charge
DHM Design – Evelyn Volz, Associate
Bachman PR – Lisa Bachman
Metcalf Archaeology – Melissa Elkins
Western Slope Paleontological Services, Ltd. – Paul Murphey
SEH Engineering – David Hoesly
BerryDunn – Teresa Penbrooke

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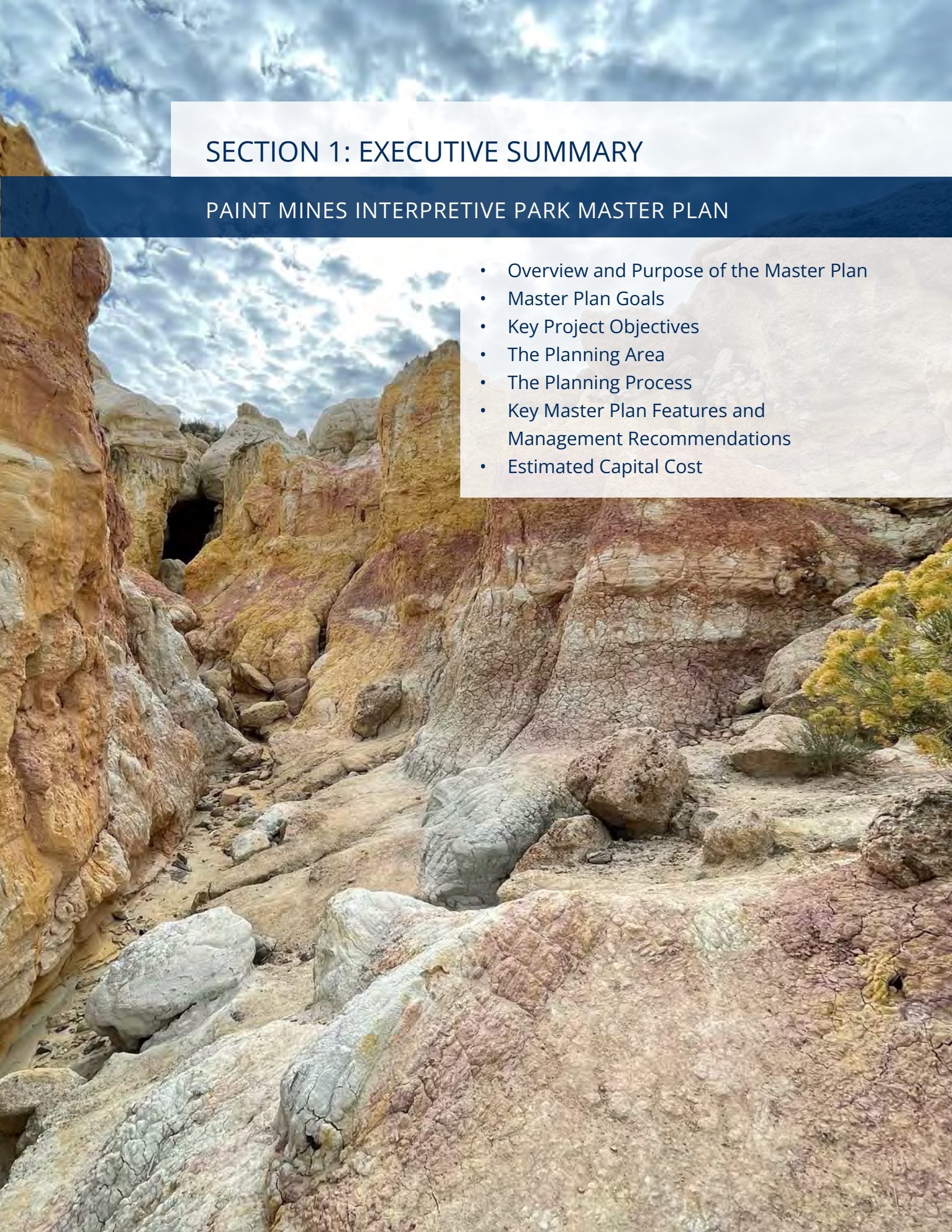

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- Master Plan Goals
- Key Project Objectives
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SECTION 1: EXECUTIVE SUMMARY

Overview and Purpose of the Master Plan

Paint Mines Interpretive Park (PMIP or the Park) encompasses 775 acres near the town of Calhan, in the northeastern section of El Paso County. The Park's spectacular geologic formations comprised of colorful clay have attracted visitors for over 12,000 years. In 2000, Paint Mines Interpretive Park was designated an "Archaeological District" and listed on the National Park Service's National Register of Historic Places and the Colorado State Register of Historic Properties. PMIP's badland formations and rolling short grass prairie landscape includes a variety of recreational resources enjoyed by the tens of thousands of people who visit the Park each year. With the increased use of social media, the Park has experienced a surge in popularity, resulting in challenges associated with managing heavy visitor use.

This project developed a comprehensive Master Plan for Paint Mines Interpretive Park. The Master Plan, reaffirms El Paso County Park's essential objectives as outlined in their 2022 Master Plan, and will act as a guide to manage, protect, and conserve PMIP, while improving the visitor experience.

(From the 2022 El Paso County Parks Master Plan)

The Mission of El Paso County Parks is to enhance quality of life in El Paso County by:

- Acquiring, developing, maintaining, and preserving regional parks, trails, and open space
- Providing responsible resource management for open space lands characterized by unique natural environments
- Supporting major community events and festivals that celebrate our County's heritage and culture
- Providing and managing visitor destinations and experiences

The design team was tasked with providing an analysis of previously developed reports, plans, and documents related to the Park, and then to evaluate the physical, natural, historic, cultural, and recreational resources present in PMIP. An extensive public and stakeholder outreach process was engaged throughout the project timeline to integrate opinions, concerns, and comments from the local community into the masterplan. The resulting management recommendations and park improvement conceptual designs incorporate public input, support El Paso County's Park protection and visitor use goals, and outline a vision for future implementation at Paint Mines Interpretive Park.

Master Plan Goals

The central goals for the PMIP Master Plan were developed in close coordination with El Paso County at the very beginning of the planning process. The Master Plan will:

- Empower El Paso County in overseeing, safeguarding, and preserving the Park while enhancing the visitor experience
- Balance providing public access with safeguarding the fragile geological features, important cultural resources, and native habitats
- Uphold the core goals and objectives outlined in the broader 2022 El Paso County Parks Master Plan

Key Project Objectives

This project included five Key Objectives:

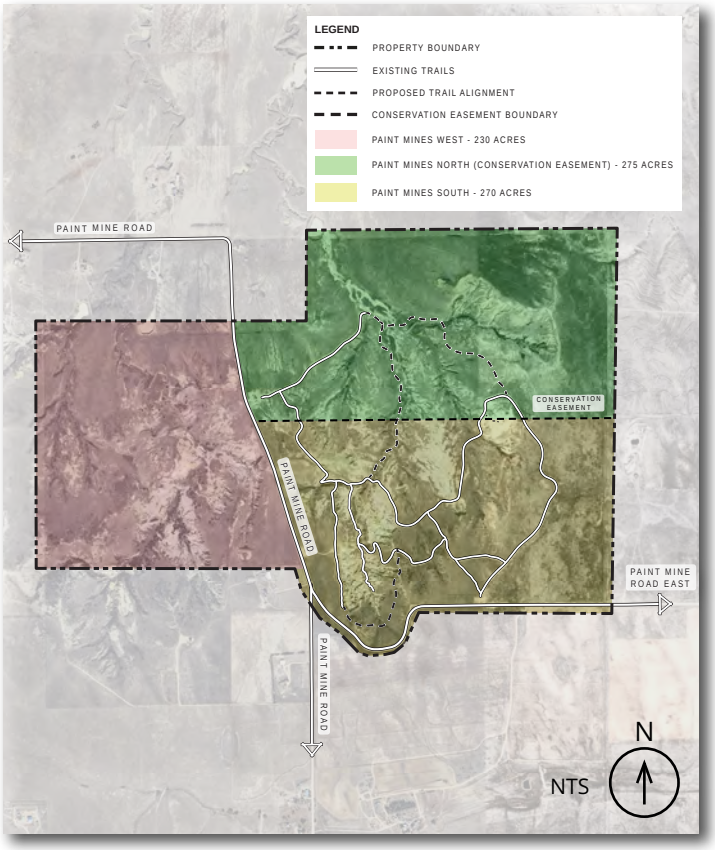
1. **Review** previously developed reports, plans, and findings and consolidate, modernize, and combine into one comprehensive Master Plan document.
2. **Provide** a comprehensive existing conditions assessment and site analysis, which will provide El Paso County with valuable data as a resource moving forward with design and implementation.
3. **Engage** the local community and stakeholders in the planning and concept design process and integrate feedback into the conceptual designs.
4. **Address** the management challenges arising from increased visitation and provide recommendations for sustainable improvements with an understanding of ongoing Park maintenance.
5. **Develop** conceptual designs that strengthen public facilities, enhance recreational and educational opportunities, and protect the exceptional natural and cultural resources.

The Planning Area

The Paint Mines Interpretive Park is located at 29950 Paint Mine Road in northeastern El Paso County, Colorado, approximately 2 miles from the Town of Calhan and 37 miles east of Colorado Springs. In total, the Park is 775 acres and is situated at approximately 6,815' – 6,550' feet in elevation. The Park slopes gently from the southwest to the northeast. Numerous small drainages run through the property resulting in the gullies that created the fragile geological formations of colorful clays seen at the Park today.

Vicinity Map

The management of Paint Mines Interpretive Park can be divided into three (3) regions. The 230 acres located west of Paint Mine Road was purchased by El Paso County and the Trust for Public Lands in 1997 from the Gerard, Amazon, and McKee Families. This portion of the Park has been and will remain closed to the public to preserve sensitive vegetation and the extremely fragile geologic formations located in this section. In 1999, the northern 275 acres of the Park were acquired from the Freeman Family and are held under a Conservation Easement with Palmer Land Conservancy. The north parking area and a section of trail are located within the Conservation Easement. The Park's southern 270 acres were acquired between 1998 and 2004 by El Paso County and the Trust for Public Lands from the Fronda, Devorss, Cummins, Luetke, and Haver Families. It comprises the primary geological formations, the Overlook parking area, the southern parking lot, and numerous hiking trails. The southern section is the most actively used area of the Park and is the most vulnerable to impacts of increased visitation.

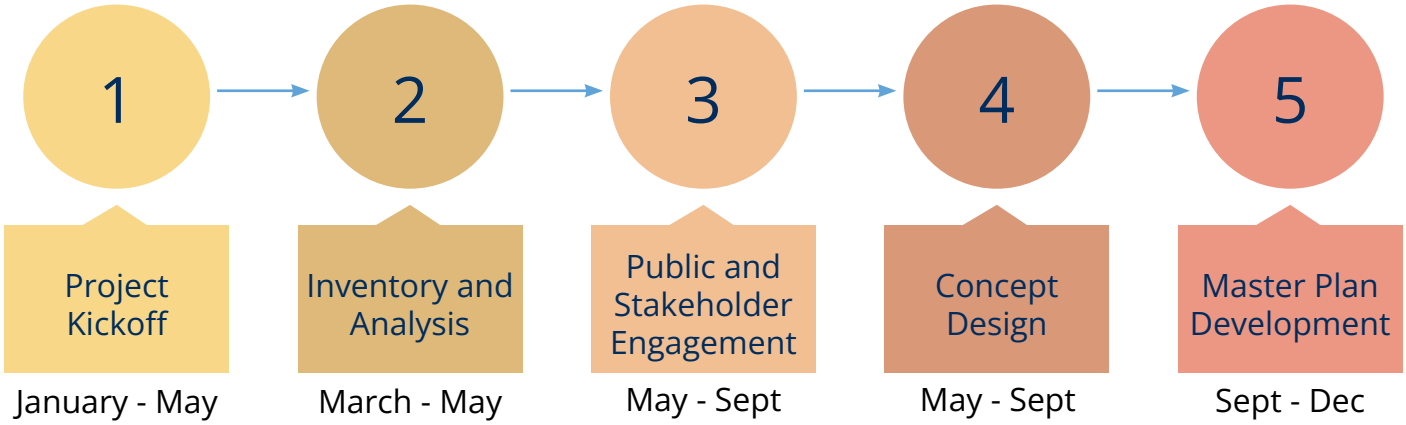


Paint Mines Interpretive Park Property Map

The Planning Process

The process of developing the Paint Mines Intrepretive Park Master Plan was initiated in January of 2024 and approved by the Board of County Commissioners in December of that year.

Specifically, the planning process included five key steps:



1. Project Kickoff

Virtual Kickoff Meeting with County – Introduced the project team and identified project goals and priorities. Review project schedule and Work Plan.

On-Site Kickoff Meeting with County – Project team walked the Park and reviewed current site conditions and concerns.

Desktop Review – Gathered and reviewed relevant existing documentation, reports, community plans, mapping, property boundaries and conservation easement information.

Project Kickoff Meeting on February 26, 2024

2. Site Inventory and Analysis

Overall Site Analysis – Collected information on existing trails, parking lots, site furnishings, stormwater infrastructure, and signage. Existing Conditions and Opportunities & Constraints Mapping were developed as a key first step in the planning process.

Natural Resource Assessment – A detailed assessment of the natural resources of the Park was completed in spring of 2024. Data collected included vegetation communities, plant and wildlife species observed, significant wildlife habitat areas, potentially sensitive areas, and water resources.

Archaeological Resource Assessment – A comprehensive summary of previously documented resources and recommendations for further work, including measures for historic preservation of known sites.

Paleontological Resource Assessment and Field Survey – A detailed summary of previously identified fossil localities, a summary of field work completed based on the review of known resources, and design guidelines to support future improvements within the Park.

3. Stakeholder and Community Outreach

A variety of outreach strategies were implemented throughout the project to engage the local community. The stakeholder and community outreach process included:

- **Project Webpage** – El Paso County set up and maintained a webpage throughout the project to inform the public regarding the planning process and schedule.
- **Project Specific email (PaintMinesMasterPlan@gmail.com)** – Set up for the public to contact the project team with questions and comments.
- **News Releases, Enewsletters and Social Media Posts** – Two news releases, Enewsletters and social media posts were distributed and posted prior to each Public Open House.
- **Stakeholder Interviews** – The project team met with 12 different, local organizations and departments to present the goals and review conceptual improvements with each stakeholder group.
- **Project Mailings** – Project information packets were mailed to adjacent property owners to inform them of the planning process and provide a way to mail comments back to the project team.
- **Door-to-Door Visits** – The project team visited properties located adjacent to the Park to review the project and to gather additional comments.
- **Online Survey** – An online survey posted for three months (July – September, 2024), allowed people to provide comments and voice concerns.
- **Public Open Houses** – Two Open Houses were held during the planning process to inform the public about the project and to present concept improvements. Comment cards for attendees to provide additional comment were distributed and collected.
- **Park Advisory Board Hearing (November 13th, 2024)** – Presented the project goals, work completed to date, and concept designs and recommendations.
- **Park Advisory Board Hearing (December 11th, 2024)** – Presented the final draft Master Plan and received PAB endorsement.
- **Board of County Commissioners presentation (December 17th, 2024)** – Presented the final Master Plan and received final BOCC approval.

4. Concept Design

During the stakeholder and community engagement process, concept designs were developed for public review and comment. The designs were further refined after public outreach was completed.

5. Master Plan Development

The Master Plan document was then developed and included all project planning efforts, from project kickoff to final approval. The final Master Plan, including all proposed concept designs and improvement recommendations, was presented and approved by the Board of County Commissioners on December 17th, 2024.

Project Kickoff Meeting on February 26, 2024

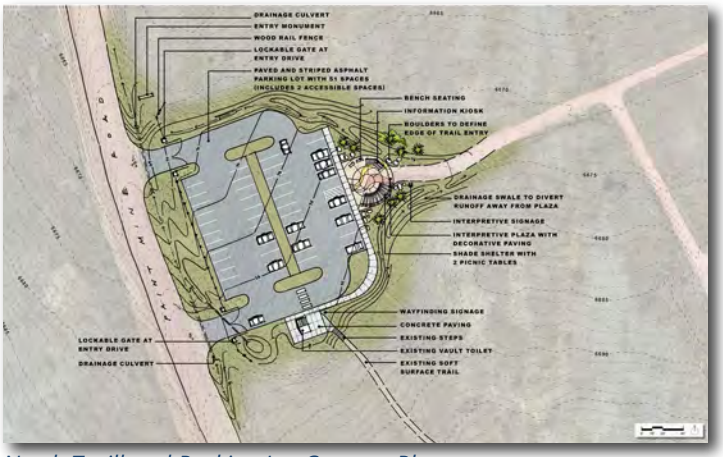
Key Master Plan Features and Management Recommendations

North Trailhead Parking Lot

- Pave and stripe existing parking lot footprint. Regrade to accommodate accessible parking spaces
- Create two entrances to parking lot to accommodate vehicular flow and large vehicle turnaround
- Maintain existing vault toilet, add accessible path to toilet
- Add a small, accessible, paved plaza area including trail and educational signage
- Informational kiosk with wayfinding and park information
- Small shade shelter and seating at plaza
- Swales and detention areas designed to accommodate stormwater flows from impervious areas of parking lot

Overlook Trailhead Parking Lot

- Move parking lot away from the main road
- Enlarge to 73 parking spaces (including 6 oversized vehicle parking)
- Pave, stripe, and add accessible parking spaces and sidewalks
- Add an accessible, paved plaza with informational and educational signage
- Add a shade shelter with picnic tables at the plaza
- Add a small Visitor's Center building for County staff use and visitor education
- New vault toilet near plaza
- Solar powered lighting to be included at plaza and restrooms



North Trailhead Parking Lot Concept Plan

Overlook Trailhead Parking Lot Concept Plan

Site Recommendations

- Additional trail connections from the Overlook parking lot to the main formation area, including an accessible trail to a new southern overlook
- Signage along Paint Mine Road with directional and wayfinding information to direct visitors to appropriate parking lots
- Low barriers and fencing added along trails within the main formation area to increase safety of visitors and help prevent off-trail use
- Boardwalks added to trails that cross main drainage ways to separate trail users from muddy conditions, and to decrease total disturbance area of trail users
- Additional trail to connect the north and south loop trails, including a new overlook with views to the west
- Restoration of social trails to native vegetation
- Move trail out of main drainage and restore trail footprint within drainage
- New and additional wayfinding and interpretive signs located throughout the Park
- Enhancement of native vegetation along riparian zones, and restoration of native grasses
- Protection of existing wildlife habitat

Estimated Capital Cost

The total capitol cost of conceptual plan improvements, not including the Visitor's Center, is estimated to be $4.77 million. The Visitor's Center was not designed as part of the Master Plan, so we have provided an estimated range of $1.5 - $2 million for its design and construction.

SECTION 2: EXISTING CONDITIONS AND ANALYSIS

PAINT MINES INTERPRETIVE PARK MASTER PLAN

- Property History
- Historical Science
- Cultural Resources
- Natural Resources
- Existing Infrastructure
- Site Opportunities
- Parks, Recreation, Open Space Conservation Trends
- Visitor Use and Recreation Opportunities

SECTION 2: EXISTING CONDITIONS AND ANALYSIS

Property History

Paint Mines Interpretive Park has been inhabited by humans for at least 12,000 years (Archaeological Inventory and Limited Testing 23). For more about the prehistory of the Arkansas River Basin and human presence at PMIP, see the Archeology section of this document.

Prehistoric Occupation Period (1750-1867)

From 1750 to 1867, the Arkansas River Basin (encompassing all of southeastern Colorado) was occupied by post-contact indigenous communities, including the Comanche, Kiowa and Kiowa Apaches, Cheyenne, and Arapaho. The Cheyenne and Arapaho resided on the plains from the Arkansas River (running through Pueblo, CO and Wichita, KS) to the Platte rivers (running through Fort Collins, CO and Omaha, NE). The Kiowas and Comanches lived south of the Arkansas River. While the Ute likely visited the area for hunting and raiding, the Arkansas River Basin was outside their core occupational zone in the mountains (Cultural Resources Class I Analysis 9).

Most indigenous groups were nomadic and depended on the herds of modern bison that inhabited the High Plains of Colorado. Regular trade was established with Europeans despite growing conflict between the Spanish pueblo settlements and Native Americans.

Around 1786, the Kiowa and Kiowa Apache migrated into the Arkansas River Basin from the north and attempted to drive the Comanche out. A peace agreement was established in 1790 between the three tribes, and they occupied the territory together until the Arapaho and the Cheyenne arrived in the region around 1810. By 1825, the Arapaho had driven the Kiowa Apache and the Comanche to the south (Cultural Resources Class I Analysis 10).

Euro-American Exploration

Spain, the original European claimant of the present study area, held tenuous control of the region throughout the 16th, 17th, and 18th centuries by virtue of Coronado's 1540-41 travels to the Colorado High Plains. Until the early 1800s, Spanish explorers, military parties, and traders ventured north out of Mexico, eventually settled New Mexico, and continued to venture farther north into Colorado. They traveled both east and west of Colorado's mountains (Cultural Resources Class I Analysis 10). The French attempted to counter Spanish incursions by aligning with the Native Americans, but their successes were short-lived after the Seven Years War (French and Indian War) began in 1754. France formally relinquished all claims to the area in 1763 and the Mississippi River served as the boundary between the English and the Spanish empires. These early Spanish provided many of the first European contact experiences for the native Indians of the Colorado High Country, introducing new goods, and resources (Cultural Resources Class I Analysis 11).

Source: https://acwm.org/louisiana-purchase-edu/

Colonialism and the Colorado Territory

The Revolutionary War between Britain and the 13 Colonies began in 1775, the Declaration of Independence was signed creating the United States in 1776, and the war ended in 1783. In 1803, eastern Colorado became part of the United States though Thomas Jefferson's purchase of the Louisiana Territory from France. This doubled the size of the country and expanded it westward (ACWM, Louisiana Purchase). The United States laid claim to this vast territory in which Native Americans concurrently and historically resided for thousands of years.

Government sponsored expeditions in the early 1800s were soon surveying the newly acquired land, including the explorations of southeast Colorado (the southwestern boundary of the Louisiana Purchase) by Lieutenant Zebulon Pike. It was during this expedition that Pike discovered the peak that bears his name (Colorado History Chronology 1). Additional expeditions took place by Major Stephen H Long in 1820 to explore the SW boundary of the Louisiana Purchase and in 1842-1853 by Lieutenant John Fremont to seek a feasible railroad route through the Rocky Mountains (Colorado History Chronology 1). By 1820, Euro-American settlers engaged in more intensive migrations westward, leading to heightened competition of resources and more cross-cultural conflicts.

In 1848, Mexico cedes to the United States most of the part of Colorado not acquired by the Louisiana Purchase in the Treaty of Guadalupe Hidalgo (Colorado History Chronology 2). In 1850, the US Federal Government purchased Texas' claims in Colorado, and the present boundaries of Colorado are established. In 1851, the Treaty of Fort Laramie was established between the United States and seven Indian nations, including the Cheyenne and Arapaho. In the Treaty, the United States recognized that the Cheyenne and Arapaho held the territory encompassing the lands between the North Platte River and the Arkansas River, and eastward from the Rocky Mountains to western Kansas, in exchange for safe passage for immigrant trains.

In 1858, the Pike's Peak gold rush began, and 100,000 immigrants flooded across and squatted on Cheyenne and Arapaho lands on their way to the front range of Colorado (Colorado History Chronology 2). Prospectors spread through the mountains and established camps at Boulder, Colorado City, Gold Hill, Hamilton, Tarryall, and Pueblo. Conflicts between miners and the indigenous groups disrupted the established peace in the region as game was driven off, resource competition increased, and settlers tried to inhabit native lands.

The Gold Rush prompted Congress to establish the Colorado Territory in 1861 (Colorado History Chronology 3). At this time, Denver City (present site of Denver) was founded and the population of the Colorado Territory grew to 25,371. The year 1861 also marked the beginning of the American Civil War. The Federal Government's withdrawal of Colorado troops to send to war meant there was no significant military protection of wagon trains, settlers, settlements, communication lines, and supply wagons in the region, increasing hostilities.

Sand Creek Massacre

The gold rush and subsequent population growth of the Colorado Territory prompted Colorado officials to pressure Federal authorities to redefine the extent of Indian lands in the territory. By February of 1861, a Cheyenne delegation, headed by Chief Black Kettle, along with Arapaho leaders, accepted a new settlement with the Federal government, called the Treaty of Fort Wise. The Cheyenne and Arapaho ceded most of their land but secured a 600-square mile reservation and annuity payments (rare at this time and necessary with rapidly constricted territory and the demise of the buffalo). The delegation reasoned that continued hostilities would jeopardize their bargaining power. In the decentralized political world of the tribes, Black Kettle and his fellow delegates represented only part of the Cheyenne and Arapaho tribes. Many were angry with the chiefs who signed the Treaty and did not accept this new agreement (SCMF).

The Homestead Act was passed in 1862, enabling the transfer of 160 acres of "unoccupied public land" to each homesteader on payment of a nominal fee after five years of residence and farming of the land. This opened new lands in the Colorado Territory and the west for colonization, increasing immigration and conflicts between indigenous groups and Euro-Americans.

A proclamation sent out at the beginning of the summer of 1864 by the Governor of the Territory of Colorado, John Evans, stating "all hostile Indians would be pursued and destroyed" and authorizing citizens of Colorado "to go in pursuit of all hostile Indians on the plains" (NPS, Sand Creek Massacre National Historic Site). The proclamation commanded all "Friendly" Native Americans of the Cheyenne and Arapaho to go to Fort Lyon (South east of PMIP) to receive supplies and to find safety (SCMF, Leadup). Unfortunately, this was in direct conflict with the standing order at all Forts within the Territory of Colorado that all members of the military should shoot and kill any Native

American that approached a Fort. Responding to the proclamation, Chief Black Kettle of the Cheyenne took the steps to negotiate peace and contacted Major Wynkoop at Fort Lyon (NPS, Sand Creek Massacre National Historic Site).

Despite the best efforts of Edward Wynkoop, both Governor Evans and Colonel Chivington failed to negotiate peace with Chief Black Kettle (NPS, Sand Creek Massacre National Historic Site). Wynkoop was instructed to indicate where the Arapaho and Cheyenne should stay near Fort Lyon until negotiations could be continued (NPS, Edward Wynkoop). At the command of the US Military, Chief Black Kettle settled the people, around 750 Cheyenne and Arapaho, in a bend of the Big Sandy Creek, a camping site within the reservation defined in the Camp Wise Treaty, southeast of PMIP. Made up of women, children and the elderly, this encampment was prepared to move to Fort Lyon at a moment's notice, where they could find safety and supplies from the military.

On November 29, 1864, Colonel John M. Chivington, who was never given orders to leave Denver, and men of the1st and 3rd Colorado Cavalry, ignoring a white flag that the tribes erected at the start of the battle, carried out the predawn attack on the Cheyenne and Arapaho who believed they were safe under U.S. military protection. Over the course of eight hours, the US troops killed around 230 Cheyenne and Arapaho women, children, and the elderly and then proceeded to mutilate and desecrate the dead (NPS, Sand Creek Massacre National Historic Site).

Initially reported as a victory, the Sand Creek Massacre was soon recognized as a national disgrace. Colonel Chivington had requested to be relieved of his command of the Military District of Colorado, and he returned to civilian life. Because he was no longer in service, Chivington could not be charged by the U.S. Army with any crimes committed while he was in service. He was never arrested, indicted or charged (NPS, John Chivington). The War Department established a military commission to investigate the events at Sand Creek. A Special Joint Committee was established to investigate the "present condition of the Indian tribes and their treatment by the civil and military authorities of the United States" (SCMF, Aftermath). In Congress, The Joint Committee on the Conduct of the War condemned Chivington's actions and called for the removal of Evans as Governor of the Colorado Territory. More recently, Colorado's political leaders made formal apologies on behalf of agents of government and rescinded 1864 proclamations by Governor John Evans that authorized killing of Native Americans in Colorado territory, 150 years later (SCMF, Remembrance).

After the massacre, war erupted on the Great Plains, lasting 12 years. The Arapaho, Cheyenne, and Sioux joined forces and attacked settlers, wagon trains, and military posts along the South Platte River (Cultural Resources Class I Analysis 12). In 1865, the Arapaho and Cheyenne signed the Treaty of the Little Arkansas that established a reservation near the confluence of the Arkansas and Cimarron Rivers.

Establishment of the State of Colorado

Between 1860-1881, the displacement and forced removal of tribes onto reservations opened western lands for rapid Euro-American settlement (Cultural Resources Class I Analysis 10). Oil and coal extraction began in 1872. The mining industry was booming, which in turn led to the expansion of commerce, transportation, and support industries in the west. In 1876, Colorado was established as a state and the bison had been hunted by Euro-Americans to near extinction. By 1881, the Ute were relocated from the mountains of Colorado to Eastern Utah (Cultural Resources Class I Analysis 12). With the removal of the Ute, American settlements grew rapidly. Railroad networks connected the high-country mines to the agricultural/commerce hubs on the plains.

By 1887, with the bison nearly wiped out, the Colorado plains were transformed to accommodate cattle ranching and Native peoples were pushed into confinement. Congress passed the Dawes Act to distribute reservation lands into 160-acre holdings and force Indians to give up communal claims on reservation lands (SCMF, Aftermath). Tribal religion and cultural practices were outlawed, tribal government eliminated, and reservation lands reduced by over 60%. Tribes are reduced to utter dependence on the U.S. government.

During the late 1880s, the Chicago Rock Island & Pacific Railroad (CRI&P) reached Elsmere Colorado, near Colorado Springs, from Kansas (Cultural Resources Class I Analysis 12). The CRI&P also built spur lines connecting communities and mines. Roadways were expanding further west, bringing increasing numbers of homesteaders, ranchers, and small settlements into the high valleys alongside the mining/industrial settlements. The western frontier was bustling with activity. Colorado was one of the nation's leading coal producers by the mid-1890s (Cultural Resources Class I Analysis 12), fueling the growing smelting and steel industries in Pueblo and near Salida. By 1900, and the Euro-American population of Colorado had reached 539,700.

Growth and Development of Calhan

Calhan, located two miles north of PMIP, was established in 1888 as a water station for the now-defunct Chicago, Rock Island and Pacific Railroad. Its first steam locomotive arrived on November 5, 1888. The town was named by and for Michael Calahan, who had the contract to lay railroad tracks from the Colorado/Kansas border to Colorado Springs. However, when the town's first U.S. Post Office opened on November 24, 1888, the middle "a" had been dropped and the town was registered as "Calhan" (Cultural Resources Class I Analysis 13). The town of Calhan was incorporated as a statutory town in 1919, with a population of 500. It grew quickly to serve the ranching and agrarian communities.

Formations in PMIP

Growth and Development of PMIP

Paint Mines Historic Land Use

Historically, the entire PMIP land area was patented with dates ranging from 1887 to 1954. These include cash sale entries and homesteads under the Homestead Act. See the 2024 Metcalf Cultural Resources Class I Analysis for a cumulative delineation of historic land patents. Since this time, cattle ranching has dominated the land use in the general vicinity of the Paint Mines Park.

Like the indigenous prehistoric and historic communities which utilized PMIP for its natural resources, at the turn of the century, the Park's clays began to be sought by settlers for brick and ceramic manufacturing. Patents for the quarry pits to the north and east (largely away from the Paint Mine's geological formations) went to the Calhan Fire Clay Company (1915) under the authority of the 1866 Mineral Leasing Act. However, Lew Scott may have been the earliest settler to haul clay from the PMIP mines around 1903. Mining of the clay found at the Paint Mines played a part in the growth and development of the region, including providing building materials for Colorado Springs and Pueblo.

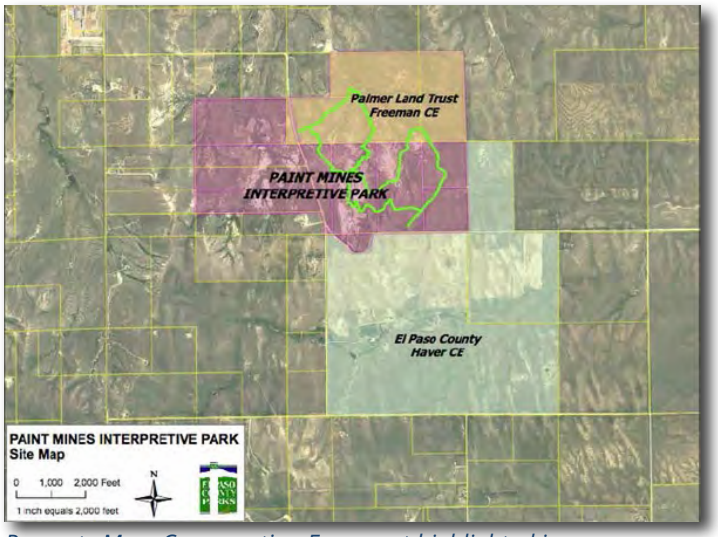
As for the archaeological record, stock or catchment ponds (1 prior to 1953, 4 dating sometime between 1953-68) and quarry sites demonstrate the two major historic era impacts to the property, as well as the historical use of the Park's natural resources. Erosion control devices were probably constructed by ranchers during the 'soil conservation boom' in the late-1930s after the Dust Bowl era. Throughout Paint Mines' land use history, cattle appear to have compacted and denuded soils, encouraging erosion, and greater impacting the Park than the clay quarries.

Park Establishment and National Register of Historic Places

In 1997, the El Paso County Parks, Trail and Open Space Master Plan identified areas of high priority for land conservation, which included The Paint Mines. El Paso County, with the help of the Palmer Land Conservancy, acquired 13 parcels of paint mines land encompassing more than 750 acres for conservation. As part of the acquisition process, the county used a State Historical Fund grant to commission the first archaeological inventory of the Paint Mine's cultural resources.

In 2000, as a result of the Powers Elevation Cultural Resource Inventory, the Paint Mines was nominated and designated an "Archaeological District" on the National Register of Historic Places (Site Number 5EP3258), administered by the National Park Service, based on its importance in the prehistory of the area (Cultural Resources Class I Analysis 5). The man-made materials on the property are a cogent representation of the full range of recorded human occupation in southeast Colorado. One of the factors that contributes to its significance is that the inhabitants were using the local clays and stone to manufacture material culture items on site. Additionally, the Park has the potential to provide a better understanding of prehistoric subsistence practices, particularly faunal procurement and processing (Interpretive Plan 5). Because of this national listing, the area was automatically entered into the Colorado State Register of Historic Properties.

The Paint Mines Interpretive Park was established in 2001 and opened to the public in 2005 (Cultural Resources Class I Analysis 5).



Property Map, Conservation Easement highlighted in yellow above

Land Trust

A 275-acre section of the Park, known as the Freeman Property, was incorporated into the Park boundaries through a conservation easement with the Palmer Land Conservancy. Founded in 1977, the mission of the Palmer Land Conservancy is to guarantee that open lands remain a part of southeastern Colorado's heritage. The purpose of the easement is to assure the Property will be retained forever predominantly in its natural, scenic, historic, and open space condition, while making it accessible to park visitors. New paving and structures may only be built within the easement with the written permission of the Palmer Land Conservancy.

Proposed recommendations and improvements were reviewed with the Palmer Land Conservancy as part of the stakeholder outreach phase, and the final PMIP Master Plan has been reviewed by the Palmer Land Conservancy without objection. Any further design and planning within the easement will once again be reviewed and will require approval by the Palmer Land Conservancy.

Historical Science

Geologic Context

The geologic conditions that formed the Paint Mines Interpretive Park (PMIP) are the result of a complex interplay of sedimentation, uplift, erosion, and climatic changes over millions of years.

Physiographic Context

PMIP is located within the Colorado Piedmont subprovince of the Great Plains physiographic province along the divide between the South Platte and Arkansas River systems. The rough topography of PMIP is uncharacteristic of the Great Plains (Geologic Survey 1).

Stratigraphic Context

The paleosol formations found at PMIP are one of several paleosol outcrops around the Denver Basin. Situated east of the Front Range of Colorado between Boulder, CO and Colorado Springs, CO the Denver Basin is a Rocky Mountain foreland basin, a structural basin that develops adjacent and parallel to a mountain belt. The basin is the deepest on the west side due to its asymmetry and has been filled with rocks deposited during the Cretaceous and Paleogene Periods (Geologic Survey 1).

Paint Mines Interpretive Park is underlain by two mapped bedrock sedimentary geologic units: the D1 and D2 Sequence of the Denver Basin Group. The Denver Basin Group is largely composed of altered andesitic (volcanic) debris that was deposited during the Laramide uplift of the Rocky Mountains. The uplift's outwash events filled the Denver Basin with delta and alluvial floodplain deposits.

Formations in PMIP

Today, the bedrock consists of dark-brown, yellowish-brown, and grayish-olive tuffaceous claystone, mudstone, and sandstone beds interbedded with scattered conglomerate. The thickness of the Denver Basin Group varies across its distribution.

Sedimentation during the Laramide Orogeny was subdivided by Raynolds into two sequences: D1 and D2 (2002). The first episode of sedimentation, D1, was formed by the deposition of andesitic volcanic rock that covered much of the Front Range which at the time was being stripped because of uplift. The second episode of sedimentation, D2, was deposition from the eroded material of the mountains west of Colorado Springs due to the Ute Pass Fault uplifting the Pikes Peak area (Geologic Survey 2).

Formations in PMIP

Paint Mines Interpretive Park contains the uppermost portion of the Denver Basin Group's D1 Sequence (early Paleocene) and the lowest strata of the D2 Sequence (early Eocene).

Paleontology

The Denver Basin Group's D1 Sequence, also known as or containing the Dawson Arkose, Dawson Formation (known for its silicified and opalized wood, Parker petrified wood, which were once tropical hardwoods), Denver Formation, and Arapahoe Formation, spans from the latest Cretaceous (Maastrichtian) to the early Paleocene (Puercan). It has high paleontological potential (with the exception of the Arapahoe Formation) because it preserves the Cretaceous-Paleogene boundary (K-Pg Boundary): the event marking the mass extinction of dinosaurs. The K-Pg boundary is located in the approximate middle of the D1 Sequence and is reflected by the presence of dinosaur fossils below the boundary and early Paleocene mammal fossils above the boundary.

This boundary has been mapped around the basin and is located approximately four miles northeast and six miles south of Paint Mines Interpretive Park. D1 Sequence typical fossils include scientifically significant and locally abundant plants and less common, but scientifically important, vertebrate fossils. Rare vertebrate fossils include a variety of Cretaceous-age dinosaurs and other reptiles and early Paleocene-age mammals. No previously recorded vertebrate fossil localities have been documented within Paint Mines Interpretive Park.

On top of the D1 Sequence strata unconformably lies the Denver Basin Group's D2 Sequence. The scant fossil evidence indicates D2 strata are early Eocene in age. General fossil types found in the D2 sequence include plants, while vertebrate fossils are rare. The colorful paleosols, which PMIP is known for, consisting of deep-red, yellow, and purple lateritic horizons, are located at the boundary between D1 and D2 strata, and are several meters thick.

PMIP Paleontological Resource Field Survey and Report

As a part of the PMIP Master Plan project, a comprehensive paleontological survey and report was completed by Western Slope Paleontological Services to review and analyze existing data, verify existing and document new paleontological resources in the field, and provide management recommendations for the County regarding the protection and conservation of resources within the Park.

Fossils include any evidence of ancient life including bones, skin impressions, leaves, and traces of an organism's activity such as footprints or burrows. Fossils are considered non-renewable resources because the organisms they represent no longer exist. Thus, once destroyed, a fossil can never be replaced. Paleontological resources are of scientific, cultural, and educational value and are protected and managed under various federal and state laws, ordinances, and regulations that apply to the resources found in PMIP. Additionally, the El Paso County Parks Master Plan Update (2022) defines Uncommon Natural Areas as areas that are more unique than a park or open space and identifies PMIP as one of three Uncommon Natural Areas within the County. The Master Plan also stipulates that access to regional open space may be limited to preserve historical and paleontological features. These regulations and recommendations are directly reflected in the goals of this Master Plan and the proposed conceptual improvements, with one main county goal for the project to protect and conserve the natural resources at PMIP.

A previous field study of the PMIP property identified five (5) fossil localities including fossilized plants and pollen. These findings are recorded with the Denver Museum of Nature and Science (DMNS). As part of this project, a field survey was conducted in August of 2024, including a 100% pedestrian inspection of the 755 acre PMIP property. No fossils were observed at any of the five previously recorded DMNS fossil plant localities that were visited and re-evaluated during the field survey. Three of these localities were originally recorded as pollen samples so plant macrofossils were not anticipated to be present.

The Park property contains locally abundant but mostly poorly preserved plant fossils and less common social insect nests. None of the fossils observed within the Park property were deemed to have a degree of scientific importance, however, they do have educational value and hence potential for development as interpretive displays. Two new fossil localities identified as a part of the field survey included fossilized wood fragments (partial logs, roots, and branches). Some fragments appear to be algal covered, suggesting the area was episodically flooded at or close to the time of deposition. An additional locality preserves what is interpreted as fossilized subterranean social insect nests.

Recommendations resulting from the paleontological resource field survey and assessment include:

1. All known fossil localities should be protected and planning for future improvements at PMIP should avoid impacting these resources.
2. Any future bedrock disturbance necessary for the construction of park infrastructure improvements (new trails, buildings, parking lots, etc.) should be monitored by a State of Colorado permitted paleontologist.
3. Interpretive signage and displays should be developed and/or revised to include the geologic history of the Denver Basin and the paleontological importance of the Denver Basin Group and how the D1 and D2 sequences in Paint Mines Interpretive Park add to our understanding of ancient Colorado. The interpretive content should include information about the K-Pg boundary even though the boundary is several miles away because the extinction of the dinosaurs is of great public interest. The series of paintings entitled "Ancient Denvers" on display at the DMNS includes panels illustrating the time period during which the D1 and D2 sequences were deposited, and incorporating copies of these into the on-site interpretation at PMIP would be beneficial to the visitor experience.

Geology

Geomorphology:

PMIP is situated near the top and along the north slope of a large hill. The hill is located along a structural divide that separates the Arkansas and South Platte River basins. Two principal ephemeral drainages have cut into the PMIP, one on the west side of Paint Mine Road and the main drainage on the east. Both have created upland gully systems that form the characteristic exposures and formations for which the Park is known. These drainages merge approximately three miles south of the main drainage. The system descends a total of approximately 550 ft on its way to Big Sandy Creek, a tributary of the Arkansas River (Archaeological Assessment 2).

The PMIP shows evidence of all the principal mechanisms of valley erosion: down cutting that lowers the stream level, headward erosion that extends drainage upslope, and slope retreat where valley walls recede laterally from the drainage. It is likely that the geologic features of the PMIP were formed because of the combination of the white sandstone capstone which crests the hill on which PMIP sits and the Nussbaum alluvium that forms the southeastern sloping flank to the south and east. The Nussbaum alluvium providing a back-stop to the back cutting and preventing the erosional processes from cutting completely through to a saddle. Once the back cutting stopped, continued downcutting lowered the elevation at the base of the headwall and steepened the incline.

These drainage patterns have eroded the underlying Denver Basin Group's D2 bedrock into badlands topography. Badlands are typically defined by steep, rough, eroding gullies with rapid runoff and high erosion with little or no soil development. The Park's labyrinthine of gulches and monoliths is rare and geologically fragile.

Geologic Formations:

PMIP's badland formations reveal paleosol, or remnants of ancient soil horizons. PMIP is one of many paleosol outcrops around the Denver Basin, but its hoodoo geology is possibly one of only four such areas in Colorado. Hoodoos typically consist of relatively soft rock topped by harder, less easily eroded stone that protects each column from the elements. The white sandstone capstone found at PMIP is part of the Dawson Arkose Formation within the Denver Basin Group's D2 Sequence and was formed out of material created when Pikes Peak Granite was uplifted and later eroded (Paleontological Resource Field Survey Report 13). The white capstone protects soft clay columns of vibrant paleosols from erosion, creating the fanciful formations PMIP is known for today. These landforms represent 65 million years of geologic processes from the dinosaurs and creation of the Rocky Mountains to the present (Interpretive Plan 3).

White sandstone found in the Park

Formations found in the Park

Vibrantly Colored Paleosols

Colorful paleosols are remnants of ancient soil horizons. Paleosols like these form under conditions of relatively continuous aggradation. Seasonal deposition was likely interspersed with periods of pedogenesis when the floodplain was not flooded (Geologic Survey 4). The wide array of colors (red, purple, and yellow-brown) found in this paleosol formation are primarily the result of varying quantities and oxidation states of iron oxyhydroxides and oxides. Paleosols provide insights into the paleoenvironment, the past climatic conditions and drainage patterns.

Vibrantly colored paleosols at the Park

The red paleosol gets its color primarily from the presence of iron oxides. As iron-rich minerals are released from the parent material, they oxidize, forming iron oxides which impart a red hue to the soil. The formation of rich red soils is often an indication of a climate that was warm, humid and well-drained, such as a tropical or subtropical climate, with seasonal precipitation. These environments promote chemical weathering and oxidizing conditions of the B horizon.

The coloration of the purple paleosols is due to a lower concentration of iron and a higher concentration of hematite compared to red soils. This indicates less well-drained conditions during the time of deposition since poorer drainage leads to less oxygen in the soil, reducing the creation of iron oxides.

The yellow-brown paleosols form from a mixture of hematite and geothite.

Climatic Significance

The PMIP's colored stratigraphy as well as the superpositional position relative to the other rock units illustrates a change in the regional climate around the time of each paleosols formation. The gray mudrocks, coals, lignites, and carbonaceous shales below the paleosol interval are indicative of a widespread organic layer which form when precipitation occurs year-round. PMIP's colorful paleosols indicate that, at least regionally, precipitation at the time of their formation decreased by becoming more seasonal rather than year-round (Geologic Survey 5).

Cultural Resources

Historic Significance

The historic significance of the Park has been recognized nationally by its designation as an Archaeological District listed on the National Register of Historic Places in 2000. The Archaeological Inventory and Limited Testing conducted in 1998 reveals a human connection to PMIP as early as 7000 BC. The quantity and nature of archaeological remains suggests that the Paint Mines were an occupation area used on a longer-term basis, not simply a short-term transitory use area, that were inhabited continually throughout the prehistoric period. Evidence of historic use is less prolific. Additionally, prehistoric peoples of different regions used the area's geologic anomalies, not elsewhere available in the Plains region, as specific resources (Archaeological Inventory and Limited Testing 150) . Exactly how and why the site was used throughout history is yet to be understood, but PMIP has the potential to provide a better understanding of its use and prehistoric subsistence practices over time.

Historically and prehistorically, the Paint Mines Interpretive Park may have presented a water source, as evidenced in modern seeps and wetlands. Prehistoric occupation seems to have been most dense around waterways, and historic Euro-American settlement and land use also appears to have been affected by the availability of water.

The clay deposits within PMIP represent the only documented prehistoric clay source found in the Colorado Great Plains (Management Plan 14). Petrographic analysis of ceramic sherds confirms local clays were used, with color deference, for ceramic manufacture at PMIP (Archaeological Inventory and Limited Testing 123), but no physical manifestation of prehistoric clay procurement activities, nor evidence of paint use has been determined (Archaeological Inventory and Limited Testing 138). Generally speaking, parts of bison bones functioned as paint application tools and bison hide was a regular vehicle of painted expression or decoration for tribal Plains peoples. Furthermore, "ferruginous" or "iron-bearing" clays like those in the study area, are commonly cited as a paint used by Plains peoples (Archaeological Inventory and Limited Testing 139). However, the archaeological record has yet to provide direct evidence of minerals modified into paints, implements associated with painting, or material remains that could potentially be used for prepping a hide for painting.

The local Parker petrified (silicified) wood was used for stone tool manufacture, accessible from the local Dawson Formation outcroppings. Previous work in regions where this outcropping occurs indicates that prehistoric sites tend to be denser where the petrified wood material is locally available (Archaeological Inventory and Limited Testing 21). In addition, the Paint Mines topography itself might have been exploited for bison procurement and/or processing, but more research is required to tie possible faunal processing or procurement to direct usage of the Paint Mines topographic features by prehistoric peoples.

In summary, the Calhan Paint Mines Archaeological District is not just of great potential significance to our knowledge of Plains Prehistoric periods, but it appears to have been a specific geographic resource known throughout human occupation of the Colorado High Plains.

Cultural Practice Timeline

Below is a description of the understanding of potential cultural practices engaged during PMIP occupation throughout specific Prehistoric periods:

Prehistoric Period

The prehistory of human occupation within the Arkansas River Basin is divided into three major stages, the Paleoindian Stage (11,500 to 7,800 BC), the Archaic Stage (7,800 to 1,850 BC), and the Late Prehistoric Stage (1,850 to 225 BC). Zier and Kalasz (1999) subsume the Protohistoric and perhaps what some might call Plains Village into their Late Prehistoric Stage. Each of these stages is further subdivided into periods, with another subdivision into phases within the Diversification Period of the Late Prehistoric Stage (Cultural Resources Class I Analysis 6).

Paleoindian Stage (11,500-7,800 BC)

The earliest people to live in the region that would eventually be known as Colorado were the Paleoindians. These groups, who may have migrated into North America from northeastern Asia over the Bering Land Bridge during the waning stages of the Pleistocene epoch, were present in the region by at least 11,500 BC (Cultural Resources Class I Analysis 23).

The Paleoindian stage is subdivided into four periods, each period named after a distinctive lanceolate projectile point, or suite of points: Pre-Clovis (>11,500 BC), Clovis (11,500-10,950 BC), Folsom (10,950-10,250 BC), and Plano (10,250-7,800 BC). The Paleoindian Stage is characterized by small, mobile populations utilizing a distinct stone tool technology for communal hunts and the butchering of large mammals. Projectile points are generally large, lanceolate, and well-made. The styles become more region-specific through time. Lithic materials used tend to be high-quality silicates, often from long-distance sources, suggesting either trade networks or extensive migration through the regions. The evidence indicates the people were generalists in their hunting strategies, with increasing emphasis on large game, particularly bison, by the Plano Period. Ground stone tools used for plant processing are rare early in the stage but become more common by the end, suggesting increased utilization and processing of plant foods. Evidence for

the Paleoindian periods in the Arkansas River Valley area is scant but Clovis, Folsom and Plano artifacts have been found (Cultural Resources Class I Analysis 7).

Two sites within PMIP were identified to have Paleoindian components.

Archaic Stage (7800-1850 BC)

The Archaic stage is divided into three periods: the Early Archaic (7,800 to 5,000 BC), the Middle Archaic (5,000 to 3,000 BC), and the Late Archaic (3,000 to 1,850 BC). The transition from the Plano Period of the Paleoindian Stage to the Archaic is marked by a sharp contrast in projectile point styles. While the Paleoindian points are lanceolate in morphology, the Early Archaic points exhibit shallow side-notches, likely a technological shift to the use of the dart and atlatl (throwing stick) increasing the speed and distance of the throw (Cultural Resources Class I Analysis 7). Grinding stones known as manos (hand stones) and metates (grinding slabs) were used to process plants.

Early: Evidence for the Early Archaic is limited, which could be an indication of near abandonment of the Plains areas in favor of more upland environs during the Altithermal climatic episode (Cultural Resources Class I Analysis 7). The paucity of sites dating to the Archaic in other portions of the context area could also be a product of poor site preservation or the sites could be deeply buried. The archaeological record from the surrounding regions indicates low population density with an increasing reliance on smaller mammals, which were intensively processed. There are no sites within Paint Mines Interpretive Park yet defined that date to the Early Archaic period (Cultural Resources Class I Analysis 7).

Middle: Changing paleoclimatic conditions may have caused geomorphic processes resulting in more stable landscapes – and a better-preserved archaeological record (Cultural Resources Class I Analysis 7). Mesic conditions may have provided for more expansive forage for bison and thus the expansion of McKean bison hunters into southern and southeastern Colorado (Cultural Resources Class I Analysis 7). The appearance of the McKean Complex lithic technology, most visibly the point variations, is significant for the region. During this period, populations increased, and people settled and exploited a wider array of ecological zones (Cultural Resources Class I Analysis 8). A broad array of both animal and plant resources were utilized, still focused on smaller mammals, although bison were exploited with increasing frequency through time. The earliest datable rock art known (not associated with PMIP) is from this period.

Late: The Late Archaic Period was a continuation of the settlement and economic practices of the preceding period. It is marked by the disappearance of the McKean Complex projectile points and an increase in the variability of point type morphology. Additionally, the earliest evidence of corn appears during the Late Archaic, although it was likely just a dietary supplement to the dominant hunting/gathering lifestyle. Phillips (2008) defines the Early Ceramic Period from 2,000-1,000 BC, which overlaps with the Late Archaic (3,000-1000 BC) (Cultural Resources Class I Analysis 8).

Late Prehistoric Stage (1,850-225 BC)

The Late Prehistoric Stage is divided into three periods: the Developmental (1,850 to 900 BC), the Diversification (900 to 500 BC), and the Protohistoric Period (500 to 225 BC). It is characterized by a shift in both technology and settlement practices. The two major changes include the introduction of the bow and arrow technology, resulting in much smaller projectile points, and a change in the manufacture and decoration of ceramics. As for economics and settlement practices, hunting and gathering of a broad array of animal and plant resources was still the primary means of survival, but maize horticulture became more common, along with an improvement in food storage techniques. These innovations allowed for a more semi-nomadic lifestyle and the establishment of more permanent habitations (Cultural Resources Class I Analysis 8). PMIP includes three late prehistoric sites.

Within park boundaries, numerous sites of historic value have been observed and documented. These include middle archaic sites, sites with Late Archaic/Early Ceramic period components, and sites from the Early Ceramic period: (2,000-1000 BC).

PMIP Cultural Resources Class I Analysis

As a part of this PMIP Master Plan, reporting prepared by Metcalf Archaeological Consultants, Inc. was developed to provide a compilation of previous archaeological and historic work that has been conducted within PMIP. This reporting included a review of existing literature available regarding PMIP including background culture history of the region, results of a Class I files search with a summary of cultural resource inventory of known resources and the potential for the discovery of new resources, and recommendations for cultural history education and interpretation.

Recommendations resulting from the PMIP Cultural Resources Class I Analysis include:

1. A previous study completed in 1998 documented a total of 28 archaeological sites that are National Register of Historic Places (NRHP) eligible. Documenting additional cultural sites was out of the scope of the PMIP Master Plan, but it is recommended for a future Class III pedestrian inventory to be completed to re-survey the entire property for existing cultural resources.
2. An updated survey would also provide the county with updated GIS location information, aiding in planning for future park improvements and ensuring that existing resources are protected.
3. Public education is also very important to protect cultural resources, like those found at PMIP. It is recommended that new and additional interpretive signage be installed throughout the Park to inform visitors of the rich history of the property, and the importance of preserving the Park's resources. Exhibits displaying and describing archaeological artifacts could be located in a protected location within the Park (like the proposed visitors center).
4. Additionally, partnerships with area universities for research projects at PMIP could potentially provide more information for the County and aid in further educating the public regarding the Park's resources.

Natural Resources

Site Ecology

Paint Mines Interpretive Park is situated in a distinctive regional environment, featuring rolling prairies, intermittent creeks, and localized features including critical wetlands and riparian zones. The interface of these components creates an ecosystem that is unusual and special for the area. Components of the ecological systems present at the site are described in more detail below. A list of plant and wildlife species that have been documented at the site, or that could occur, is provided in Appendix 3.

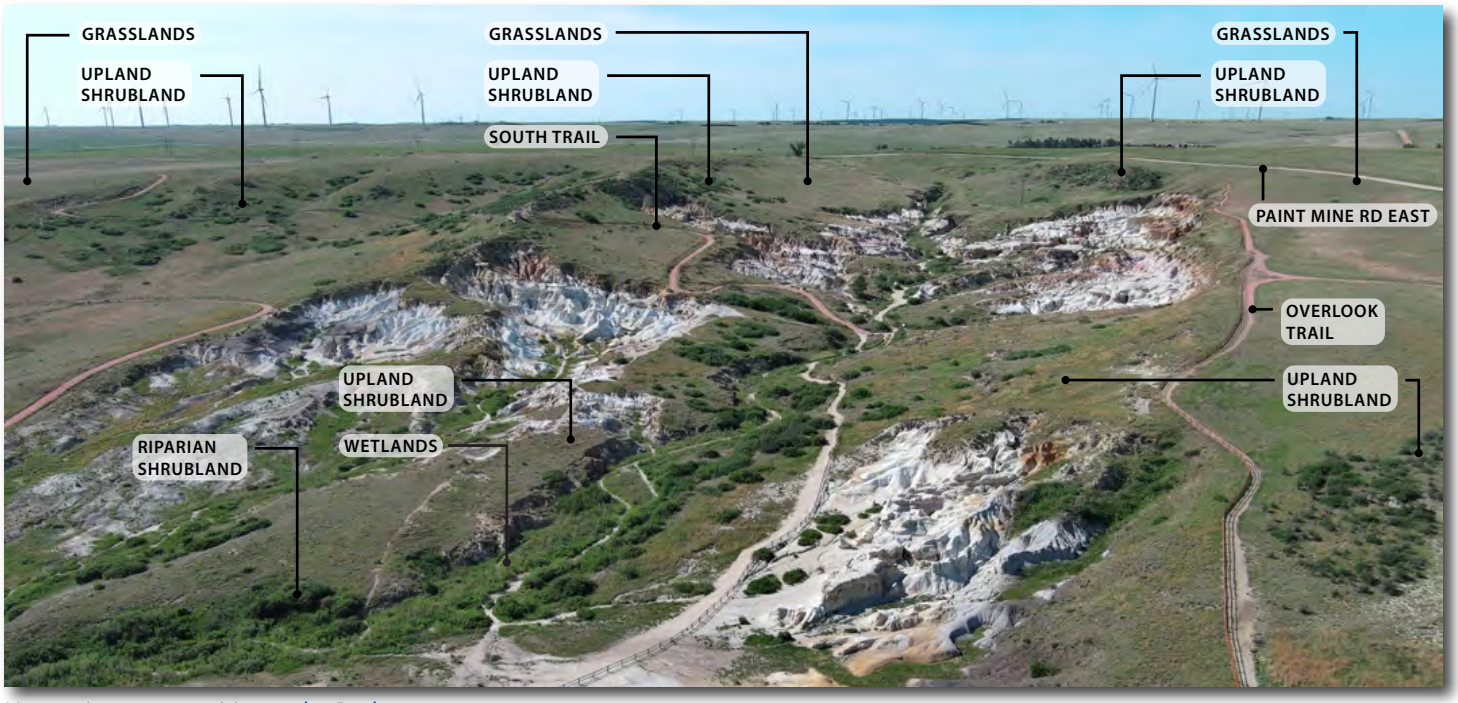
DHM Design Ecological Services staff completed an ecological site assessment to evaluate existing ecological conditions, opportunities, and constraints as they relate to current and future management of the natural resources of the Park. The team also merged the numerous site documents into the following sections, to offer a summary of historical natural resource finds at the Park. This information was then used to influence the creation of this Master Plan. The Plan's design is intended to harmonize the relationship between passive recreation and ecological function.

Hydrology

The property is situated in the Big Sandy Creek watershed, which feeds into the Arkansas River downstream. The site includes four intermittent drainages that flow northward, and merge to form a single drainage before exiting the property boundaries, to the northwest. The drainages conform and contribute to the formation of the geologic structures at the site. Additionally, several perennial pools form on the property due to the presence of natural seeps. Clay deposits in the soil slow down water absorption. 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. Lastly, stock ponds are present in the property and were created by historical agricultural practices on the land. Several small earthen dams are present that limit water flow, and subsequently create ponds. Ponds are surrounded by emergent bulrushes and cattails, coyote willow, and other hydrophytic vegetation. Absorption of water into the ground in areas mentioned has been found to be limited due to the presence of clay soils at the site.

Vegetation Communities

The property falls within the Southwestern Tablelands / Foothill Grasslands ecoregion, as defined by the Environmental Protection Agency. Paint Mines Interpretive Park is composed of native prairie grasslands, introduced grasslands, upland shrublands, scrub-shrub riparian, emergent wetlands, and scattered coniferous woodlands. Common native grasses, such as blue grama (*Bouteloua gracilis*) and buffalograss (*Bouteloua dactyloides*) are found throughout the Park. Other common species identified at the site include rubber rabbitbrush (*Ericameria nauseosa*), four-winged saltbush (*Atriplex canescens*), and smooth brome (*Bromus inermis*). Many of these species are commonly found in the rangelands of eastern Colorado. Upon field review and aerial imagery analysis, five main vegetation communities were found on the open space property. The communities are described in further detail below and a comprehensive plant list is provided in Appendix 3.



Vegetation communities at the Park

Grasslands

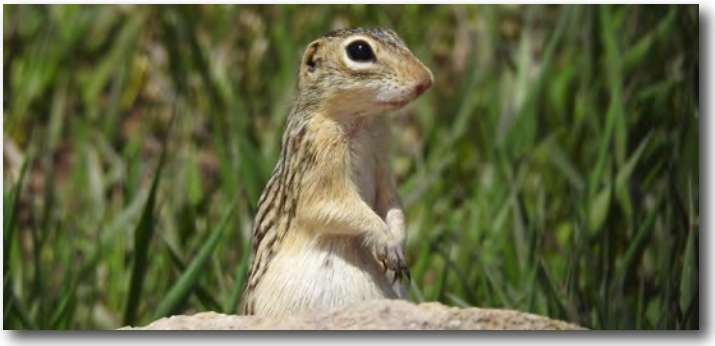
Native Mixedgrass Prairie

Native mixedgrass prairie is prevalent throughout the property and is dominated by blue grama and buffalograss. These two native species are moderately dense and form sod-like patches with scattered midgrass and forb species. Midgrass graminoids found in this community include sideoats grama (*Bouteloua curtipendula*), needle-and-thread grass, (*Hesperostipa comata*), prairie Junegrass (*Koeleria macrantha*), and western wheatgrass (*Pascopyrum smithii*). Forb species documented in this community included hedgehog cactus (*Echinocereus viridiflorus*), spreading daisy (*Erigeron divergens*), wallflower (*Erysiumum sp.*), false golden aster (*Heterotheca sp.*), prairie evening primrose (*Oenothera albicaulis*), and chiming bells (*Mertensia lancelata*), among many others. Sparse rubber rabbitbrush and broom snakeweed (*Gutierrezia sarothrae*) were seen to compose the shrub layer of the community. Additionally, some areas are more sparse, with scattered native grasses and forbs, yucca (*Yucca glauca*), and bare, exposed soils present. This community is commonly found in the eastern plains of Colorado in lowland sites with well-developed soils composed of loam, clay, and silty clay. At the site, native midgrass prairie covers flat areas and rolling hills. The National Vegetation Classification (NVC) System vegetative community that matches the site is G133 Southern Great Plains Mixedgrass Prairie.

Native sod-like patches of buffalograss

Ruderal Grasslands

Ruderal grasslands dominated by smooth brome are present within the property. These areas are prevalent where intermittent water flow occurs when regular inundation does not occur enough for wetland vegetation to establish. It is also found in many upland areas throughout the site, scattered within native shortgrass prairie areas and also creating monocultures in some areas of the property. In the monoculture areas, smooth brome is very dense and does not permit other herbaceous species to grow. The NVC System vegetative community that matches the site is G679 Northern & Central Great Plains Ruderal Grassland & Shrubland.



Thirteen-lined ground squirrel documented in native prairie

Shrublands

Upland Shrublands

Upland shrublands are scattered throughout the property. The southern half of the main parcel has the largest concentration of upland shrublands, where wax currant (*Ribes cereum*), chokecherry (*Prunus virginiana*), snowberry (*Symphoricarpos occidentalis*), and mountain mahogany (*Cercocarpus montanus*) form clusters of shrubs on hillslopes, surrounded by grassland communities. Upland shrublands often line the periphery of riparian and wetland areas, and are primarily composed of snowberry, chokecherry, golden currant (*Ribes aureum*), skunkbush sumac (*Rhus trilobata*), and wax currant in such areas. Flatter, lowland rubber rabbitbrush shrublands were also seen throughout the site that show signs of occasional water pooling from the presence of soil cracks. Four-winged saltbush and rubber rabbitbrush also occasionally are clustered together in flat, dry, upland grassland sites. The NVC Systems that best matches the different upland shrubland vegetative communities present at the site include G559 Great Basin-Intermountain Shrub & Herb Wash-Arroyo and G276 Southern Rocky Mountain Mountain-mahogany - Mixed Foothill Shrubland.

Hedgehog cactus documented in native prairie

Wet Shrublands / Riparian

Wet shrubland / riparian zones are present throughout the property along waterways with ephemeral and intermittent water flows. Most occurrences span 10 to 20 feet wide and are on the periphery of where obvious waterflow occurs. However, this community is also present within the channel flow area. In these areas, small wetland pockets may be present within the riparian community. Dominant species include narrowleaf willow (*Salix exigua*), snowberry, chokecherry, and interior rush (*Juncus interior*), among other forbs and graminoids. These areas are maintained by temporary flooding from spring runoff. Soils in this community are typically composed of alluvial deposits of sands, clays, silts, and cobbles. The NVC System vegetative community that best matches the wet shrublands and riparian zones is G526 Rocky Mountain-Great Basin Lowland-Foothill Riparian Shrubland.

Ruderal grassland example at the Park

Coniferous Woodlands

Coniferous woodlands documented during surveys were comprised of scattered one-seed juniper (*Juniperus monosperma*) and only are present in the western parcel. These woodlands compose a small area of the property along hillslopes and along intermittent alluvial washes. The understory of the vegetation community was similar to the native shortgrass prairie community, and was primarily composed of blue grama, buffalograss, and smooth brome. Occasional shrubs were noted and included snowberry, wax currant, and mountain mahogany. Mule deer (*Odocoileus hemionus*) were seen in this community during the site visit, using trees for shade and cover. The NVC System vegetative community that best matches the coniferous woodlands documented is G252 Southern Rocky Mountain Juniper Open Woodland.

Willow shrubland

Wetlands

Wetlands are present within intermittent waterways and surrounding ponds found in the property. Occasional water flow was obvious from signs of sediment transport, soil cracks, and the presence of wetland obligate plants. Species such as interior rush, narrowleaf willow, saltgrass (*Distichlis spicata*), and rose (*Rosa sp.*) were noted in areas with historical water flows. Additionally, pond areas with emergent wetland vegetation were documented, composed of monocultures of cattails (*Typha spp.*) or bulrush (*Schoenoplectus sp.*) species. The NVC System community that best matches the wetland types found in the property include G325 Great Plains Freshwater Marsh and G568 Great Plains Riverscour Vegetation.

Other

Other types of landcover exist in the property and include dry washes that are devoid of much vegetation, badlands with exposed soils, and areas historically disturbed or modified by people that do not currently have vegetation present (parking lots, trails, and dams).

Typical site drainage

Table 1 *- Vegetation Community types at Paint Mines Interpretive Park*

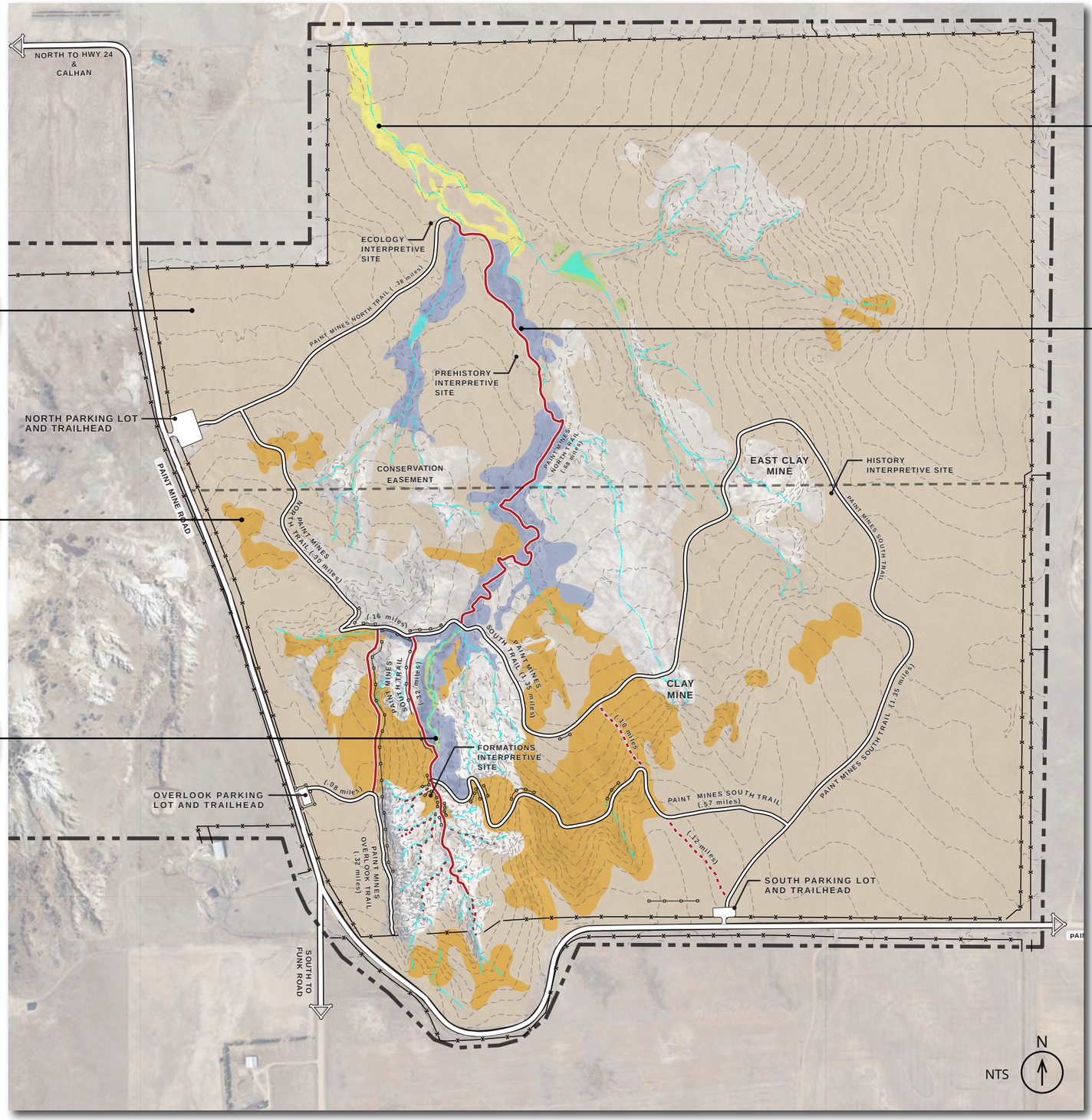
Vegetation Type	Details	Acreage
Grassland	Native prairie composed of blue grama and buffalograss. Ruderal grassland composed of smooth brome.	499.99
Upland Shrubland	Various pockets of shrublands composed of wax currant, chokecherry, rabbitbrush, and four-winged saltbush.	85.88
Wet Shrublands / Riparian	Shrublands on the periphery of water features, composed of golden currant, snowberry, chokecherry, and narrowleaf willow.	18.80
Wetlands	Emergent wetlands surround ponds or are located in depressional areas with cattails, sedges, and rushes dominating.	1.51
Coniferous Woodland	One-seed juniper scattered woodlands on hillslopes.	20.28

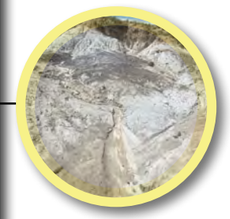
Vegetation Communities Map

GRASSLANDS
Native prairie composed of blue grama and buffalograss. Ruderal grassland composed of smooth brome.

UPLAND SHRUBLAND
Various pockets of shrublands composed of wax currant, chokecherry, rabbitbrush, and four winged saltbush.

WETLAND
Emergent wetlands surround ponds or are located in depressional areas with cattails, sedges, and rushes dominating.





DRYWASH
Areas that generally are devoid of any vegetation, located around formations and within the drainages.

RIPARIAN SHRUBLAND
Shrublands on the periphery of water features, composed of golden currant, snowberry, chokecherry, and narrowleaf willow.

LEGEND

- PROPERTY BOUNDARIES
- MAINTAINED 8' WIDE CRUSHER FINES
- MAIN TRAIL, NATURAL SURFACE
- SOCIAL TRAILS
- EXISTING TWO RAIL WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING MAJOR CONTOUR
- CONSERVATION EASEMENT
- DRAINAGE

VEGETATION COMMUNITIES

- UPLAND SHRUBLAND
- GRASSLANDS
- RIPARIAN SHRUBLAND
- DRYWASH
- WETLAND

Noxious Vegetation

The Colorado Noxious Weed Act states that noxious weeds are a present threat to the economic and environmental value of the lands of the state of Colorado. Listed noxious weeds are designated as List A, B, C, or watch listed. Noxious weeds tend to inhabit areas that are disturbed, such as roadsides, construction areas, public lands overused by animals and people, wetlands, and riparian corridors. Overall, the Park's vegetation is in excellent condition, but noxious weeds and other non-native plants are present. Non-native plants have likely been introduced through past land management, visitation by recreationists and pets, and the location of the Park near a roadway. Plants that are invasive or listed as Colorado state noxious weeds are provided in Appendix 3 in the Park's plant list. A total of 11 state-listed noxious weeds have been found historically at the site.

Common mullein is a noxious weed documented at the Park.

Rare Plants

Paint Mines Interpretive Park hosts several rare plant species that are adapted to its unique habitats, particularly within the badlands and mid-grass prairie. Notable among these is Colorado bursage (*Ambrosia linearis*), which is a rare Colorado endemic plant found primarily in sandy or gravelly soils along river valleys and grasslands. Its habitat includes open areas with full sun, often near sagebrush and rabbitbrush communities. Colorado bursage was recently documented within the Park, during a survey conducted by the Denver Botanic Gardens. A list of the four rare plants historically documented in the Park is provided in Table 2. The presence of these species emphasize the ecological importance of the Park, where careful management is crucial to preserving habitat present and the biodiversity they support.

Table 2 *– Sensitive Plant Species Documented at PMIP*

Scientific Name	Common Name	Conservation Status
Ambrosia linearis	Colorado bursage	G3/S3
Asclepias hallii	Hall's milkweed	G3/S3
Eleocharis mentevidensis	Sand spikerush	G5/SNR
Juncus brachycephalus	Smallhead rush	G5/S1

Global Ranking Codes: G3, vulnerable to extirpation or extinction; G4, widespread, abundant, and apparently secure; G5, demonstrably widespread, abundant, and secure; T, rank applies to subspecies or variety.

State Ranking Codes: S1, state critically imperiled; S2, state imperiled; S3, state rare or uncommon; S4, state apparently secure, SNR, not ranked in the state.

Colorado bursage (Ambrosia linearis) is a rare plant species that has been documented at the Park. (Source: Janet Wingate)

Wildlife and Habitats

Paint Mines Interpretive Park is characterized by its unique geological formations and diverse habitats that support a wide range of wildlife species. The Park's landscape includes midgrass prairie, riparian corridors, upland shrublands and badland formations, each offering distinct ecological niches.

Lark sparrow is a common bird species at the Park

Grassland habitats within the property are in excellent condition and contain a high diversity of native graminoids, forbs, and shrubs. This translates directly to exceptional wildlife habitat. Native grasslands provide resources for a wealth of wildlife species. The preservation of these native grasslands is crucial, especially as their availability has declined due to agricultural expansion and urban development in recent years in Colorado. Protecting this habitat within the property contributes to the conservation of bird species that are grassland-obligate, including Say's phoebe (*Sayornis saya*), grasshopper sparrow (*Ammodramus savannarum*), horned lark (*Eremophila alpestris*), and the state bird, lark bunting (*Calamospiza melanocorys*). Native grass species like blue grama and buffalo grass provide essential foraging grounds for various herbivores, including mule deer and pronghorn antelope (*Antilocapra americana*). These areas are also home to numerous small mammals, such as thirteen-lined ground squirrels (*Ictidomys tridecemlineatus*) and cottontail rabbits (*Sylvilagus sp.*), which, in turn, attract predators like coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*).

The riparian areas, although limited, are crucial for sustaining a different assemblage of species. The riparian scrub-shrub habitats on the property consist primarily of coyote willow and other early successional riparian plants. These areas are sought out by wildlife year-round for food, cover, and shelter. It is estimated that in Colorado, approximately 75 percent of wildlife species depend on riparian habitats at some point in their life cycles. The need to conserve these spaces is important, as they comprise only about one percent of the state's land mass. Species that may occur at the property that would utilize this habitat include lazuli bunting (*Passerina amoena*), house wren (*Troglodytes aedon*), and mule deer.

Mule deer are common at the Park

Swift fox is an uncommon, sensitive mammal species in the state that is dependent upon native grasslands in the eastern plains. The species has historically been documented in the Park

Plains leopard frog is a state sensitive amphibian species that is dependent upon the sparse wetland habitats in the Park

Wetland habitats on the property are limited and are primarily found adjacent to stock ponds. Despite containing low plant diversity, property wetlands still provide key habitat for wildlife, especially bird species. Pond vegetation containing cattails, sedges, and rushes offer habitat for bird species such as red-winged blackbird (*Agelaius phoeniceus*), song sparrow (*Melospiza melodia*), and mallards (*Anas platyrhynchos*). Moreover, these wetland environments support populations of herptofauna, including uncommon and rare species. Species that have been observed or could potentially occur include the western painted turtle (*Chrysemys picta*), ornate box turtle (*Terrapene ornata ornata*), western terrestrial gartersnake (*Thamnophis elegans*), and the sensitive plains leopard frog (*Lithobates blairi*). Scattered shrublands composed of fruit-producing species, including chokecherry and currants, provide essential forage for numerous many wildlife species. These habitats also offer crucial cover for birds, reptiles, and mammals during critical periods of the year, which is particularly significant in the open landscape where temperatures can soar during spring and summer. Species that rely on the presence of these habitats include pronghorn antelope, mule deer, Virginia's warbler (*Leiothlypis virginiae*), and lark sparrow (*Chondestes grammacus*).

The juniper woodlands located in the western parcel remain undisturbed by human visitation, as no trails or access is currently allowed to this area. These woodlands offer crucial shelter and shade for local wildlife. Observations include mule deer seeking refuge in these wooded areas, during a hot summer day and red-tailed hawks (*Buteo jamaicensis*) soaring overhead. Other wildlife species benefiting from these habitats may include various raptors, cavity-nesting birds, desert cottontails, greater short-horned lizards (*Phrynosoma hernandesi*), and coachwhips (*Masticophis flagellum*).

The badland formations within Paint Mines Interpretive Park create a more arid and rugged environment, where specialized species have adapted to the harsher conditions. Reptiles such as the bullsnake (*Pituophis catenifer*) and eastern fence lizard (*Sceloporus undulatus*) are commonly found in these rocky areas, seeking shelter in crevices and basking on sunlit surfaces. The sparse vegetation in these badlands supports a unique community of invertebrates, which are crucial for the Park's ecological balance. Overall, the varied habitats within PMIP foster a rich diversity of wildlife, making it a valuable natural area for conservation and ecological study.

Say's phoebe is a common bird species at the Park

Sensitive Wildlife Species

Paint Mines Interpretive Park is composed of unique landscapes, including colorful geological formations, open grasslands, and intermittent wetlands, which together create a diverse range of habitats. These varied environments support many specialist species that rely on specific conditions, such as grassland birds and amphibians, to thrive and maintain their populations. As a result of these unique conditions, numerous sensitive wildlife species have been documented historically or have the potential to occur at the Park.

Among the notable species, raptors such as the golden eagle (*Aquila chrysaetos*) and ferruginous hawk (*Buteo regalis*) utilize the Park's expansive grasslands, cliff habitat, and pinyon-juniper woodlands. These large birds of prey depend on open areas for hunting small mammals and reptiles. The cliffs and elevated areas provide safety from potential disturbances and potentially nesting habitat, although it is unlikely golden eagles would use these areas for nesting. Ferruginous hawks may use pinyon-juniper habitat for nesting and all raptors may use the habitat for perching, roosting, and shelter during windy conditions, hot summer days, and at night. The protection of these habitats is critical, as both species are classified as sensitive. Both ferruginous hawk and golden eagle have been documented in the Park historically on past surveys completed.

Lark bunting, the Colorado State Bird and a sensitive species, is seen in the Park frequently

In addition to the raptors, grassland ecosystems within the Park play a crucial role in supporting species like the lark bunting, grasshopper sparrow, and swift fox (*Vulpes velox*). The lark bunting, Colorado's state bird, and the grasshopper sparrow, rely on the Park's open prairies for nesting and foraging, where the mix of native grasses and shrubs offers the ideal habitat structure. The grasslands present are also essential for the swift fox, which depends on open, undisturbed landscapes for hunting and

Ferruginous hawk is a state sensitive raptor species that has been documented in the Park

Western meadowlark is a common bird species at the Park

denning. The presence of these species and several other grassland-dependent sensitive wildlife species highlights the importance of preserving the Park's grasslands, as they provide the specific habitat conditions necessary for these species to thrive.

The Park's limited but important wetland habitats further contribute to its biodiversity, supporting species such as the plains leopard frog, which relies on these moist environments for breeding and foraging. These amphibians are highly sensitive to changes in water availability and quality, making wetland preservation a key priority for maintaining their populations. Although the wetlands at PMIP may not be as extensive as other habitat types, they are crucial for sustaining amphibian life cycles and providing a water source for many other wildlife species.

Table 3 on the next page lists wildlife species that have the potential to occur or have been historically documented at the Park. The list includes 22 bird species, one amphibian, seven mammals, and one reptile, all categorized as sensitive species.

Pronghorns utilizing native prairie

Upland shrublands located on the south side of the main parcel area composed of wax currant, chokecherry, and mountain mahogany

Horned lark is a common bird species at the Park

Table 3 *– Sensitive Wildlife Species Documented or Potentially Occurring at Paint Mines Interpretive Park*

Common Name	Scientific Name	Conservation Status
Birds		
American white pelican	*Pelecanus erythrorhynchos*	G4/S1B, Tier 2
Bald eagle	*Haliaeetus leucocephalus*	G5/S1B, S3N, Tier 2, SC
Brewer's sparrow	*Spizella breweri*	G4/S2B, Tier 2
Burrowing owl	*Athene cunicularia*	G4/S4B, Tier 1, ST
Cassin's sparrow	*Aimophila cassinii*	G4/S2B, Tier 2
Curve-billed thrasher	*Toxostoma curvirostre*	G5/S3
Ferruginous hawk	*Buteo regalis*	G4/S3B, S4N, Tier 2, SC
Golden eagle	*Aquila chrysaetos*	G5/S3S4B, S4N, Tier 1
Grasshopper sparrow	*Ammodramus savannarum*	G5/S3S4B, Tier 2
Greater sandhill crane	*Grus canadensis tabida*	G5T4/S2B,S4N, Tier 2, SC
Lark bunting	*Calamospiza melanocorys*	G5/S4, Tier 2
Lazuli bunting	*Passerina amoena*	G5/S5B, Tier 2
Loggerhead shrike	*Lanius luovicianus*	G4/S3S4B, Tier 2
Long-billed curlew	*Numenius americanus*	G5/S2B, Tier 2 SC
Northern harrier	*Circus cyaneus*	G4/S3B, Tier 2
Peregrine falcon	*Falco peregrinus*	G4T4/S2B, Tier 2, SC
Prairie falcon	*Falco mexicanus*	G5/S4B, S4N, Tier 2
Short-eared owl	*Asio flammeus*	G5/S2B, Tier 2
Swainson's hawk	*Buteo swainsonii*	G5/S5B, Tier 2
Virginia's warbler	*Vermivora virginiae*	G5/S5B, Tier 2
Amphibians		
Plains leopard frog	*Lithobates blairi*	G5/S3, Tier 2, SC
Mammals		
Black-tailed prairie dog	*Cynomys ludovicianus*	G4/S3, Tier 2, SC
Botta's pocket gopher	*Thomomys bottae*	G5/S1, Tier 2, SC
Hoary Bat	*Lasiurus cinereus*	G5/S5B, Tier 2
Olive-backed pocket mouse	*Perognathus fasciatus*	G5/S3, Tier 1
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	G5/S1, Tier 1, ST, FT
Swift fox	*Vulpes velox*	G3/S3, Tier 2, SC
White-tailed jackrabbit	*Lepus townsendii*	G5/S4, Tier 2
Reptiles		
Central Plains milksnake	*Lampropeltis triangulum*	G5/S2, Tier 2

Global Ranking Codes: G3, vulnerable to extirpation or extinction; G4, widespread, abundant, and apparently secure; G5, demonstrably widespread, abundant, and secure; T, rank applies to subspecies or variety.
State Ranking Codes: S1, state critically imperiled; S2, state imperiled; S3, state rare or uncommon; S4, state apparently secure; B, breeding populations; N, non-breeding populations.
FP – Federally Proposed, FE – Federally Endangered, SE – State Endangered, ST – State Threatened, SC - State Special Concern, BGEPA – Bald and Golden Eagle Protection Act.
Tier 1 - species which are truly of highest conservation priority in the state, and to which CPW will likely focus resources over the life of the State Wildlife Action Plan.
Tier 2 – species considered important in light of forestalling population trends or habitat conditions that may lead to a threatened or endangered listing status, but the urgency of such action has been judged to be less than Tier 1.

Existing Infrastructure

Paint Mines Interpretive Park is a popular recreational resource for El Paso County and surrounding areas. Visitors come to the Park to walk the trails, learn about the history of the land, and explore the beautiful natural landscape.

Parking Lots/Trailheads

Three parking lots located along Paint Mines Road allow parking and access to PMIP.

North Trailhead Parking Lot

- Largest existing parking lot with approximately 57 parking spaces
- Unpaved and unstriped, with boulders delineating parking rows
- Single vault toilet on south side of lot
- (1) Small informational kiosk and (3) interpretive signs on east side of lot
- (1) Trash receptacle
- Stone Park sign at Paint Mine Rd
- Small, lockable shed for County use
- Oversized vehicles are able to turn around, no clear parking for larger vehicles

Existing North Trailhead Parking Lot

Overlook Trailhead Parking Lot

- Closest parking to the Park formations
- Smallest parking lot with approximately 17 parking spaces
- Unpaved and unstriped with split rail wood fence delineating boundary
- Port-o-let on northeast corner
- (1) Trash receptacle
- Stone Park sign at Paint Mine Rd
- No oversized vehicle parking

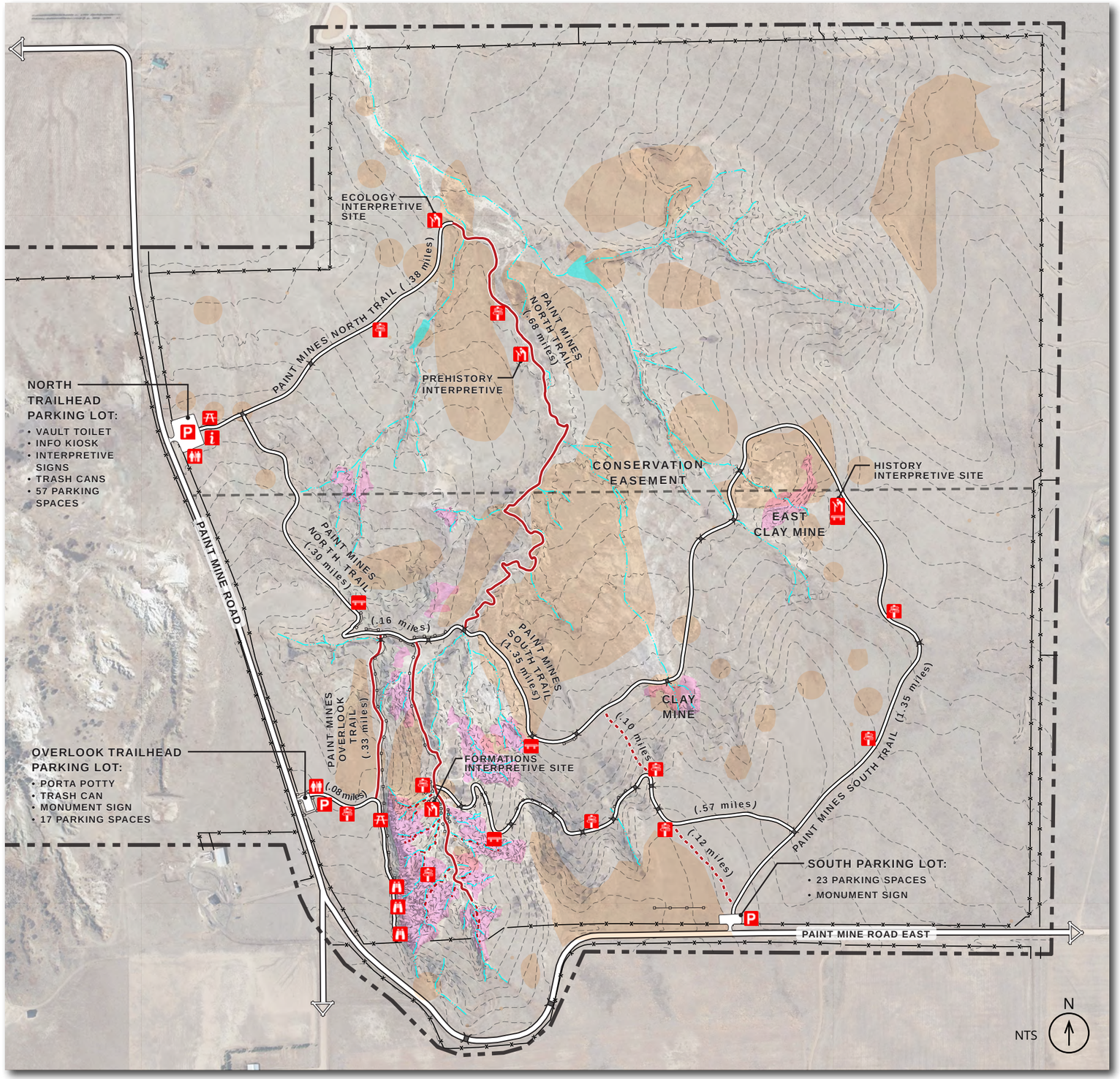
Existing Overlook Trailhead Parking Lot

South Parking Lot

- Approximately 23 parking spaces
- High rates of vandalism
- Unpaved and unstriped with split rail wood fence delineating boundary
- Stone Park sign at Paint Mine Rd
- No oversized vehicle parking or ability to turn around

Existing South Parking Lot

Existing Conditions Map



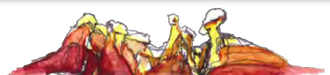
LEGEND

- PARKING
- RESTROOMS
- BENCH
- PICNIC SITE
- OVERLOOK SITES
- INTERPRETIVE SITES
- WAYFINDING SIGNS
- INFO KIOSK
- CULVERT
- PROPERTY BOUNDARIES
- MAINTAINED 8' WIDE CRUSHER FINES
- MAIN TRAIL, NATURAL SURFACE
- SOCIAL TRAILS
- EXISTING TWO RAIL WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING MAJOR CONTOUR
- CONSERVATION EASEMENT
- DRAINAGE
- FORMATIONS
- SENSITIVE AREAS

View looking west over formations

View looking south from within formations

View looking east from within formations



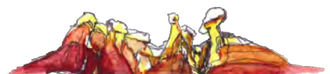
Existing Conditions – Formation Trails

PATH 1 -
- No clear end point of path promoting climbing and exploration
- Multiple paths to follow due to multiple drainages
- Paths turn wet/muddy due to drainage

PATH 2 -
- Narrow path following drainage
- No clear end point of path promoting climbing and exploration
- Temporary signage being ignored by visitors

PATH 2a -
- Primary path not defined
- Signs used to prevent climbing
- No clear end point of trail promoting climbing and exploration

PATH 3 -
- Path is not defined and obstacles create wider disturbance area
- Path brings visitors into contact with formations, further eroding delicate rock material
- Cave creates opportunities for vandalism



Existing Conditions – Formation Trails

PATH 4 -
- Path created due to mellow grade, visitors climbing out of formations to social trail on ridge

PATH 5 -
- Path is not defined and obstacles/drainage create wider disturbance area
- No clear end point of path promoting climbing and exploration
- Highest concentration of hoodoos and unique geology

PATH 6 -
- Path created due to mellow grade, visitors climbing out of formations to social trail on ridge

PATHS 7, 7a, 7b -
- Narrow paths following drainage
- No clear end point of paths promoting climbing and exploration
- Paths turn wet/muddy due to drainage

Trails

There are a total of 4.4 miles of soft surface trails in PMIP. Two larger "looped" trails allow visitors to explore the north and south ends of the Park. The "looped" trails are typically 8' wide, and the surface is compacted, red crusher fines. These trails are regularly maintained by El Paso County and very comfortable for two-way pedestrian traffic.

Existing 8' wide crusher fines, looped trail, view looking north

Natural surface trail along the north loop trail, view looking south

Other heavily used trails within the Park vary in width from 4'-10' wide, and consist of a light tan natural surface. These trails exist along the north trail, where the trail is located adjacent to a drainage, and within the main formations area.

Within the formations the trails are located along the small drainages running between the many canyons. The surface is native material, and the trails are often saturated by stormwater. In the saturated areas, there is evidence of visitors walking off trail to avoid saturated trails, creating a wide disturbance area in many locations throughout the Park. These larger disturbance zones impact not only the delicate formations, but also the adjacent vegetation. Some trails have steep steps and uneven ground with obstacles visitors walk around, where they often choose their own path, thus creating social trails and a wider disturbance area.

Example of a saturated trail within the formations

Social trails have been created by visitors walking off-trail and are located throughout the Park, including many located within the sensitive geologic formations. These trails provide a visual cue for visitors to explore outside the designated park trails. Many of the social trails within the main formations area typically lead to the top of the hoodoos, creating a safety hazard for visitors and are quickly degrading the formations, often leading to the collapse of geologic features that have been standing as a part of the landscape for thousands of years. The small trails within the formations do not always have clear wayfinding signage or barriers and visitors may not always know what trails are considered off-limits.

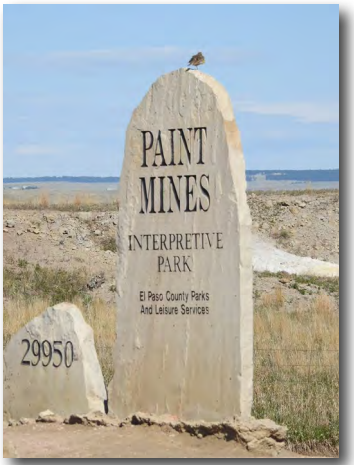
Some of the social trails have been used for so long, they are now part of the official trails within the Park. Other social trails within the Park have been restored to native vegetation and have been fenced off from public use. Fencing and signage are often ignored and many of these social trails are still in use by visitors.

Example of a social trail leading to the top of formations

Wayfinding Signage

A variety of wayfinding signs are located along the trails. Stone monument signs located along Paint Mine Rd are located at each of the three parking lots. One (1) informational kiosk with trail information is located at the northern parking lot. Trail Maps are located along the longer looped trails, and smaller directional signs are located within the formations. Numerous signs within the formations warn visitors to not climb on the geologic features. The signs are not cohesive in design and messaging.

Warning signs within the formations



Stone monument Park sign at Paint Mine Rd

Trail Map Sign along the trails

Interpretive Signage

Four (4) interpretive signs are located throughout the Park. These signs educate visitors on general geology, prehistory, history, and ecology at the Park. The signs are not cohesive in design and some display outdated information.

Existing interpretive and informational signs

Fencing

Fencing at the Park is limited to areas where it is needed for safety and to prevent visitor access. All fencing is a two rail wood fence (some locations have three rails). This type of fence is easy for the County to fix and replace as needed. Most of the fencing is located along trails at the top of steep drop-offs, such as at the overlook trail on the west side of the formations. Other fencing is located within the formations in an effort to keep visitors on trail. Fencing is in good condition and is maintained regularly by County staff.

Example of two rail wood fence found throughout the Park

Example of fencing installed to protect trail restoration area

Stormwater Infrastructure

The Paint Mines geologic formations have been shaped by erosion, making the maintenance of these natural drainage pathways a key aspect of site preservation. The existing site features three gravel parking lots and four miles of hiking trails provide access to the geologic formations. Runoff is currently managed using swales to divert flows around parking lots and culverts where necessary to carry flows to a roadside ditch along Paint Mine Road, allowing runoff to continue north away from the site. The existing trails are generally laid out to minimize impact on natural drainage. Where necessary, small swales run adjacent to trails to minimize trail erosion. Closer to the geologic features, runoff flows across trails, and trail erosion is evident. The runoff from the Park site generally flows north, where it is collected in an existing pond before continuing north.

Example of a swale located along an existing trail to direct stormwater away from the trail surface

Interpretive Park Caretakers

During the pandemic, the PMIP experienced a surge in visitors. In response, part-time Interpretive Park Caretakers were hired in May 2021 to work on Fridays, Saturdays, and Sundays (the park's busiest days), from May through the end of October. These staff members are trained in interpretive techniques and utilize the Authority of the Resource approach to protect the park. Their presence has led to a noticeable decrease in rule violations and has positively contributed to preservation effort.

Educational Programming

Educational programming at the PMIP featured quarterly themed interpretive hike series and guided expert hikes for paleontology, geology, and archeology. With the introduction of Interpretive Park Caretakers, the programming includes interpretive hikes twice a month during their working season, focusing on the geology and cultural history of the park and surrounding region. Additional offerings now include bird-watching events, school field trips, and guided hikes.

Site Opportunities

After site data was collected and compiled, the project team then analyzed the existing conditions to determine opportunities for improvement at PMIP. The following analysis detailed in this section was then used to develop initial concept designs and recommendations for park improvements.

Parks, Recreation, Open Space Conservation Trends

The project team analyzed recreational trends in parks and open spaces, gathering data from a variety of sources. In developing conceptual designs and recommendations at Paint Mines Interpretive Park, the project team utilized feedback from stakeholder and public outreach, and referenced the trend analysis below.

Data gathered indicates people visit parks with natural features for the following reasons:

1. Outdoor recreation, such as hiking, camping, and birdwatching, provides adventure and physical challenges
2. Escape from urban environments
3. Health and wellness benefits, including stress reduction, mental health enhancement, relaxation and mood improvement
4. Connection to nature
5. Educational and cultural experiences

Trends for Parks/Open Spaces:

1. **Conservation and Sustainability Practices**
   a. Waste reduction programs
   b. Renewable energy sourcing and integration
   c. Habitat restoration projects
   d. Educational programs on preservation encourage visitors to engage in eco-friendly behavior
   e. Climate change adaptation and resiliency assessments
   f. Sustainable infrastructure

2. **Inclusive and Accessible Park Experiences**
   a. Infrastructure improvements and/or mobility support vehicles or equipment to make trails, view platforms and facilities accessible to all visitors
   b. Diverse programing that caters to various interests and abilities

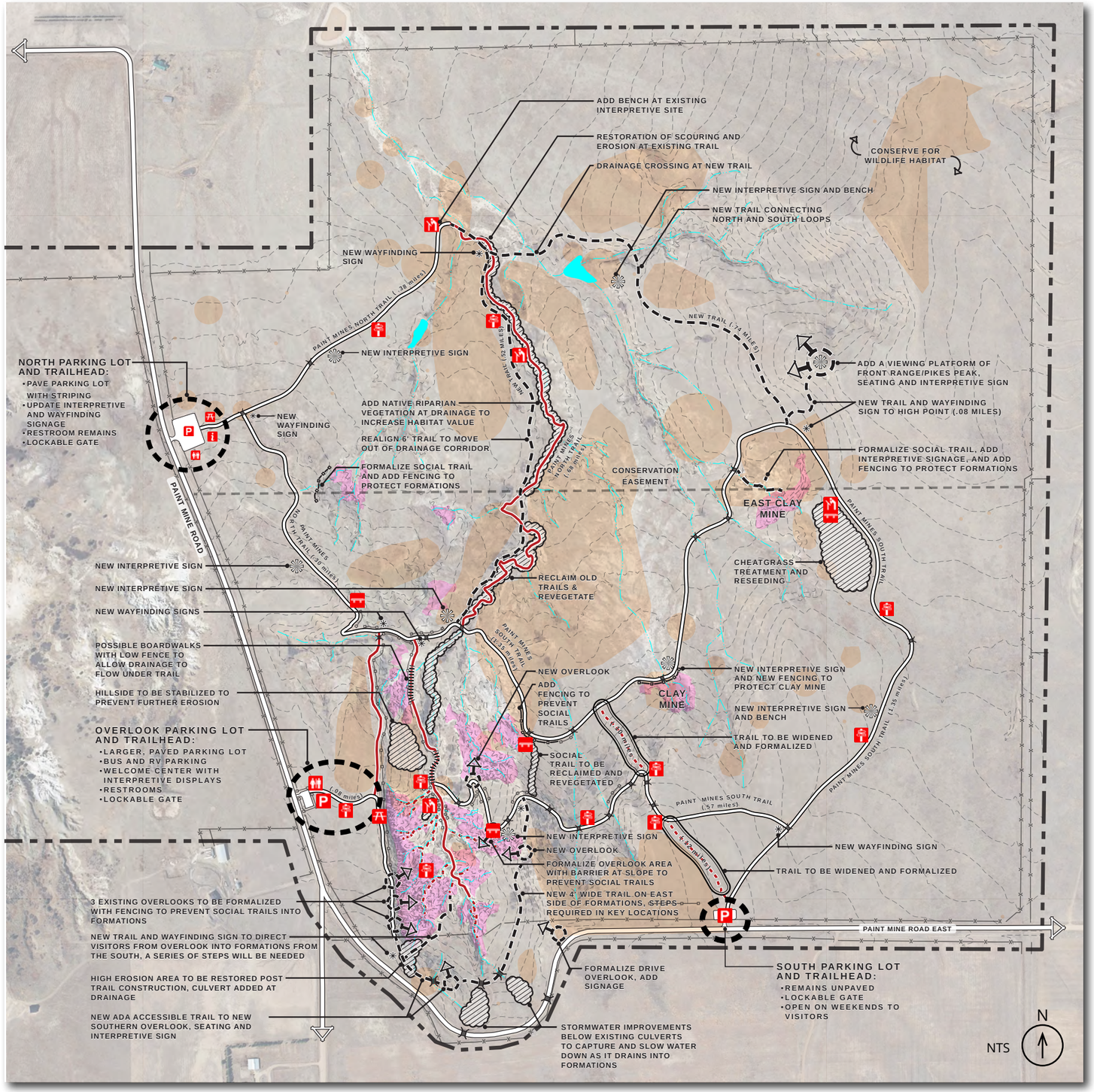
3. **Park Management**
   a. Community engagement and partnerships fosters community ownership
   b. Collaborate with local organizations, volunteers, and indigenous communities helps in co-managing resources and developing culturally enriching programs
   c. Parks are diversifying revenue streams by partnering with local businesses, nonprofits, and schools
   d. Private events and rentals are also major sources of income while funding from government grants and private events is becoming more prominent

4. **Recreational Trends:**
   a. New activities are being integrated into parks, increasing recreation options
   b. Nature based activities that promote wellness and mental health, such as guided meditation, yoga, and nature therapy walks, highlight the therapeutic benefits of natural environments and attract more diverse visitors

5. **Leveraging Advanced Technology to Enhance Visitor Experience**
   a. Mobile apps and websites that provide real-time updates on trail conditions, wildlife sightings and available guided tours help track visitor patterns and asses environmental impacts
   b. Enables more efficient and informed decision making and management, such as optimizing park maintenance

Drainages contribute to the formation of the geologic structures and vegetation communities

Site Opportunities Map



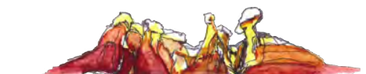
LEGEND

- PARKING
- RESTROOMS
- BENCH
- PICNIC SITE
- INTERPRETIVE SITES
- WAYFINDING SIGNS
- INFO KIOSK
- CULVERT
- PROPERTY BOUNDARIES
- MAINTAINED 8' WIDE CRUSHER FINES
- MAIN TRAIL, NATURAL SURFACE
- SOCIAL TRAILS
- EXISTING TWO RAIL WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING MAJOR CONTOUR
- CONSERVATION EASEMENT
- DRAINAGE
- PROPOSED TRAIL ALIGNMENT
- PROPOSED BOARDWALK
- RESTORATION AREAS
- AREAS OF INTEREST
- OVERLOOKS
- PROPOSED INTERPRETIVE SIGN
- PROPOSED WAYFINDING SIGN
- PROPOSED TWO RAIL WOOD FENCE
- FORMATIONS
- SENSITIVE AREAS

Visitor Use and Recreation Opportunities

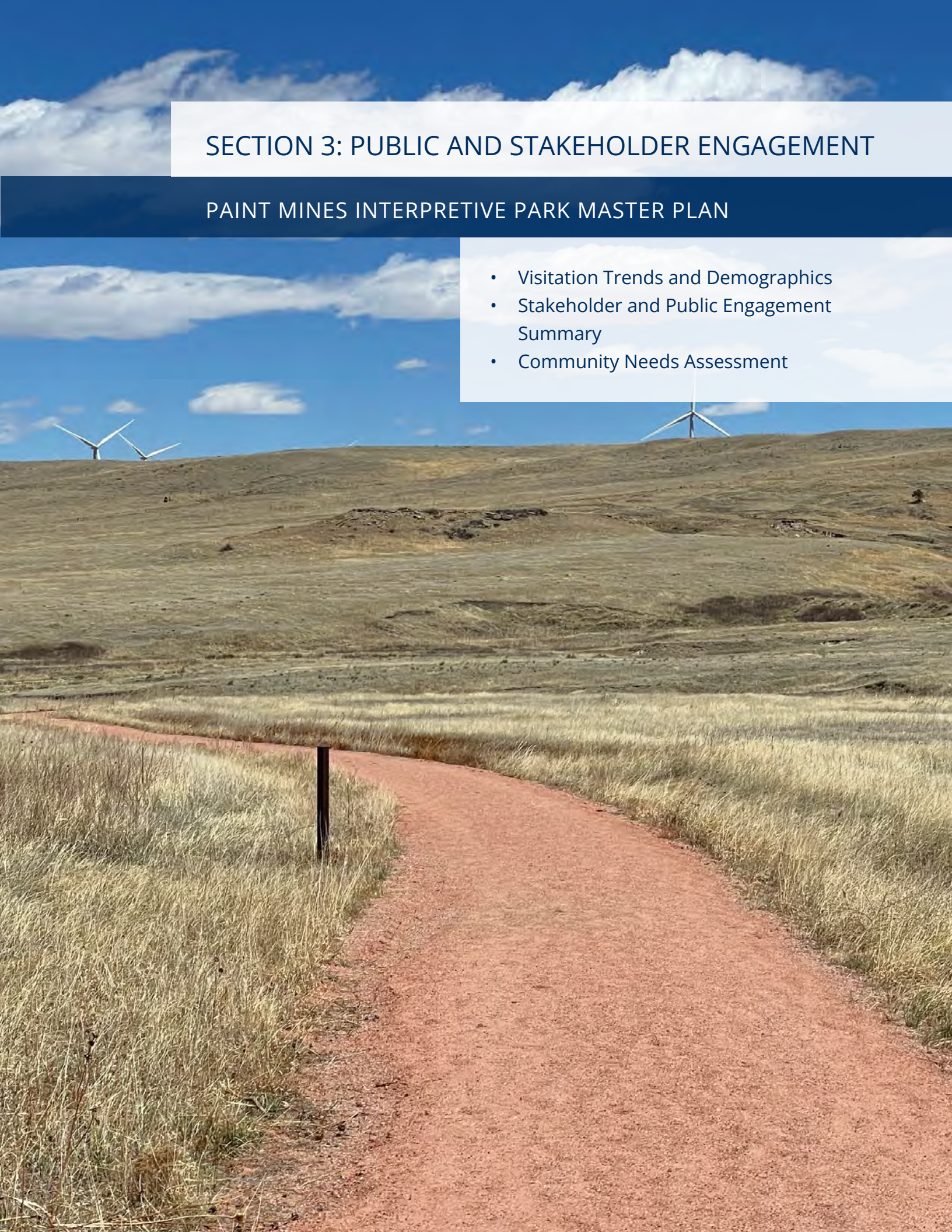
Opportunities to enhance the recreational opportunities at Paint Mines Interpretive Park include:

- All improvements to avoid important cultural and natural resources identified in the Park
- Formalize parking, which may include enlarging, paving, and striping the Parking lots
- Add speed limit, cautionary, and wayfinding signage along Paint Mine Rd
- Add restroom(s)
- Add shade features at trailheads
- Add ADA accessible parking and trails
- Move trails out of sensitive habitat
- Formalize social trails where appropriate
- Add new trails where appropriate to increase visitor access
- Improve visitor access through drainage corridors by providing a raised trail surface, or boardwalks
- Add wooden split rail fencing to discourage social trails
- Add physical and visual barriers so visitors can better understand what areas are off limits
- Increase safety of trails by adding clear wayfinding signage and better defining of paths
- Replace wayfinding and cautionary signage with a cohesive family of signs that match in material, colors, and messaging
- Replace and add interpretive signs throughout the Park
- Provide a more formal space for County Staff to store materials



SECTION 3: PUBLIC AND STAKEHOLDER ENGAGEMENT

PAINT MINES INTERPRETIVE PARK MASTER PLAN



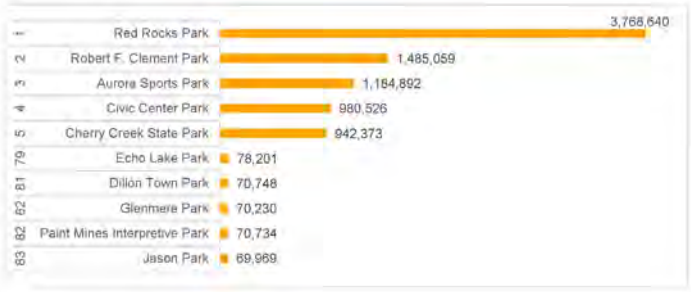
- Visitation Trends and Demographics
- Stakeholder and Public Engagement Summary
- Community Needs Assessment

SECTION 3: PUBLIC AND STAKEHOLDER ENGAGEMENT

Visitation Trends and Demographics

For the PMIP Masterplan, BerryDunn analyzed 2023 visitation data for Paint Mines Interpretive Park, sourced from Placer.ai, which provides anonymous insights based on aggregated cellphone location services data. User consented app location data is collected by other parties and shared with Placer.ai. Placer.ai then uses this data to draw a map of where a device is at different points in time. By comparing the frequency and time that a device sits and returns to a certain location, the user's "home" is determined. For privacy reasons, this is a general area, not a pinpoint. The following is BerryDunn's analysis of the anonymous Park visit data and device location pre and post visit.

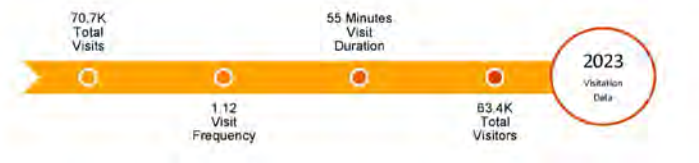
PMIP currently ranks 82 out of 187 in visitation for tracked nature sites and landmarks within the State of Colorado registered on Placer.ai. As a comparison of visitor popularity, the following figure indicates how the Park compares to some others in the State. Federal parks were excluded from the analysis, and it should be noted that the data below paints a different picture than Colorado Parks and Wildlife's visitation data.



Colorado State Nature and Landmarks Visitation Ranking index

Analysis showed that July was the highest visitation month, followed by June, and May. Visits were the lowest between November through February. The data indicates that the Park received 70,735 total visits and 63,418 visitors throughout 2023, with Saturday and Sunday being the most frequented days. The busiest visitation hours were between 10am and 4pm, with noon-2pm being the most popular.

Figure 1.1: Visitation Data from Jan 2023 to Dec 2023



Visitation Data from 2023

The majority of visitors (41.6%) traveled more than 250 miles to see the Park, while 20% traveled 50-100 miles.

Distance Travelled to Park (2022)

Most visitors travel to the Paint Mines from their home (48.3%). An estimated 1.7% of visitors arrive from work. After visiting the Park, most travel home (30.7%), while an estimated 6.9% travel to a restaurant.

For travel routes, most visitors access the Park from roads east of Colorado Springs or Denver. Very few take roads east of Calhan.

For racial demographics, most visitors are white (~71%), followed by Latino (~17%) visitors.

72% of park visitors live in households making more than $50,000 annually. 32% make between $50,000-99,000K, while 40% make over 100k.

Income Distribution of Paint Mines Park Visitors

Stakeholder and Public Engagement Summary:

It is the County's goal to ensure the proposed PMIP improvements reflect community needs and values. As such, a strong stakeholder and community engagement process was crucial in the development of the Paint Mines Interpretive Park Master Plan. A wide range of outreach techniques were used to keep the public informed, advertise feedback opportunities, and collect diverse community voices. The process was designed to discover priorities, understand perspectives, hear concerns, and identify specific user needs. It was also a platform to generate new ideas, promote the Park, and attempt to align the interests and goals of both users and management. Due to PMIP's location, stakeholders and the public located from Calhan to the larger communities of Falcon and Colorado Springs were included.

ENGAGEMENT TECHNIQUES INCLUDED:

A Public Project-Specific Email:
PaintMinesMasterPlan@gmail.com (inactive)

A Project Webpage (Live on April 23, 2024 – present).

(2) News Releases

- Distributed prior to each Public Open House
- These resulted in 15 news stories published about the PMIP Master Plan process

(2) Social Media Posts

- Posted prior to each Public Open House
- Comments collected

(2) E-Newsletters

- Distributed prior to each Public Open House.

Project Information Fliers

- Distributed to local organizations prior to each Public Open House

Stakeholder Interviews (9)

- El Paso County Park Advisory Board, El Paso County Fair Advisory Board, Town of Calhan, Palmer Land Conservancy, Trails and Open Space Coalition, Friends of El Paso County Nature Centers, Fountain Creek Nature Center, History Colorado, Aiken Audubon Society, and Falcon School District #49

Two Public Open Houses

- June 27 and September 19, 2024
- Comment forms collected

Public Online Survey

- Live from June 11 – September 6, 2024

Project Information Mailing

- Sent to adjacent property owners on August 5, 2024

Door-to-Door Visits

- To adjacent property owners on September 30, 2024

Phases of Public and Stakeholder Engagement

Phase 1: Initial Site Assessment

- Project Kickoff Meeting
- Desktop Review
  - Project Team and County Staff desktop review of existing conditions
- Site Visit (February 26, 2024)
  - The project team and El Paso County staff met at PMIP to conduct a site inventory and identify opportunities and constraints
- Ecological Site Assessment (May 2024)
  - Vegetative communities, noxious weeds, and wildlife data were collected
- Existing Literature Review and Analysis:
  - Paleontological Resource Existing Conditions Study
  - Cultural Resources Class I Analysis
- The PMIP Masterplan Webpage
  - Went live on April 23, 2024
- Initial Design Concepts for PMIP Improvements Were Developed

Project Website Homepage

Flyer for the public online survey (Inactive)

Phase 2: Initial Public Outreach

- Webpage Updated
- News Release Distributed
- Social Media Posts Posted
- Public Survey
  - Made available online, June 11th – September 6th, 2024
  - 137 responses were received; summary included in Appendix 2: Outreach Summary
- E-Newsletter Created and Distributed
- (4) Stakeholder Interviews Conducted Between April -June 2024
  - Park Interpretive Staff (April 23, 2024)
  - Palmer Land Conservancy (June 12, 2024)
  - El Paso County Parks Advisory Board (June 20, 2024)
  - Trails and Open Space Coalition (June 21, 2024)
- Public Open House #1
  - Date: Thursday, June 27, 2024
  - Time: 5:00 p.m. – 6:30 p.m.
  - Location: Bear Creek Nature Center, 245 Bear Creek Road, Colorado Springs, CO 80906
  - Attending: ~ 16 guests
  - Included:
    - A presentation and Q&A with El Paso County Parks and DHM Design
    - Six information boards with proposed concept renderings
    - One-on-one comments, questions, and discussion
    - Comment cards provided to attendees

Initial PMIP Site Visit, Feb 26, 2024. Project team and El Paso County staff assess existing site amenities

Phase 2 Summary of Comments:

Regulation:

- Protect formations from climbing and destruction
- Requests for fire/police/security patrol to limit vandalism

Ecology:

- Status of rare plants at PMIP
- Bird study data
- Protect deer and pronghorn habitat

Education/Interpretation:

- Geological interpretation needs improvement
- Use space at fairgrounds for programs
- Interpret the wind turbines

Proposed Improvements:

Parking Lots

- Are there alternatives to paving the Parking lot
- Gates are needed at all parking lots
- Provide enough parking to meet at least the least demand numbers
- For additional parking, what about the possibly of shuttles from the fairgrounds
- Include more oversized parking spaces

Trails

- Consider closing sensitive at risk trails when conditions warrant, e.g. spring rainy season
- Adding extended trail loops (eg. "prairie hike") would make this park more useful and spread people out
- Trail delineation is needed inside the canyons

Boardwalks

- Absolutely the best answer. The more boardwalks the better. Boardwalks are critical to protect trails when it rains and reduce erosion

Low Barrier/Fencing

- Railing height should be at least adult knee height
- Low barriers will impede views and ruin photo opportunities
- Railings will not deter hoodoo climbers

Amenities

- More restrooms needed
- Covered, wind-proof trashcans with capacity that are routinely maintained are needed

Open House:

- Hold the next open house at the County Fairgrounds closer to PMIP

El Paso County staff answer questions and collect public comments at Open House #1

Phase 2 Comment Takeaways: Since open house #1 was held in CoS, attendees were mainly occasional park visitors. Attendees agreed that PMIP could use additional amenities and were divided over how best to protect the formations for future generations.

Phase 2 Comment Incorporation: As a result of comments from open house #1, open house #2 was held adjacent to PMIP and at a later time to allow commuters to attend.

Phase 3: Final Public Outreach

- Design Development
  - Conceptual design improvements were updated based on feedback from the first Open House
  - A concept plan for the north parking lot was developed
- Project Website Updates
- 115 E-Newsletters Distributed
- (5) Stakeholder Interviews Conducted Between July-September 2024
  - Aiken Audubon Society, Fountain Creek Nature Center, Friends of EPC Nature Centers (July 26, 2024)
  - History Colorado (August 15, 2024)
  - Town of Calhan (September 4, 2024)
  - El Paso County Fair Advisory Board (September 5, 2024)
  - Falcon School District (49) (September 10, 2024)
- Design Packet Mailed to 17 Adjacent Property Owners
- Door-to-Door Visits
  - 17 adjacent property owners
  - 4 Calhan businesses
- Open House #2
  - Date: Thursday, Sept. 19, 2024
  - Time: 6:00 p.m. – 7:30 p.m.
  - Location: Swink Hall, El Paso County Fair and Events Center, 366 10th St, Calhan, CO 80808
  - Attending: ~ 25 attendees
  - Information boards included 3D renderings of proposed improvements, site opportunities and constraints, and a summary of the public engagement process to date
  - Representatives from the project team and El Paso County were available for questions, discussion, and comments
  - Comment cards were also available to attendees

Boards set up around the room at Open House #2, Sept. 19, 2024

Flyer for Open House #2

Images from Open House #2, Sept. 19, 2024

Phase 3 Summary of Comments:

Regulation:

Paint Mine Road (PMR)

- A traffic study is needed
- Road is unsafe and needs improvement prior to Park improvements
- Wash boards, dust and trash
- The 90-degree corner
- When wet (rain/snow), the clay of the road material creates slick conditions that cause accidents
- PMR Speed Limit is too high and needs to be enforced
- Comments were divided on road paving

Park Capacity:

- Feasibility study needed: how many people can the Park hold
- Implement reservation and permitting system to limit visitation

Paint Mines Interpretive Park West:

- The rules for this portion of the property need to be made abundantly clear on site through signage and for future land use planning within the Masterplan

Signage:

- Private property signage is needed for neighbors and PMIP West
- Concern about the addition of more signs and sign durability

Enforcement:

- More rangers/staff are needed to patrol the Park and enforce rules
- Issue tickets/fines for climbing the geological formations
- Paint Mines will not exist for future generations if we keep letting people destroy it
- The increase in visitatorship post covid has increased crime and vandalism to neighboring properties

Dogs:

- Comments divided between enforcing the existing "no dogs allowed" rule, and allowing dogs, but only on the outer trailer loop where formations are not at risk

Emergency Management:

- Facilities for heat exhaustion are greatly needed
- The Park is outside of the Town of Calhan's jurisdiction. County emergency response is slow
- Alternative routes during inclement weather should be advertised

Proposed Improvements:

Outreach

- Communication with PMIP's neighbors should have been first. Then Paint Mine Road review, followed by conceptual design review
- Indigenous nation outreach and input needed

Visitor Center

- The Visitor Center's impact to the ridge, as well as to the neighbors, would be less if moved to the north parking lot
- The north parking lot is a more central location for future PMIP facilities and trail expansion
- Opposition to visitor center- oppose lights on at night and using well water. The region cannot support use of ground water

Support of Low Fencing /Barriers

Requested Amenities

- Benches
- Interpretive/wayfinding signage
- Shade structures

Trails

- Additional walkways could further destroy the land/formations

Accessibility

- Make PMIP more ADA accessible

Phase 3 Comment Takeaways: Since Open House #2 was held adjacent to PMIP, attendees were mainly neighbors. The majority of comments were concerned about the increase in visitation and the impact to and safety of Paint Mines Road (how visitors get to the Park). Neighbors liked the proposed improvements, but believe the road problems need to be addressed before other Park improvements are planned and implemented.

Phase 3 Comment Incorporation: As a result of comments collected during PMIP Open House #2, the County will be conducting a traffic study on Paint Mines Road during the fall of 2024 and in July 2025. According to the BarryDunn demographic data included in this report, July is PMIP's busiest month for visitation.

Phase 4: Draft Master Plan

- Final Concept Design:
  - Feedback and analysis incorporated into the final designs
- Presentation of the Draft Master Plan to the Parks Advisory Board (November 13th, 2024)
- Webpage Update
- E-newsletter Promoting the Parks Advisory Board Meeting
- DRAFT Master Plan:
  - The Draft Master Plan was posted to the project and County websites and open for public comment between November 7th - 20th, 2024. Six comments were received.
- Park Advisory Board Hearing and endorsement (December 11th, 2024)

Phase 5: Adoption of Final Master Plan

- Presentation of the Final Master Plan to the Board of County Commissioners and approval (December 17th, 2024)
- Webpage Update

Open House Final Presentation

Community Needs Assessment

Paint Mines Interpretive Park's community is comprised of neighbors, stakeholders, and sightseers traveling from anywhere from Calhan to Massachusetts to visit the Park. Diverse community voices vary depending on personal interests and their relationship to the Park. The master plan strikes a balance between El Paso County's responsibility for Park management and preservation and the desires of both neighbors impacted by the Park and Park visitors.

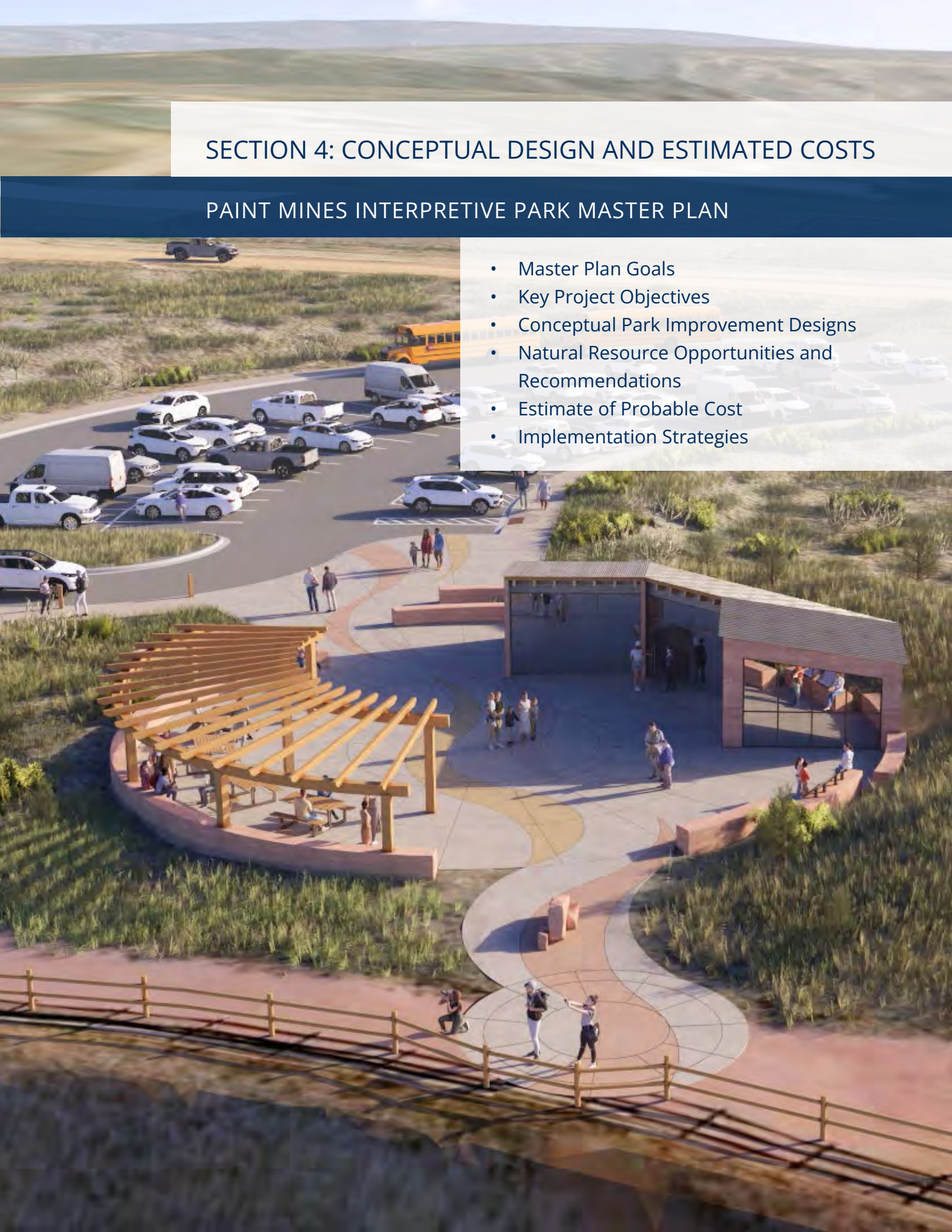
From a geographic perspective, the majority of Park visitors reside in Colorado Springs, however, many others come from cities throughout Colorado, outside the state, and even internationally. Visitor desires are generally focused on the Park experience.

Neighbors who reside adjacent to PMIP, while smaller in numbers, are impacted directly by the Park due to its proximity to their properties. PMIP has potentially increased the economic vitality of Calhan due to its proximity to the Park. Locals generally believe the Park is a benefit to their community and want to see it protected, however Park visitation is seen as potentially harmful to the area and to neighbor's personal property. Increased traffic negatively impacts Paint Mine Road, and speeding, weather, lack of dirt road driving experience, and poor signage add additional challenges for both visitors and neighbors.

Community desires for the Park vary widely, requiring a balanced approach. For example, those who visit for hiking/walking have expressed an interest in a visitor center, better wayfinding, and additional interpretive signage. Those who visit for photography have expressed a desire to not add signage, low barriers, or other wayfinding additions. However, the overall community feedback during the engagement process was the recognition of the importance of protecting PMIP's geologic formations from human degradation.

SECTION 4: CONCEPTUAL DESIGN AND ESTIMATED COSTS

PAINT MINES INTERPRETIVE PARK MASTER PLAN



- Master Plan Goals
- Key Project Objectives
- Conceptual Park Improvement Designs
- Natural Resource Opportunities and Recommendations
- Estimate of Probable Cost
- Implementation Strategies

SECTION 4: CONCEPTUAL DESIGN AND ESTIMATED COSTS

Master Plan Goals

The central goals for the PMIP Master Plan were developed in close coordination with El Paso County at the very beginning of the planning process. The Master Plan will:

- Empower El Paso County in overseeing, safeguarding, and preserving the Park while enhancing the visitor experience
- Balance providing public access with safeguarding the fragile geological features, important cultural resources, and native habitats
- Uphold the core goals and objectives outlined in the broader 2022 El Paso County Parks Master Plan

Key Project Objectives

This project included five Key Objectives:

1. **Review** previously developed reports, plans, and findings and consolidate, modernize, and combine into one comprehensive Master Plan document.

2. **Provide** a comprehensive existing conditions assessment and site analysis, which will provide El Paso County with valuable data as a resource moving forward with design and implementation.

3. **Engage** the local community and stakeholders in the planning and concept design process and integrate feedback into the conceptual designs.

4. **Address** the management challenges arising from increased visitation and provide recommendations for sustainable improvements with an understanding of ongoing Park maintenance.

5. **Develop** conceptual designs that strengthen public facilities, enhance recreational and educational opportunities, and protect the exceptional natural and cultural resources.

Conceptual Park Improvement Designs

Key Elements

This section highlights key proposed amenity improvements and the overall goals for improvements at Paint Mines Interpretive Park. Improvements detailed in the Conceptual Plans are derived from the key objectives, site analysis, natural and cultural resource assessments, public and stakeholder outreach and engagement, and input from El Paso County Staff in the planning process. These key elements also reflect and reaffirm the essential goals of the 2022 El Paso County Parks Master Plan.

Conceptual design recommendations focused on three key elements:

1. **Protect** the unique natural features and cultural resources
2. **Enhance** the user experience with high quality passive recreation and educational amenities
3. **Provide** high quality and safe experiences for park visitors

Conceptual Rendering of the Overlook Parking Lot and Visitors Center

Design Guidelines

Specific guidelines were developed by the project team to inform conceptual design and recommended improvements.

Overall

- All improvements shall enhance public safety and protect existing resources
- All improvements to adhere to appropriate regulatory requirements (laws, regulations, codes, etc.) and conservation easement requirements with the Palmer Land Conservancy
- All improvements to be as sustainable as possible, and in alignment with County Parks maintenance capabilities
- All improvements to limit impact to known cultural resources
- All improvements and proposed facilities to reflect and integrate into the natural environment
- All improvements to manage stormwater and not impact existing drainage patterns
- Access hours during daylight hours shall continue to be enforced, unless otherwise approved and permitted by the County
- Dogs, pets, horses, and bikes shall continue to be prohibited

Accessibility

- Add accessible improvements utilizing Universal Design Principles
- Add accessible trail and overlook on the south side of the formations
- Ensure new signage adheres to accessibility standards

Parking Lots/Trailheads

- Trailhead improvements are not to be visible from the main formation area
- Lighting at the parking lots and plazas to be minimal, face west away from the Park, and should adhere to night-sky requirements
- Improve existing parking lots and increase the amount of available parking, including accessible and over-sized vehicle parking opportunities
- Add gathering areas at the main trailheads with shade structures, seating, informational and educational signage
- Add lockable gates to all parking lots to increase site security

Trails

- Restore unnecessary social trails to native condition
- All new trails shall be of a soft surface material, and shall match colors of existing trails
- When trails cross over drainages, culverts or boardwalk should be installed to keep foot traffic off saturated ground, and to allow water to flow along its original path
- New trails shall be carefully designed as avoid sensitive habitat or known cultural resources
- New trails should be designed to use existing terrain strategically to avoid steep areas, drainageways

Signage

- Replace and add wayfinding signage throughout the Park, creating a cohesive sign package that emphasizes graphics, with matching text, logos, colors, and materials. Bilingual (English and Spanish) text may be implemented
- Replace existing interpretive signage throughout the Park
- Add clear signage along Paint Mine Road to direct traffic into the Park's parking lots
- "No Trespassing" signage shall be added at the fencing along the west side of Paint Mine Road to deter access to closed areas of the Park

Fencing

- Two rail wood fencing shall be installed along main trails and overlooks to limit visitor access to off-trail areas
- Low (18"-24" tall), steel post and chain barriers shall be installed within the formation areas to limit off-trail access into the sensitive geologic areas
- All fencing finishes shall be of an earth-toned color to blend into the natural scenery

Conceptual Rendering of the Overlook Parking Lot and Visitors Center

Conceptual Designs

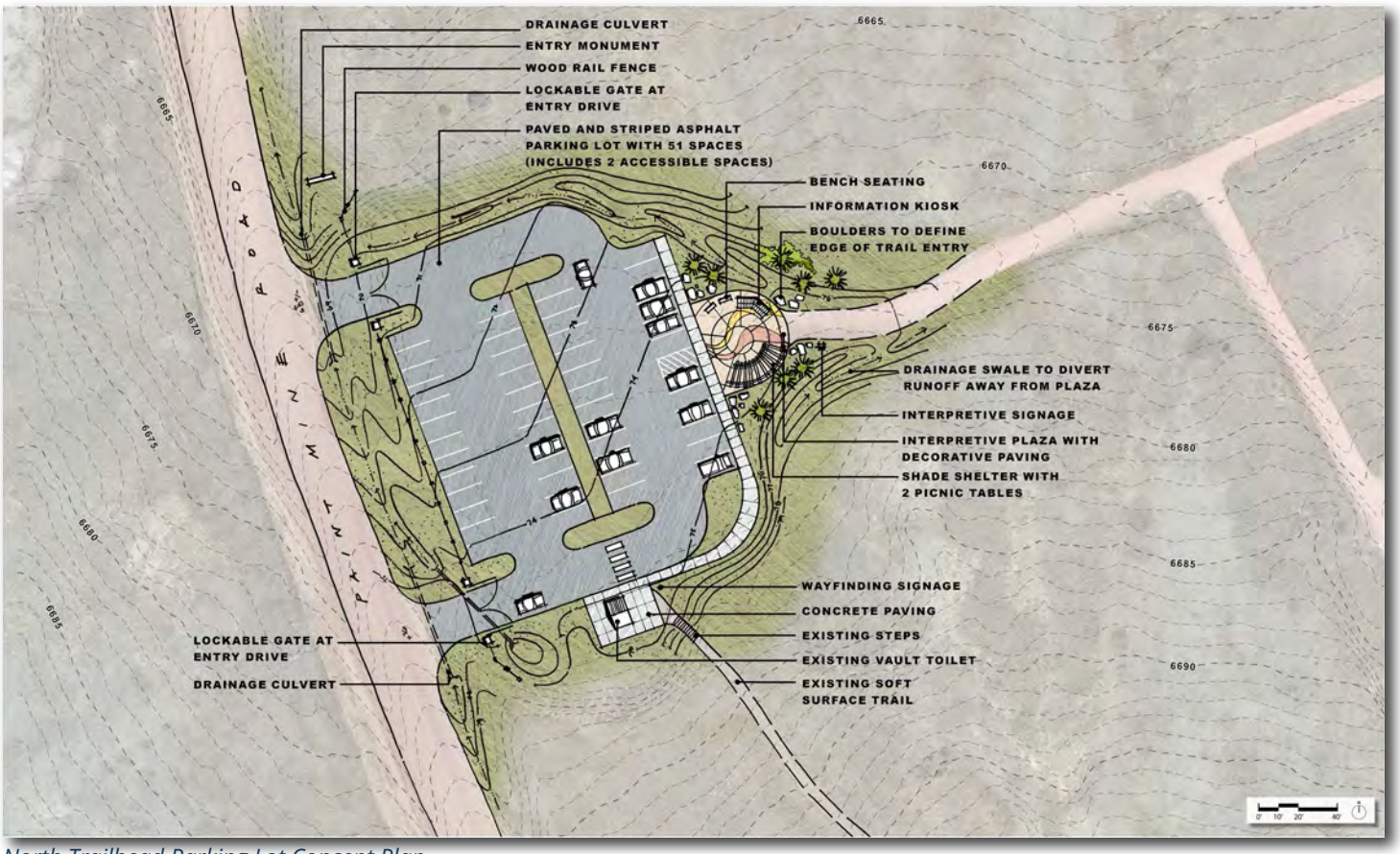
Key locations within the Park were further developed into conceptual site plans that were presented to the Public at the two Open Houses. Comments from the public were incorporated into the conceptual designs and improvement recommendations.

Trailheads

North Trailhead - Parking Lot

When traveling south to the Park from the town of Calhan, the first access point to the Park is at the most northern parking lot. This parking lot is within a Conservation Easement, thus possible improvements are limited to the requirements within the Easement agreement. This parking lot will continue to connect visitors to the existing trails leading to the formations and to the northeast portion of the Park. Proposed improvements at this parking lot include:

- Paving and striping the current footprint of the parking lot with approximately 51 parking spaces
- Entry monument along Paint Mine Road directing traffic into the parking area
- Two vehicular entrances to allow for proper vehicular circulation, with lockable gates at each entrance
- Existing vault toilet remains and an accessible concrete walk connects toilet to the plaza and accessible parking spaces
- Grading the parking lot to allow for accessible parking spaces, sidewalk, and plaza
- Keep the existing vault toilet and add concrete around the toilet to connect to a new accessible sidewalk
- New, small, paved interpretive plaza with one (1) shade shelter, two (2) picnic tables, bench seating, information kiosk, interpretive signage, and wayfinding signage
- Swales, culverts, and small retention areas to direct and slow stormwater draining across the parking lot, sidewalk and plaza. Based on the concept design, approximately 500 square feet at a 2' depth would be needed to capture drainage from the improvements. This could be done using bioretention or sand filter basins, located near the north entry drive
- Existing trails to the south and east will connect to the new plaza and sidewalks

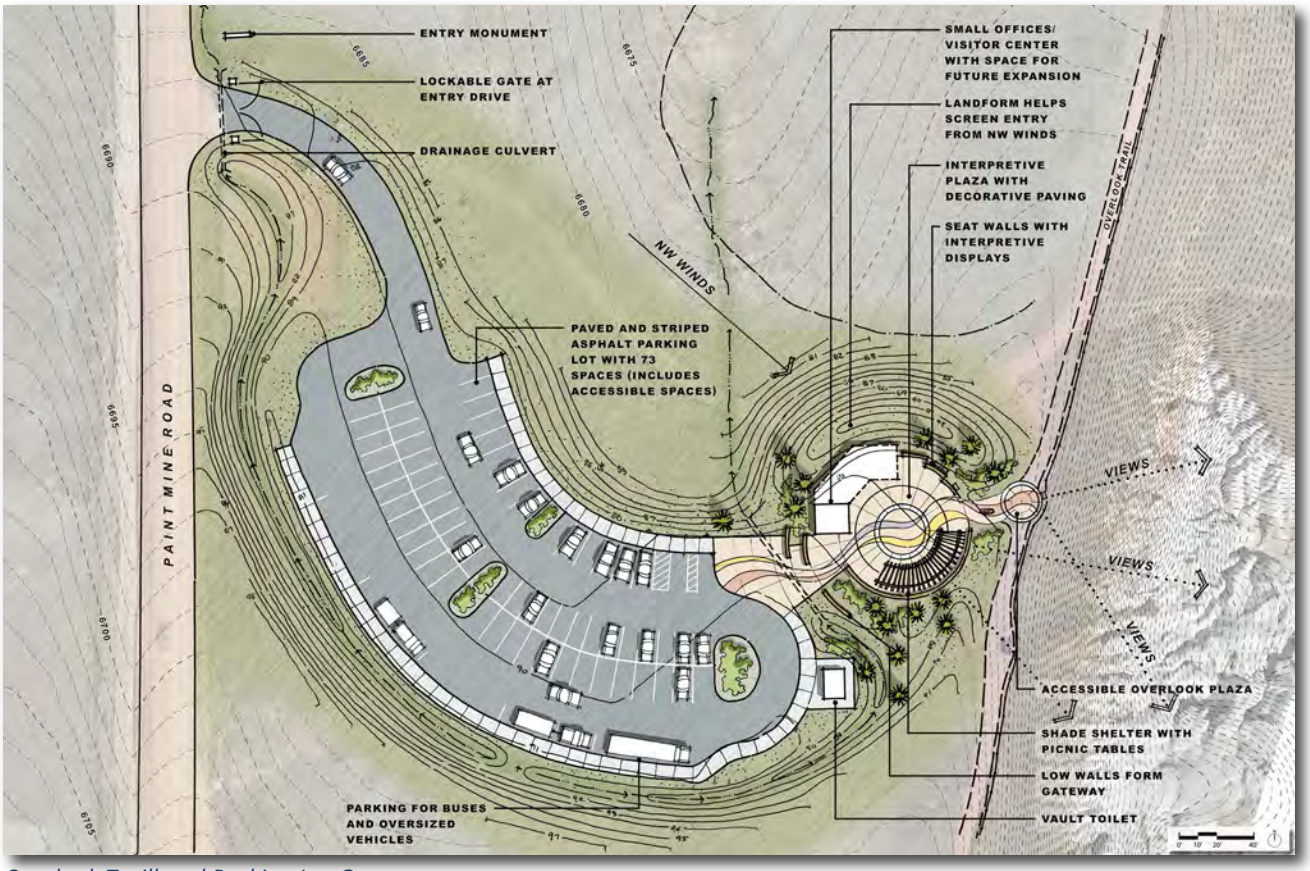


North Trailhead Parking Lot Concept Plan

Overlook Trailhead - Parking Lot

Throughout the planning process, the need for additional parking was discussed and reviewed with County staff, stakeholders, and the public. It was determined that additional parking would be located at an enlarged parking lot near where the existing overlook parking lot currently sits on site. This location has a moderate slope, no major drainages exist here, and this location avoids known cultural resources and sensitive habitat. The new overlook trailhead parking lot is also located near the main formations area, thus allowing more opportunities for visitors to access and view the formations, including accessible pathways to overlooks and additional trails. Proposed improvements at this parking lot include:

- Entry monument along Paint Mine Road directing traffic into the parking area
- Parking lot entrance location remains the same along Paint Mine Road, including a lockable gate at the entry
- Relocated and enlarged parking area to be paved and striped with approximately 73 total parking spaces (including accessible spaces)
- A small plaza space is included at the edge of the overlook trail to allow an accessible, central viewing platform to the formations below
- Over-sized vehicle parking along the south side of the Parking lot to allow buses, trucks and trailers, campers, etc. to comfortably park and circulate through the parking lot
- Interpretive plaza with decorative concrete paving. Plaza to include low walls acting as a gateway, a shade shelter with picnic tables, seat walls around interpretive displays
- Also included within the plaza area is a small visitors center and office space for County staff. A berm on the north side of the visitor's center screens the building entrance from northwesterly winds and tucks the building into the landscape
- Small groupings of native shrubs and trees can be located around the plaza to further screen the improvements from Paint Mine Road
- New, double vault toilet near the interpretive plaza
- Swales, culverts, and small retention areas to direct and slow stormwater draining across the parking lot, sidewalks and plaza. Based on the concept design, approximately 1,750 square feet at a 1' depth would be needed to capture drainage from the improvements. This could be done using bioretention or sand filter basins, located at the far north end of the entry drive



Overlook Trailhead Parking Lot Concept

Overlook Trailhead - Visitor Center

One feature of the proposed overlook trailhead is a small visitor center. The visitor center is planned as an aspirational future phase that is based solely on available funding. Connected to the interpretive plaza, the visitor center would serve as the central hub to welcome visitors to the park, provide interpretive information and trail guides, as well as other visitor amenities such as restrooms and water.

While the visitor center was only conceptually coordinated as part of the Master Plan, it is intended for its low-profile design to be carefully sited to limit views of the building from within the formations and for its earth-toned exterior finishes to blend into the landscape. A berm on its north side would allow the building to feel as though it is tucked into a hillside, while offering visitors a refuge from harsh winds and sun. Additional programmatic options within the building could include interpretive displays, County office space, and storage. If funding for the visitor center becomes available, further design and coordination with the County will be required to determine exact programming, size, and building dimensions.

Conceptual Rendering of the Overlook Visitors Center

Southern Trailhead - Parking Lot

The south parking lot currently sits farthest away from the formations and allows access to the loop trails on the eastern side of the Park property. Problems with security at the parking lot will be addressed with the addition of lockable gates. The parking lot footprint is anticipated to remain the same, with no changes to the parking layout or surface material. This parking lot is intended to be closed most of the time, opening only for busy weekends during the summer months pending analysis of a park capacity report.

Drainage and Stormwater Infrastructure

The major drainage improvements recommended in the Master Plan study include the expansion of the overlook parking lot and paving the north parking lot. These improvements involve expanding and paving the parking areas, which will increase the impervious area and, in turn, increase runoff from the site. It is anticipated that these improvements will require Best Management Practices (BMPs) to manage the water quality of the runoff. Estimated additional impervious area and Water Quality Capture Volume (WQCV) can be found in the table below.

	New Impervious Area (acres)	WQCV (ft^3)
North Parking Lot	0.69	1,000
Overlook Parking Lot	1.16	1,700

BMPs will need to be designed to accommodate these WQCVs. A suitable BMP could be a sand filter basin or a similar solution, as it has a smaller footprint and functions well in the dry climate. Onsite flows from the parking lot will be directed overland to the water quality facility and then discharged to the roadside swales to continue north, as in the existing condition. The conceptual designs for the parking lots utilize swales and culverts to divert offsite flows around the parking areas. Keeping onsite and offsite flows separate is recommended to minimize the size of any BMPs by limiting the volume of flow that reaches them.

Runoff management for the trails is anticipated to follow the existing concepts. Swales are recommended adjacent to trails to minimize trail erosion. Where concentrated flows cross a trail, it is recommended that culverts be used to prevent trail material from washing out. One specific recommendation from this study is related to an existing culvert near the overlook area currently discharges roadway runoff from Paint Mine Road toward the geologic features. This discharge is not natural and appears to be causing erosion downstream. A recommended solution is to create a depressed area at the downstream end of the culvert (north side of Paint Mine Road) with a level spreader. This would slow flows from the culvert and reduce erosion caused by the point-source discharge of the existing culvert.

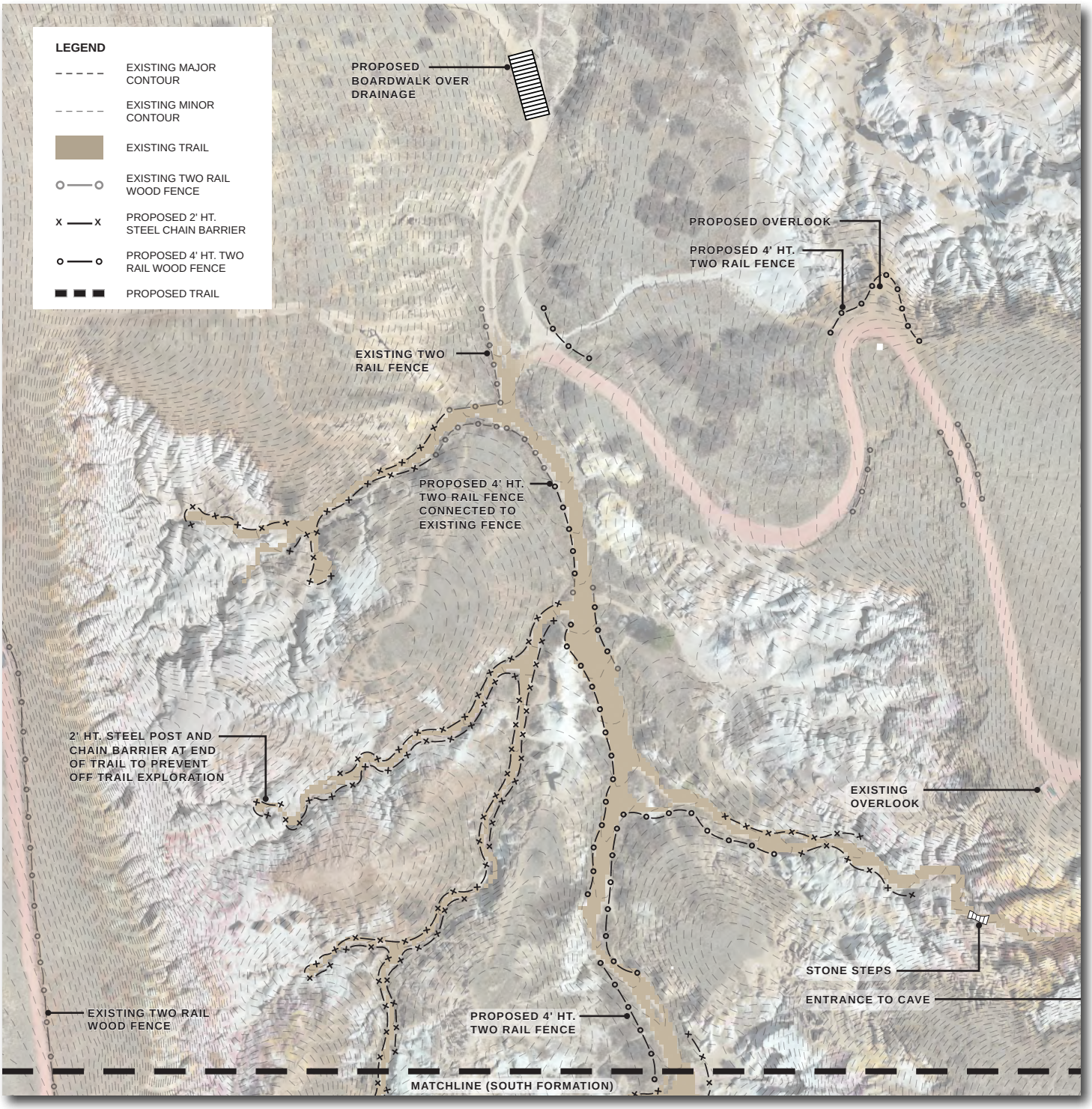
Pedestrian Circulation within the Formations

One of the main concerns from the County at Paint Mines Interpretive Park is the increase in vandalism and off-trail use at the formations area. Additional protective measures at the formations was unanimously supported by stakeholders and the public, with the main goal of protecting these incredible natural features. A variety of proposed improvements are recommended within the formations area to help guide visitor traffic, identify areas that are off-limits, and increase visitor safety as they explore the Park.

Social trails around the Park

Conceptual rendering of the Overlook Trailhead plaza

North Formations Concept Plan



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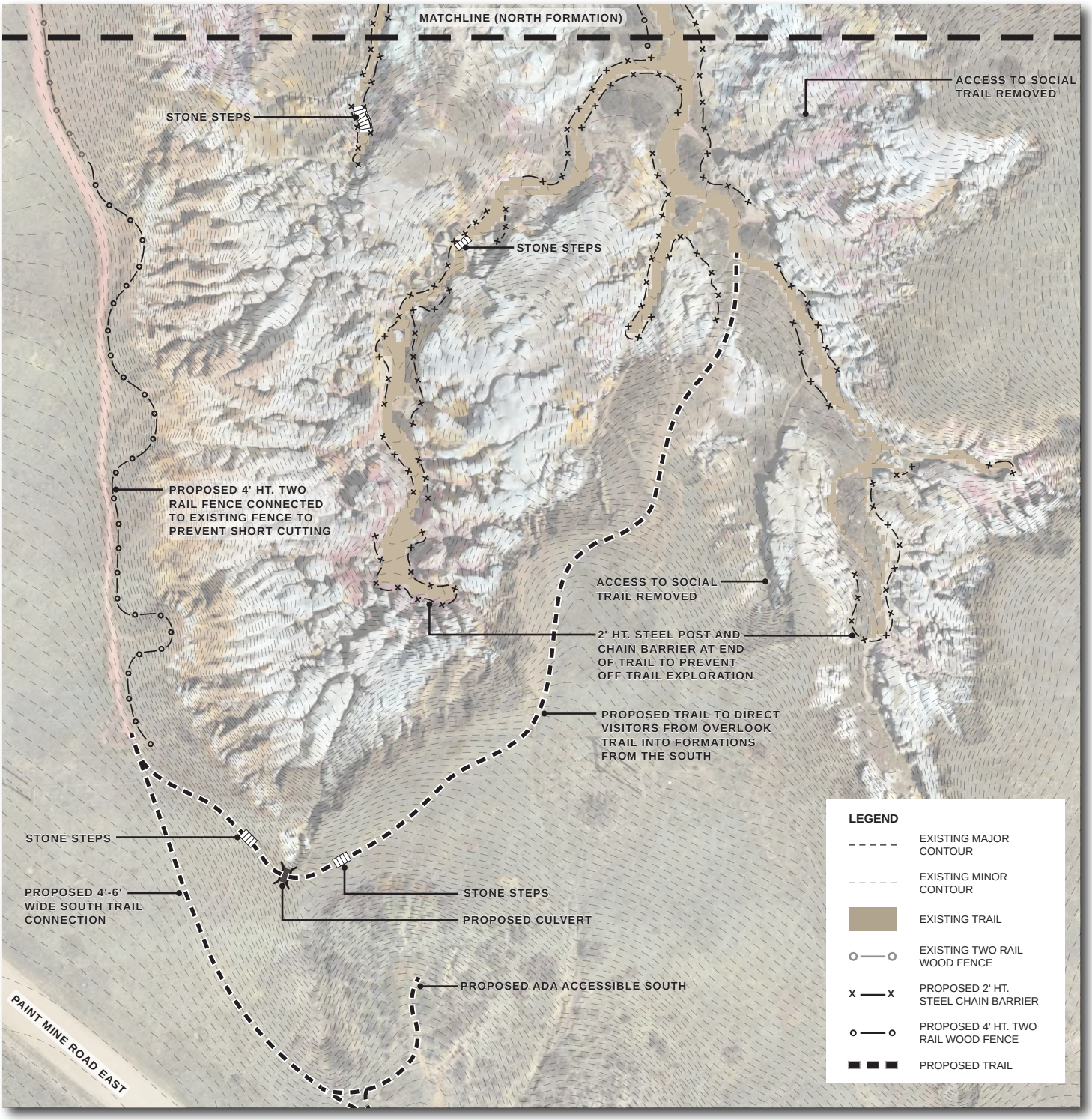
South Formations Concept Plan



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Two Rail Wood Fencing

This type of fence is already present at the Park and has been successful in directing visitor traffic. Additional fencing is proposed in specific locations to help manage off-trail access, and to protect the surrounding vegetation from continued trampling. This fencing would weave in and out of established vegetation, making it less obvious as visitors walk along the paths.

Two Rail Wood Fencing

Low Steel Post and Chain Barrier

In addition to the spilt rail wood fencing, it is recommended to have additional physical barriers along the smaller pathways within the smaller canyons of the formations. These barriers are intended to be lower to the ground (18″-24″ in height) as to not impede views of the formations. Steel posts and chains will lead visitors through the narrower pathways and will deter off-trail access to the sensitive formations. The materials are intended to be of a lighter color to blend into the natural setting.

Low Steel Post and Chain Barrier

Boardwalk

Numerous trails in the Park intersect natural drainageways. At the larger drainages, culverts have been installed to allow water to naturally flow downstream. Some of the drainages in the Park have water flows that spread across the landscape, broadly crossing existing trails. At these trails, visitors tend to walk around the most saturated areas and often walk adjacent to the trail creating a wide disturbance that is impacting surrounding vegetation. One solution to the trails in these drainageways is to add a boardwalk system that raises the elevation of the trail over the natural drainage patterns and brings visitors above the saturated areas. Adjacent vegetation is then allowed to reestablish around the boardwalk. Boardwalks would be added in very specific locations using sustainable materials easy to maintain.

Boardwalk

Stone Steps

Some of the narrower canyons within the formations area have significant elevation change and require additional wayfinding to stay on trail. Rain, snow, and ice impact these steeper trails, often creating a slick surface. Stone steps can be added at these locations to help direct visitor traffic, and to provide a safer route along the steeper trails. Steps are to be made of stone to match the surrounding natural colors.

Stone Steps

Trails

Restoration of Existing Social Trails

Located between the established trails within the Park are social trails where visitors have continually gone off-trail, creating a visual line void of vegetation that is tempting for visitors to follow. Some of these social trails are located in dangerous locations, within sensitive habitats, and around the extremely fragile formations. It is recommended that most of these trails be restored to native vegetation and protected during vegetation establishment. Some of these social trails, in appropriate locations, are recommended to be formalized for visitor access. In the center of the Park, the north trail currently weaves in and out of a natural drainage. This trail is proposed to be moved out of the drainageway and up to a higher elevation, thus removing visitors from this important habitat. The original trail alignment can then be removed and restored with native vegetation to enhance the riparian habitat along the drainage.

Proposed Trails

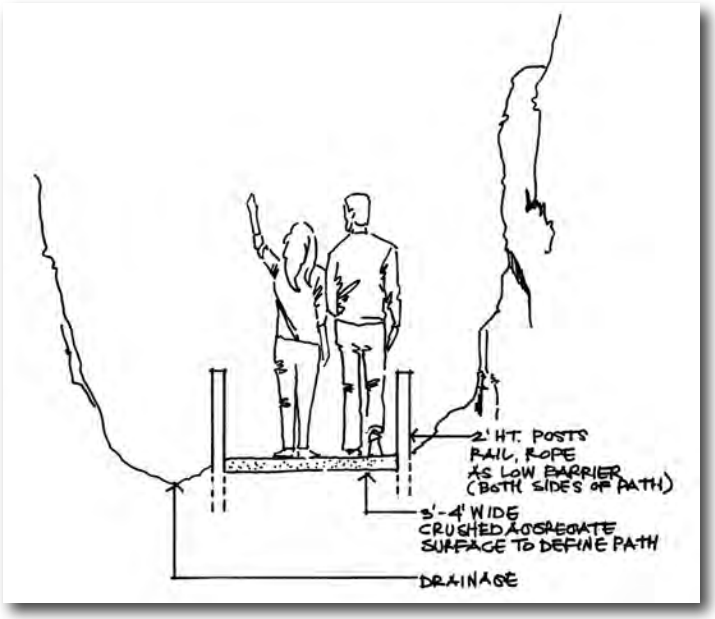
Currently there are 4 miles of trail for visitors to explore Paint Mines Interpretive Park. These trails are heavily used by visitors to the Park for hiking, running, wildlife viewing, and to reach various features within the Park. An additional 0.9 miles of new trail are proposed in the concept designs.

One proposed new trail would connect the north loop trail with the south loop trail on the northeastern section of the property. This would create one larger "outer loop" trail and would provide an additional connection along the eastern side of the property. This trail would match the existing loop trails in width and material. In final design, this new trail would need be assessed to determine the best alignment that avoids known cultural resources and does not impact sensitive wildlife habitat.

Another proposed trail on the southern end of the Park property would connect the overlook trail leading from the overlook parking lot, around the southern tip of the formations, following an upper ridgeline heading north, ending at the south loop trail. Many social trails exist on the southern end of the formations area as visitors are dipping into the formations from the south. Formalizing these trails into a wider, maintained trail would allow visitors a safe way to travel around the formations from both the west and east sides, and allow a formal access point from the south into the main formations area. A portion of this new trail is intended to be accessible from the overlook parking lot to a new overlook point at the far southern end of the formations. This would provide a closer view of the formations for those who are unable to access the formations from other, steeper trails.

Other proposed trails allow safe access for visitors to other features located within the Park, including additional geologic formations, historic clay mines, and overlook viewpoints along existing trails.

Conceptual rendering of proposed trail improvements



Cross-section of typical proposed trail

Signage

Informational Kiosks

Kiosks at the north and overlook trailhead parking lots will display trail information, park rules and regulations, and other important park information. Donation tubes or boxes will be added adjacent to information kiosks at all trailhead parking lots.

Example Informational Kiosk

Wayfinding Signs

Signs directing visitors to various features and trails throughout the Park will be placed at all trail intersections, and at each of the three trailheads (north, overlook, and south). These signs would include a "you are here" note so it is easy for visitors to know where they are within the Park. A possible future public outreach activity could be to ask the public to name the features of the Park and add that information to the signs. These signs will share the same graphics and materiality, creating a family of matching signs at the Park.

Example of Wayfinding Signage Concept

Regulatory Signs

These signs will be located in areas where trespassing and off-trail use are currently occurring. This includes within the formation areas, along Paint Mine Road to keep visitors out of the western property where access is prohibited, and where social trails are being restored. These signs might also include before and after photos of damage to the formations with information related to how fragile the formations are. These signs will match in language, materiality, and will have cohesive messaging throughout the Park.

Interpretive Signs

During the public process it was clear from stakeholders and the public that additional interpretive signage was desired throughout the Park. These signs might display information regarding the prehistoric occupation and use of the Park, history of the Park as a clay resource, the unique geology within the Park, and existing wildlife and vegetation one might encounter (including pictures). The signs would share a cohesive aesthetic and would have matching pedestals.

Example of Interpretive Signs

Proposed Overall Master Plan

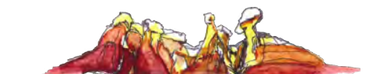
LEGEND

- PROPERTY BOUNDARIES
- EXISTING TRAILS
- EXISTING TWO RAIL WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING MAJOR CONTOUR
- CONSERVATION EASEMENT
- DRAINAGE
- PROPOSED TRAIL ALIGNMENT
- PROPOSED BOARDWALK
- OVERLOOKS
- PROPOSED INTERPRETIVE SIGN
- PROPOSED WAYFINDING SIGN
- SENSITIVE AREAS

View looking northeast towards plaza and visitor center

View looking west into interpretive plaza and visitor center

View looking south east towards formations



Educational Programming

Educational and Interpretive programming will continue to be available to the public and County park staff will continue to be present at the Park on the weekends to answer questions and provide information to visitors. If a visitors center is implemented at the Park, additional programming would be available, including protected display cases and signage within the building. The addition of oversized vehicle parking also allows easier access for school groups to visit the Park by bus. Additional staff have shown to decrease vandalism and inappropriate behaviors at the park, so with the addition of a visitor center, it would be recommended to increase staff presence at the park.

Natural Resource Opportunities and Recommendations

Opportunities for habitat restoration, enhancement, and preservation are present at Paint Mines Interpretative Park. Although situated in a semi-arid prairie environment, the Park provides essential habitat for local wildlife and could be enhanced and protected to support native plants and animals of the Colorado plains ecosystem.

Based upon current site conditions, areas have been identified utilizing the following types of habitat interventions:

1. **Restoration** – Identifying and re-establishing areas that are heavily degraded but have the opportunity to become a native feature, due to location and surrounding vegetation resulting in the creation of a new instream habitat feature, wetland, riparian or upland area depending on site conditions.
2. **Enhancement** – The restoration of partially functioning uplands, wetlands and riparian areas. This can include noxious weed elimination, planting, seeding, and other restoration techniques as well as the utilization of wetland benching to improve hydrological connectivity to existing wetlands.
3. **Preservation** – The protection of intact and functioning upland, wetland or riparian areas through ecologic and landscape planning. Installation of habitat enhancing elements as recommended.

Habitat Restoration

Central Wetland and Wash Habitat Areas

The wetlands and ephemeral washes centrally located in the Park have been disturbed historically due to the presence of a trail that runs parallel.

Short-term:

- Move this trail into the adjacent upland area to allow for regeneration

Long-term:

- Supplement regrowth of native species within this area by planting willow stakes and other native vegetation that will withstand the dynamic riparian environment characterized by periodic disturbances, such as flash flooding

Social Trails With Compacted Soils

Many areas where social trails exist have compacted soils and are devoid of vegetation. To restore these areas following the implementation of the Master Plan, consider the following to improve soil structure and promote healthy plant growth.

Short-term:

- Till soils to break up compacted layers and increase soil aeriation
- Limit heavy machinery and foot traffic in the restoration zones
- Distribute signage informing visitors that there is "Revegetation in Progress" and to avoid the areas

Long-term:

- Potentially add amendments to improve soil fertility and water retention
- Plant native vegetation to assist in loosening and stabilizing soil over time

Old Parking Lot Footprint

Parking lots will be redesigned, and an existing Parking lot will be reduced in size. It is recommended that areas no longer used be restored using the following recommendations once construction begins:

Short-term:

- Till soils to break up compacted layers and increase soil aeriation
- Limit heavy machinery and foot traffic in the restoration zones

- Distribute signage informing visitors that there is "Revegetation in Progress" and to avoid the areas
- Apply native seed mixes that are certified weed-free and contain species native to the area
- Apply amendments to improve soil fertility and water retention
- Distribute temporary fencing to reduce foot traffic in the areas

Long-term:

- Monitor the site for revegetation progress
- Implement adaptive management strategies, such as additional seeding or planting, and introduce new species if initial growth efforts are unsuccessful

Habitat Enhancement

Manage and Treat Noxious Weeds

Several noxious weed species were documented on the site recently and should be managed to reduce further degradation of the native vegetation within the Park.

Short-term:

- Specifically treat any Russian olive trees found on the property
- Russian olive has significantly impacted riparian areas in the western US, including eastern Colorado. The species was initially introduced for erosion control, windbreaks, and ornamental purposes but have since aggressively spread, outcompeting native plant species. Russian olive consumes large amounts of water, alters soil chemistry, and shades out understory plants. Its dominance reduces biodiversity in riparian zones by displacing native species, which subsequently reduces habitat values for wildlife
- To mitigate the negative impacts of Russian olive, an integrated management approach that involves more than one control method is recommended, such as mechanical and chemical controls

Long-term:

- Create a Noxious Weed Management Plan specifically for the Property

Distribute Bluebird and Swallow Nesting Boxes Throughout the Park

- The Park lacks cavity-nesting bird habitat and supplementing the site with nest boxes will enhance habitat for identified species.

Short-term:

When distributing bluebird nesting boxes on a property, follow these general guidelines:

- Spacing: Place boxes 200-300 yards apart to avoid competition between bluebirds and other species, as they are territorial during breeding season
- Height: Mount the boxes 4 to 8 feet above the ground to make them accessible for bluebirds while keeping them out of reach of predators
- Orientation: Face the box opening away from prevailing winds and towards open areas like fields or meadows, which bluebirds prefer for foraging
- Habitat: Install the boxes in open areas with sparse trees, avoiding densely wooded regions. Bluebirds prefer areas with low grass and scattered trees or fence lines for perching
- Predator Guards: Use predator guards or baffles to prevent animals like raccoons or snakes from accessing the nests. Mounting bluebird boxes on a fence lines, tree trunks, or buildings renders them vulnerable to climbing predators and should not be used if snakes and raccoons are present
- Maintenance: Clean the boxes after each breeding season to reduce parasites and prepare them for the next year

Long-term:

- Develop a bluebird nest box monitoring program to ensure boxes are cleaned annually and to measure the success of their presence

More information about nest box design, placement guidelines, and monitoring can be found through the North American Bluebird Society and the local Audubon Chapter.

A pair of western bluebirds utilizing a nesting box in Colorado.

Habitat Preservation

Habitat Preservation Recommendations Include:

- Implement raptor nest protection buffers in accordance with Colorado Parks and Wildlife guidelines. No raptor nests are currently known to exist in the Park, but if discovered, consider implementing a no-disturbance buffer to protect any nests.
- To the extent possible, preserve the intactness of the land and minimize habitat fragmentation by maintaining large blocks of undisturbed core habitat throughout the properties and consolidate trails into a smaller area.
- Limit disturbance within wetlands and riparian zones from human encroachment by locating new trails away from these sensitive areas.
- Create Interpretive Signage for the Park to educate visitors about the important resources present. The following topics may be included:
    - The role of native prairie ecosystems in eastern Colorado and their importance to pollinators and other wildlife species native to the area
    - "Stay the Trail" signage, and how walking off trail can compact soils and trample vegetation, negatively altering the ecosystem
    - Information about the unique geological landforms and the Park

Estimate of Probable Cost

A conceptual level cost estimate has been prepared based on the Conceptual Design improvements proposed within the Paint Mines Interpretive Park Master Plan. The total estimated capitol cost of conceptual plan improvements, not including the Visitor's Center, is estimated at $4.77 million. The Visitor's Center was not detailed as part of the Master Plan, so we have provided an estimated range from $1,500,000 to $2,000,000 for the cost of the Visitor's Center. These cost projections include both future detailed design and construction expenses.

The proposed improvements can be executed as a single project, or the improvements can be phased, offering flexibility for implementation. The cost estimate was prepared in October of 2024.

Given the current trend of rapid inflation in construction prices, funding adequacy may change in the future. As the designs for improvements are further developed and detailed, these costs will need to be revisited and revised to determine accurate costs. Inflation should also be accounted for depending on the schedule of improvements.

Volunteer opportunities to complete many improvements within the Master Plan should be reviewed by the County and local organizations to save on costs and encourage a sense of belonging at Paint Mines Interpretive Park.

Conceptual rendering of the Overlook Trailhead Visitor Center

Paint Mines Interpretive Park		Date: November 6, 2024
El Paso County, Colorado		
Estimate of Probable Cost based upon Conceptual Master Plan		
Paint Mines Interpretive Park Master Plan		
Description	**Subtotal**	**Total**
General conditions - 10%		**$ 318,014.10**
Overlook Trailhead Parking Lot		
Site Work and Paving	$ 549,285.00	
Site Furnishings, Signage, and Restroom	$ 504,640.00	
Lighting	$ 152,000.00	
Trail and Landscape Improvements	$ 29,950.00	
	Subtotal:	**$ 1,235,875.00**
North Trailhead Parking Lot		
Site Work and Paving	$ 338,265.00	
Site Furnishings and Signage	$ 514,000.00	
Trail and Landscape Improvements	$ 18,100.00	
	Subtotal:	**$ 870,365.00**
South Trailhead Parking Lot		
Site Furnishings and Signage	$ 120,000.00	
	Subtotal:	**$ 120,000.00**
Formations/Trails Improvements		
Site Work	$ 158,700.00	
Site Furnishings and Signage	$ 477,725.00	
Trail and Landscape Improvements	$ 317,476.00	
	Subtotal:	**$ 953,901.00**
	Project Subtotal	**$ 3,180,141.00**
Contingency 20%	$ 636,028.20	
Design / Engineering / Survey / Geotechnical - 20%	$ 636,028.20	
	Total Without Visitor Center	**$ 4,770,211.50**
Visitor Center (Range from $1,500,000 - $2,000,000)	$ 2,000,000.00	
	Total With Visitor Center Allowance	**$ 6,770,211.50**

Implementation Strategies

Below is a list of next step recommendations for Conceptual Design implementation at Paint Mines Interpretive Park:

1. Complete a traffic study for Paint Mine Road. A study by the County is already in progress with traffic monitoring being performed in the fall of 2024, and again in July of 2025. El Paso County Parks Department would then work with El Paso County Public Works to address safety and road condition concerns along Paint Mines Road. No improvements to Paint Mine Road were included in this Master Plan as recommendations were focused within the property boundaries of the Park.
2. Detailed field surveys and reporting to identify and map potential additional paleontological localities and cultural resources. This would be completed prior to final design to ensure new site improvements would avoid impacting historic resources on the property.
3. Complete an interpretive master plan to guide interpretation and programming for the park and visitor center. This includes development of messaging, interpretive signage, and visitor center interpretive displays. Consult with Tribes and key stakeholders to review educational opportunities including interpretive signs and displays, and educational programming.
4. Explore the possibility of placing a Conservation Easement over the Paint Mines West property.
5. Install improvements, possibly in a phased approach. If a phased approach is determined, installation of improvements could be:
    a. Phase 1 (Critical Improvements) – Fencing, boardwalks, and low barriers within the formations, update wayfinding and informational signage
    b. Phase 2 (Parking and Education Improvements) – Parking lots and trailhead improvements and new interpretive signage
    c. Phase 3 (Recreation Improvements) – New trails and overlooks
    d. Phase 4 (Visitor Center) – Visitor Center and related infrastructure

Conceptual rendering of the Overlook Trailhead Parking Lot and Visitor Center

APPENDIX 1 – BIBLIOGRAPHY

PAINT MINES INTERPRETIVE PARK MASTER PLAN

APPENDIX 1 – BIBLIOGRAPHY

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APPENDIX 2 – PUBLIC OUTREACH SUMMARY

PAINT MINES INTERPRETIVE PARK MASTER PLAN

APPENDIX 2 – PUBLIC OUTREACH SUMMARY

A strong stakeholder and community engagement process was crucial in the development of the Paint Mines Interpretive Park Master Plan. The project team was committed to keeping stakeholders and the public involved throughout each phase of the planning process.


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NEWS

El Paso County tackles vandalism, environment degradation and pet ferrets at Paint Mines Interpretive Park

By CANNON TAYLOR

News Article, The Independent, 7/8/24

Given PMIP's location and appeal, it was important to engage everyone from neighboring property owners in Calhan to the larger communities of Falcon and Colorado Springs. A wide range of engagement techniques were used to both advertise the process and collect diverse community voices throughout the planning stages.

Engagement techniques included:

- A project-specific email (PaintMinesMasterPlan@gmail.com) was set up for the public to contact the project team with questions and comments
- A project webpage on the El Paso County website (Live on April 23, 2024 – present)
- News releases (two were distributed prior to each Public Open House resulting in 15 news stories published about the PMIP Master Plan procesa)
- Social media posts and comment collection (two sets of posts prior to each Public Open House)
- E-Newsletters (two were distributed prior to each Public Open House)
- Project information disseminated by local organizations prior to each Public Open House
- Stakeholder interviews (9 organizations interviewed)
    - These included meetings with the El Paso County Park Advisory Board, El Paso County Fair Advisory Board, Town of Calhan, Palmer Land Conservancy, Trails and Open Space Coalition, Friends of El Paso County Nature Centers, Fountain Creek Nature Center, History Colorado, Aiken Audubon Society, and Falcon School District #49. Stakeholders provided information regarding how their organization was interested in the project and noted any concerns or comments on the proposed Park concept designs. This valuable input was directly incorporated into the Master Plan within the Design Guidelines and Concept Designs
- Two Public Open Houses with comment forms available (June 27 and September 19, 2024)
- Public online survey (live from June 11 – September 6, 2024)
- Project information mailing to property owners located nearby the Park (August 5, 2024)
- Door-to-door visits to property owners located nearby the Park (September 30, 2024)

It is the County's goal to ensure the proposed improvements reflect community and stakeholder needs. As such, the engagement process was designed to discover what is important to the community, understand user perspectives and priorities, hear concerns, and identify the specific needs of residents. It also provided an opportunity to generate new ideas, promote the park, and attempt to align the interests and goals of both users and management. Below is a summary of the public engagement process.

Phases Of Public And Stakeholder Engagement

Phase 1: Initial Site Assessment

Project Kick Off Meeting

- The project team met with County Staff to do a desktop review of existing conditions, understand site concerns and limitations, and discuss the County's vision for PMIP.

Site Visit (February 26, 2024)

- The project team and El Paso County staff met at PMIP and conducted a site inventory to identify opportunities and constraints. This included the assessment of existing amenities, wayfinding and interpretive signage, trail health and location, social trail formation, site drainage and erosion, parking, ADA accessibility, and illegal access to geologic formations.

Ecological Site Assessment (May and August 2024)

- Natural Resources data, including vegetative communities, noxious weeds, and wildlife were collected. An Ecological Restoration Opportunities summary was developed.

Existing Literature Review and Analysis

- A review and analysis of existing paleontological resources was conducted to provide management recommendations. The findings were summarized in the Paleontological Resource Existing Conditions Study (Appendix X).
- A prior Cultural Resource Inventory was summarized, and recommendations for further work within PMIP were provided. These findings can be found in the Cultural Resources Class I Analysis (Appendix X).

The PMIP Masterplan Webpage

- Went live on April 23, 2024 and included the following information: project background, project schedule, funding, E-newsletter, community engagement process and Open Houses, Open House documents, and links to news articles.

Initial Design Concepts for PMIP Improvements Were Developed

Phase 2: Initial Public Outreach

Webpage Update

News Release Distributed

Social Media Posts Posted

Public Survey

- Made available online (June 11th – September 6th, 2024)
- Links to the survey were distributed through news releases, E-newsletters, social media, El Paso County Parks distribution list, property owner mailers, and the project webpage
- 137 responses were received. Summary included at the end of the Public Outreach section

80 E-Newsletters Promoting the Survey and First Public Open House were Distributed.

Stakeholder Interviews

- A total of 4 stakeholder interviews took place from April to June 2024
- DHM Design and Bachman PR ran each meeting virtually
- The meetings began with an introduction to the masterplan, review of project goals and phases, a presentation of the proposed improvements and next steps, then followed by discussion

Public Open House #1

- Date: Thursday, June 27, 2024
- Time: 5 – 6:30 p.m.
- Location: Bear Creek Nature Center, 245 Bear Creek Road, Colorado Springs, CO 80906
- Approximately 16 attendees
- A presentation was given by representatives of El Paso County Parks and DHM Design and included information about the Park's existing conditions analysis, opportunities and constraints, proposed formation and overlook trailhead concepts, and how to stay involved. Q&A was held after. El Paso County Parks and DHM Design engaged with the public for one-on-one comments and discussion around six information boards/concept renderings. The design team wrote down community comments on easel pads. Comment cards were provided to attendees and four were filled out.

Summary of feedback received during Phase 2:

Stakeholder Interview Notes

Stakeholder Interview #1: Park Interpretive Staff, April 23rd, 2024

Attendees

Ryan Dorough, El Paso County Parks
Ken Bryant, El Paso County Interpretive Staff
Chris Rudnick, El Paso County Interpretive Staff
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

PMIP Open House #1 Welcome Table with Sign-in Sheet and Comment Cards.

Meeting Notes

1. **General Notes**
   a. Family oriented place (Ken)
   b. International folks visit the park often (Ken)
   c. Many visitors love the quiet and solitude of the park (Ken)
   d. Chris spoke very highly of the park experience and peacefulness of the place

2. **Issues**
   a. Climbing on the formations is the main issue Ken and Chris see at the park
      i. When new fences went in last fall, people climbed more on other areas. Not sure if fencing will stop that ever. Maybe more PSA would help (Chris), more publicity might help, publicity of fining of people.
      ii. Social media is exponentially creating problems with climbing on formations (Ryan
   b. Protection of other park features
      i. Management is needed for archaeological sites and their destruction (Chris)
      ii. Have they all been mapped?
   c. Dogs and drones are still brought to the park
      i. Are a major issue. Rule is no dogs. Is it really that bad to have an area where dogs could be allowed? Is there maybe a trail they could use? We don't have staffing Mon-Thurs, so it's hard to enforce all the time (Ryan)
      ii. Maybe could have dogs leashed on the maintained loops and include bags and receptacles (Ken)
      iii. South end maintained loop is preferred trail IF dogs were allowed as a pilot program (Ken and Chris). Ashleigh mentioned that some local parks have been allowing dogs at their properties as a pilot program to see what immediate impacts are, and assess after a certain time period.

iv. Prefer to have NO DOGS ever. Maybe a separate dog park off main parking lot (relief area)? Park is a quiet and peaceful place. Dogs bring a lot of conflict at parks. Worried about tight spaces with dogs and visitor interaction. (Chris)
v. Dogs chase wildlife, which is a major concern (Chris)

3. Parking Lots

a. Main Parking Lot (North)
   i. Need more interpretive opportunities at the main parking lot. (Ryan)
   ii. The map sign needs to be placed on the other side of the trail as it's confusing for wayfinding. (Chris)
   iii. Signs need to be moved away from the shed/building as visitors miss them often (Chris).
   iv. Need bus and RV parking spots at the larger parking lots (Ryan). Currently they park on the county road and locals usually drive 50-60 mph.
   v. Donation pipe needs to be replaced with something easier to use (Chris). Ryan has collected quite a bit of money from there in the past, so it is worth having.
b. Overlook Parking Lot
   i. Would like to see this parking lot expanded 2-3 times the current size (everyone agreed).
   ii. This parking lot is closest to the formations, so adding more signage, shade shelter, etc. would be nice. Visitors are sometimes confused why they parked at the main parking lot and had to walk much further to get into the formations. (Ryan)
   iii. There have been requests for a drive thru option at this lot, but no one is interested in that as an option (Chris).
c. South Parking Lot
   i. Maybe install a security camera here as this parking lot sees the most vandalism, dumping, and damage occurs (sandstone sign stolen as example) (Chris).

4. Park Amenities

a. Welcome Center
   i. Group thinks the popularity of this park warrants a welcome/visitors center at the entrance. Social media of the park is getting the same level of hype as National/State parks.
   ii. Chris noted that families visiting the area that can't get into the bigger Parks because of timed entry, come to Paint Mines. Thinks the park is on the same tier of a national park, but the quality of the amenities is lacking.
   iii. Ryan would like to program school trips to the park, but need parking for buses, and would be great to have a pavilion with walls and glass cases to display educational information.
b. Signage
   i. Signs with before and after photos describing how destructive it is to climb in the park, would be good to have before reaching the formations. EDUCATING the public with more signs. (Ryan)
   ii. Could use more interpretive signs (up to 20!) of different sizes and locations throughout the park.
   iii. Interpretive sign information is outdated. Geology sign is not specific to Paint Mines. The Denver Museum of Nature and Science is currently mapping the geology of the park, would be nice to include that information in signage (Chris).
   iv. Signs need pictures of the birds and plant species, asked often about that information (Ken)
   v. Would be nice to have native American stories/how they used the paint mines/what did it mean to them/how did they make the clay as part of interpretive signage (Ken)
   vi. 7-8 places where short permanent signs are NEEDED to keep people off formations. Chris and Ken have placed temp signs at no climbing areas. (Ken)
   vii. Naming the different features on the signs/mapping would be nice (could the public get involved in that?) (Ken)

c. Wayfinding Signs
    1. "You are here" stickers on all trail maps (Chris thinks they have around 6 out on site)
    2. More signs, the better
    3. Big font, simple language (7th/8th grade level)
    4. Ryan would like to see all signage proofread by a County source
d. Shade
    i. One single tree in the formations that provides shade, and it is currently fenced off. Suggest removing fencing and adding seating so visitors can enjoy shade (Chris).
    ii. Shelters could have signed displays possibly? (Ken)
    iii. Group would like to see shade shelters for visitors at parking lots
e. Benches
    i. Would like to see benches added in the main formations area (Ken)
    ii. Benches should be lettered or numbered and displayed on the maps so emergency services can find visitors in the park easier (Chris)

5. Park Formations

a. The Cave
    i. A decision needs to be made if it's to be opened, or close it. There is no open path, and it's significantly getting eroded away. County needs to make a decision there. (Ken)
    ii. Chris has stood there to stop people from going in. It's one of the fastest eroding areas, from natural erosion, but visitors are not helping. Significant rockfall occurs regularly near cave.
    iii. Suggestion is to install steps with railing and interpretive signage (if kept open). Chris thinks this cave was mentioned by early pioneers. Significant history in that cave. Worries that if you close it, people would access from the top and would be a major safety concern.
b. Clay Mines
    i. East Clay Mine
        1. Deeper erosional slots canyons (tiny)
        2. On edges it's hazardous and very tall.
        3. Maybe not safe to access or highlight as a place to access
        4. More rattlesnake area (never seen one though)
        5. No cell service
        6. Early 1900's would mechanically mine for clay
    ii. Another clay mine along the southern loop trail, and at Paint Mines West.
    iii. Chris and Ken think visitors would be interested in learning more about these areas (history).
c. Black Formations Near the Main Parking Lot
    i. Some of the most fragile features on site
    ii. First pink zone (black) very soft, and fragile. Should have no access at the end of the social trail, really really neat overlook. Fencing and signage needed.

6. **Archaeological Features**
    a. Both Ken and Chris noted the importance of protecting the resources on site and the need for additional survey to be completed to identify ALL resources visible on site.
    b. Artifacts that have been found should be a part of a future interpretive display, or within a visitors center if built. Need to be locked and safe from vandalism.
    c. There is a brochure about archaeology but nowhere to place a brochure. Maybe this could be uploaded online for visitors?

7. **Emergency Services**
    a. What have Chris and Ken seen for emergencies?
        i. Lack of water
        ii. Elevation sickness
        iii. Banged up knees and elbows
        iv. Sunburns
        v. Heat exhaustion
        vi. Rarely wildlife interactions
    b. Park Access
        i. All emergency service folks needs keys to the bollards
        ii. Most often trucks access the park from the south and north lots
    c. Cell Service
        i. Service in formations is very limited
        ii. Add signage about where cell service is available
        iii. Suggest a map with areas named for emergency personnel (name the areas so emergency services can find people easier)…maybe a short post with the names labeled at each location.

8. **Miscellaneous Notes**
    a. Suggest longer hours on weekends and holidays (9am-7pm), and longer hours for interpretive staff.
    b. Paint Mines West should remain closed to the public. Very fragile resources that would be immediately ruined by visitors.
    c. Audio Tours
        i. Asked if audio tours have ever been discussed as an option. Ryan would love to see that but hasn't had the resources or time to develop.
        ii. Could download an app at the parking lot, but not within the park.

Stakeholder Interview #2: Palmer Land Conservancy, June 12th, 2024

Attendees

Steve Harris, Land Stewardship Director, Palmer Land Conservancy
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. Have you personally visited Paint Mines Interpretive Park?
   - Yes, used to be involved with Park in the past.

2. Please describe your organization, its primary purpose, and the general demographic of customers it serves.
   - Formed to support the City parks department. First easement was established in 1985, "The Pineries". Land Trust for the 10 County area they serve (trusts became popular in 1990's/2000's with tax credits). 148 properties, 138,000 acres, 7 with El Paso County. Steve works on stewardship and monitoring (annual monitoring). Accredited by the Land Trust Alliance. Internal policy to get on each property every 3 years. Serve public and private entities, in a very large area (over 1 million people).

3. How might your organization as a whole utilize Paint Mines Interpretive Park, either recreationally or administratively?
   - Enforcing the terms of the conservation easement. Freeman Parcel. Monitoring; document current conditions on the ground, note violations (if any), talking to the land manager, etc.

4. Which of the proposed programs and/or facilities would you like to see expanded or improved?
   - Interested in the protections

5. What additional programs and/or facilities would you like to see at Paint Mines Interpretive Park?
   - Will talk to team and see if there are any suggestions.

Meeting Notes

1. Really only interested in the northern part of the property within the easement
2. Very interested in protecting the resources
3. Steve wants to review the conservation easement and dive into language
4. Lisa sending Steve email with Open House text and survey QR code, and can follow up with a newsletter (PDF). Please push out as much as possible.
5. Would like to make approvals, and review the Draft master plan prior to Board/Commissioner presentations.

Stakeholder Interview #3: El Paso County Park Advisory Board, June 20th, 2024

Attendees

Thomas Lachocki, Chair, El Paso County Park Advisory Board
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. What additional programs and/or facilities would you like to see at Paint Mines Interpretive Park?
   - Additional staffing, additional hours
   - Effective way for donations to the Park (QR code, etc.)
   - Pay to park "goes to support Park protection and improvements" ($2 to park)

2. Please provide any other comments or input.

3. What else are you hearing from the public about paint mines/parks in county in general?
   - Tom has spoken with Todd/staff:
   - Proximity to the Fairgrounds as opportunity to purchase the property between the two locations. Transit corridor between the two. Could support staffing with proximity.
   - Increase visibility.
   - Camera system (even fake), changes behavior. Visual monitoring implemented.

Meeting Notes

1. Option to have Open House #2 at the fairgrounds close to the Park.
2. What are the visitor use statistics for visitor increase? Need that info.
3. Tom has been hearing: concern regarding vandalism/harm to formation,
4. Cell phone data for visitor use is very helpful for the County. Can we do additional areas?
   - Also data regarding where visitors are coming from?
   - Can Teresa (BerryDunn) contact Tom regarding more about the cell phone data.
5. Could we post the public survey information at the fairgrounds this summer. Booth?
6. Arch/paleo studies, grants to continue to study for preservation. Other historic resources on site, important.
7. Tom liked our concept design and initial proposed improvements, and looks forward to the final Master Plan, and eventually funding. Noted that this is such a special place, and is excited the Park is going through this process.


El Paso County launches master plan effort to protect Paint Mines

By Mary Shinn mary.shinn@gazette.com Jan 16, 2024

Popular

1. 'The game has changed': Virginia Canyon mountain bike trails open in Colorado
2. Colorado Trail: Aches and pains, but 'the trail provides'
3. Forest Service celebrates 203 acres of private land-turned wilderness
4. The task of tackling environmental impacts along the Colorado Trail is ever-evolving

News Article announcing project. The Gazette, Jan 16,2024.

Stakeholder Interview #4: El Paso County Trails and Open Space Coalition, June 21st, 2024

Attendees

Susan Davies, Executive Director, Trails and Open Space Coalition
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. Have you personally visited Paint Mines Interpretive Park?
   - Yes
2. Please describe your organization, its primary purpose, and the general demographic of customers it serves.
   - Susan has been with Coalition for 15 years. Coalition created in late 80's.
   - Focus on parks, connect trails, open space improvements, etc. advocacy, planning, working with local groups/boards, coordination with public.
3. How might your organization utilize Paint Mines Interpretive Park, either recreationally or administratively?

4. Which of the proposed programs and/or facilities would you like to see expanded or improved?
   - Guided hikes were very popular in years past. Keep the hikes, increase number of hikes. Encourage community to attend, gets them excited about the Park which leads to advocacy/possible funding opportunities. This is YOUR paint mines…connect with the local community is critical.
   - TOSC might looking into offering hikes at the Park.

5. What additional programs and/or facilities would you like to see at Paint Mines Interpretive Park?
   - Visitor's Center, if well done, could make the Park more of a destination. Education! Engagement is important.
   - Cost is a huge concern. Public needs to know costs so they can help support, or at least know about the costs. Will be a part of this Master Plan.

Meeting Notes

1. What feedback has Susan heard about the Park? During pandemic, comments about being overrun, social media increasing visitation and vandalism. New land manager? Questions asked during this time. Very fragile site, very unique and needs protection. At the end of day, it's about the resource and protecting it for generations to come. Tried to form a Friends Group of volunteers…was very challenging with location. Pleased to hear that County hired staff to help protect and educate.
2. How do you think the public will react? Probably a balance between pro barriers, and no improvements. Can't think of any other open space that is this unique.
3. Telling the story about how special the Park is, and the story of the geology (how old, why fragile?), is important messaging for the public to get buy in. What will resonate with the public that will help with protection?
4. Do you see bikers wanting to use the Park? Susan doesn't think so with the limited trails. Can we allow horses? Is there a place for horse trailers? Staff should be ready to answer this questions. Horse trailers could also park at the county fairgrounds and ride to the Park, as an option.

Open House #1: June 27, 2204

Comment Card Comments: (5) Cards Filled Out

Zip Codes:

- (4) Colorado Springs
- (1) Latigo

Average Visitation:

- (2) monthly
- (2) yearly
- (1) Occasionally

Additional Amenities Requested:

- Additional trails
- Benches
- Interpretive/wayfinding signage
- Restrooms
- More parking
- Visitor Center w/ restrooms
- Shade Shelter

Presentation at Open House #1

Human Impact Related Requested Improvements

- Trail delineation in canyons
- Paved Trails
- Protect from climbing on and/or breaking off rock chunks. I have witnessed both :(.

Thoughts on Parking Lot Concepts Presented Tonight

- Is there another option to paving the parking lots? It's hot there whenever there is sun and an asphalt parking lot is a dead landscape.
- Great. Possibly more oversize parking spaces would be better.
- I think it's a good idea to have a vault bathroom at the second parking lot.
- Based on your visitor statistics, be sure you have enough parking to meet at least your limited/least demand numbers. Parking for 12,000 in July even based on 400 car/day may be too much for the area, but possibly there could be bussing from the fairgrounds or other nearby sites.
- Good ideas- need funding- it would also be nice to improve, pave and have a shade shelter and benches at the upper overlook. The view from the top of the park is spectacular.

Thoughts on Low Barrier and Boardwalk Concepts Presented Tonight

- The more the better. Boardwalks are critical in the erosion gullies to protect trails when it rains and reduce mud erosion.
- Low barriers will impede views and ruin photo opportunities. I also don't believe these barriers will deter those who want to climb on the hoodoos. I am very much opposed to these barriers.
- Low barrier railing should be at least adult knee height. Board walk concepts at White Sands in New Mexico works very well.
- Definitely need barrier and marked trails.

Additional Comments

- When the property was first purchased, a rare plant was identified. Does it still exist there and can we address its importance
- Consider closing sensitive, at risk trails when conditions warrant - eg. spring rainy season
- Need to improve the geological information. Use a color photo to indicate layers/formations

- Adding extended trail loops would make this park more useful and spread people out.
- I have volunteered to be on this committee. I would like to meet with the committee and invite them on my next photography workshop at the paint mines so that the members can better understand how adding barriers will adversely impact photography opportunities in the park. I run the largest photography group in the area and would like to set up a public meeting so that my members can provide feedback.
- The present situation of one porta-potty at south parking lot certainly makes one plan ahead especially when driving a distance to get there and when the area becomes busy.
- Be sure there are available and empty trash cans in the parking lot. Be sure covered due to high winds that sometimes occur out there.
- Get volunteers to be at park during high visitor traffic times. Also at upper overlook. No vehicles or equestrians on interior trials due to fragile soil.

Open House #1: June 27, 2204

In-person Easel and Noted Comments:

Vandalism

- How about fire/police patrol to limit vandalism?
- Speak to high school nearby about volunteer projects Calhan fire department might be very interested in helping/ being involved
- Calhan school district security

Interpretation

- Use space at fairgrounds for programs
- Interpret the wind turbines

Parking

- Need gates at parking lots (do first before improvements)
- Prioritize gates
- Parking lot control- auto gates
- Shuttle from the fairgrounds
- Porous pavement in parking lots

Barrier/ Boardwalk/Trails

- Absolutely the best answer is the board walk. I've used them elsewhere and they are just great. If they're wide enough you won't have to worry about ADA or one way traffic.
- Possible wide loop “prairie hike”

Ecology

- Rare or endangered species on site? Spike rush?
- Bird study area
- Protect deer and pronghorn habitat

Other

- Hold the next open house at the County Fairgrounds closer to PMIP?
- Phasing

Phase 3: First Iteration of Feedback

Design Development

- Based on feedback from the first Open House, the conceptual design improvements were updated with more detail regarding stormwater management.
- Proposed lighting was added to the renderings of the proposed improvements to better understand its impact to neighbors, dark sky initiatives, and PMIP evening programs.
- A concept plan for the north parking lot was developed.

Project Website was Updated

- Documents from the first Open House.
- Information about the second Open House was added to the website
- The E-Newsletter was updated.
- Links to PMIP press were updated as articles were written.
- The link to the online survey was removed after its closing date (9.6.24).

E-newsletter Promoting the Public Open House. Approximately 115 were Distributed

Stakeholder Interviews

- The remaining 5 Stakeholder Interviews were conducted between July – September 2024.

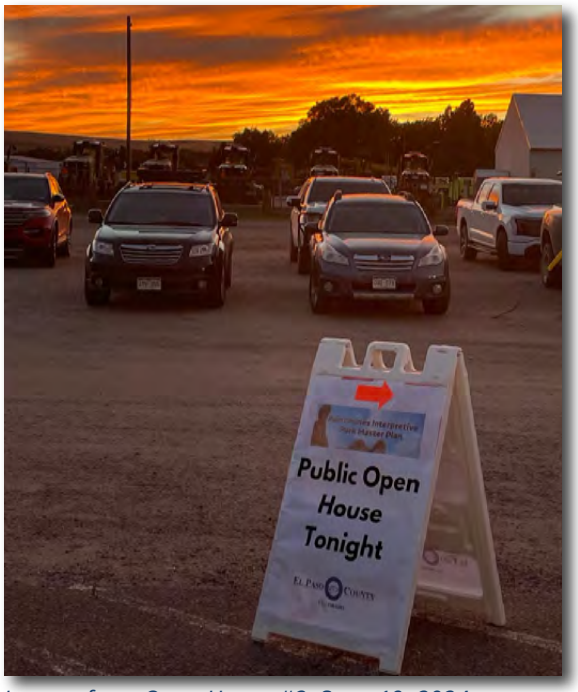
Design Packet Mailed to 17 Nearby Property Owners

Door to Door Visits

- 17 nearby property owners with information promoting the Public Open House.
- 4 Calhan area businesses with flyers promoting the Public Open House for distribution

Open House #2

- Date: Thursday, Sept. 19, 2024
- Time: 6 – 7:30 p.m.
- Location: Swink Hall, El Paso County Fair and Events Center, 366 10th St, Calhan, CO 80808
- Approximately 25 attendees
- Representatives of El Paso County Parks and DHM Design engaged with the public around renderings of the proposed improvements to the North Parking Lot, Visitor Center daytime and evening concepts, and a summary of the public engagement process to date.
- The event time was moved back compared to the first Open House, in response to attendee comments, to allow commuters to attend after work. Representatives of El Paso County Parks and DHM Design engaged with the public around information boards, including the same boards present at the first Open House, with the addition of a summary of public outreach to date and online survey results, as well as 3D renderings. Comments were collected on easel note pads and a sign-in sheet was used to collect names and the numbers of attendees. Comment cards were available for guests to fill out and two were received.



Images from Open House #2, Sept. 19, 2024.

Summary of the Feedback Received During Phase 3:

Stakeholder Interview Notes:

Stakeholder Interview #5: July 26th, 2024

Attendees

Linda Hodges, Conservation Chair – Aiken Audubon Society
Jessica Miller, Supervisor – Fountain Creek Nature Center
Risë Foster-Bruder, President – Friends of EPC Nature Centers
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. Have you personally visited Paint Mines Interpretive Park? Yes, everyone is familiar. Risë has been completing field surveys on the property for many years.

2. Please describe your organization, its primary purpose, and the general demographic of customers it serves.

3. How might your organization as a whole utilize Paint Mines Interpretive Park, either recreationally or administratively?

4. Which of the proposed programs and/or facilities would you like to see expanded or improved?

5. What additional programs and/or facilities would you like to see at Paint Mines Interpretive Park? Would be nice to have programming that speaks to the history of the place, for those who request (preserve and protect). Add a variety of short, guided public walks with visitors (low-cost, donation based) of varying topics.

Meeting Notes

1. Does the County know the carrying capacity for the Park? Adding parking just to accommodate additional visitors can overrun the Park's resources without knowing the capacity for visitor use. Would be very cautious about adding parking #'s.
2. Concerns about runoff with paving parking lots. Would prefer to keep the parking lots a natural surface.
3. Wouldn't resources be better spent on staffing vs money spent on amenities and other improvements?
4. Group would highly encourage County to complete a more updated archaeological survey because of the important resources on site, and knowing where future improvements should be placed (or current trails to be moved away from). Noted that information might be outdated from the survey completed in the 1980's. Those that are on the ground area aware of many areas where artifacts are exposed from erosion/stormwater runoff, and witnessed artifacts being removed by visitors. Very interested in seeing more protection of these cultural resources.
5. Please take care in adding new trails because they directly contribute to habitat fragmentation. We discussed the additional trail on the north side, connecting the two "loops" quite a bit. The group felt this was appropriate, but they want the County to take care in the exact layout of that trail to not impact habitat, and the cultural resources on site. Do not want visitors any closer to sensitive areas.
6. Take note of social trails on site as potential opportunities for new trails.
7. Take care in adding vegetation to only appropriate locations. Very little water on site.
8. Seeing a wide diversity of visitors at the site. Make sure new signs have images and pictures on them in case visitors can't read English.

Stakeholder Interview #6: History Colorado, August 15th, 2024

Attendees

Holly Norton, History Colorado
Matthew Marques, History Colorado
Sarah Allan, History Colorado
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. Have you personally visited Paint Mines Interpretive Park?
   - No
2. Please describe your organization, its primary purpose, and the general demographic of customers it serves.

3. How might your organization as a whole utilize Paint Mines Interpretive Park, either recreationally or administratively? Would review any new documentation for cultural resources. Highly encourage additional, updated field survey to be completed.

4. Which of the proposed programs and/or facilities would you like to see expanded or improved? Educational is always great.

Meeting Notes

1. Funding sources from state historic for preservation of resources (shouldn't be used for section 106), but could be used for a full documentation for the Park.
2. Generally speaking, the concepts are addressing the visitor impacts, which is great.
3. Would like to see the updated Metcalf report in order to make more comments.
4. Boardwalks can be good to avoid deposits. If resources have unique features, boardwalks might be too much disturbance. Eligible under criterion D.
5. Has the project been in contact with the tribes? Section 106/state register act, wouldn't NEED to involve them. Would be a good idea to connect with tribes, and get their perspective and input. Even interpretive elements to be added to the Park.

Images from Open House #2, Sept. 19, 2024.

Stakeholder Interview #7: Town of Calhan, September 4th, 2024

Attendees

Cindy Tompkins, Town of Calhan, Town Clerk
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. Have you personally visited Paint Mines Interpretive Park?
   - Yes

2. What additional programs and/or facilities would you like to see at Paint Mines Interpretive Park? Education is important for programming.

Meeting Notes

1. Cindy has been the Park, many times.
2. Lisa to send the enewsletter to Cindy again, and Cindy can post on their social media (Instagram and facebook).
3. Notes from Cindy
   - People walk where they want to, so agree with adding fencing and defining the paths
   - Love the idea of a visitors center, not sure the County can justify manning the building. Education is important.
4. Get calls about dogs most often. Options to be able to walk dogs. Want access for dogs.
5. Important for folks to understand that the County is working with the Town of Calhan. Town of Calhan can post the Master Plan for their residents.
6. Cindy will share the enewsletter with the Mayor, who was unable to join today's meeting.

Stakeholder Interview #8: El Paso County Fair Advisory Board, September 5th, 2024

Attendees

Kate Johnson, El Paso County Fair Advisory Board, Chair
Michael Publicker, El Paso County Fair Advisory Board, Vice Chair
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. Have you personally visited Paint Mines Interpretive Park?
   - Yes

Meeting Notes

1. Mike noted that last time he was at the Park, he walked south from the middle parking lot and there was no signage regarding a dead end, or where to go next. He noted that many people were continuing south along a social path, or they were hiking straight down into the formations. Ashleigh showed him exactly where on the opportunities plan, that we discussed adding a new trail that loops visitors to the south, as well as adding wayfinding signage and fencing to direct visitor traffic.
2. Mike and Kate thought a visitors center seemed like a good idea to have a place where County staff could be stationed or use as an office space.
3. Excited about accessible opportunities.

4. We mentioned that it was noted by other stakeholders the possibility of having a shuttle system or an alternate connection between the County Fair property and the Park. Kate and Mike weren't sure a shuttle would be used, and thought a physical connection would be too far for people to likely use.
5. Overall, Kate and Mike were supportive of our proposed improvements.

Stakeholder Interview #9: Falcon School District No. 49, September 10th, 2024

Attendees

Heather Diaz, Falcon School District (49), County Manager
Spencer McCabe, Falcon School District (49), Budget Manager
James Rohr, Falcon School District (49), Procurement and Contract Manager
Evelyn Galane Phillips, Falcon School District (49), Community Facility Planning Manager
Ashleigh Quillen, DHM Design
Lisa Bachman, Bachman PR

Questions

1. Have you personally visited Paint Mines Interpretive Park? 2 had been to the Park, 2 had not. We showed some photos of the formations to give those that had never been an idea of why the Park is special.

2. How might your organization utilize Paint Mines Interpretive Park, either recreationally or administratively? Certainly could be an educational opportunity for the District.

Meeting Notes

1. Excited to see the concepts have tried to blend the new development into the landscape (colors, materials, and berming). Want to keep it as natural as possible.
2. Asked if there will be full-time staff at the Park. We noted that there are staff at the Park on the weekends.

Open House #2: Sept. 19, 2024

Comment Card Comments: (3) cards filled out

Zip Codes:

- (2) Calhan

Average Visitation:

- (1) monthly
- (1) Yearly

Additional Amenities Requested:

- (3) Benches
- (2) Shade Shelter
- Interpretive/wayfinding signage
- Other: Fences to protect formations

Images from Open House #2, Sept. 19, 2024.

Human Impact Related Requested Improvements:

- People to patrol the park to enforce rules

Thoughts about Visitor Center Concepts:

- Ok, but wanted more presentation
- I don't like the idea of a visitor center. Mostly I would oppose lights on at night for an infrastructure there or a well to run water. We honestly do not have the ground water for that.

Thoughts on low barrier and boardwalk concepts:

- Ok
- I like the fences and barrier ideas.

Additional Comments:

- Please make a speed limit on Paint Mine Road! Please do not pave it. Please inform public there is an alternative way out of the park when weather makes the road impassable. People ride horseback and have livestock on the road; force people to slow down.

Open House #2: Sept. 19, 2024

In-Person Easel and Noted Comments:

Regulation:

- Paint Mine Road (PMR)
  - Many neighbors are fine with the proposed PMIP improvements, but the access road problems need to be addressed before any improvements implemented.
  - A traffic study is needed to assess traffic impact on PMR.
  - Road is unsafe and needs improvement even for just existing conditions.
    - Constant traffic creates wash boards and dust on PMR.
    - Visitors do not know how to drive on a dirt road.
    - The 90-degree corner on PMR is not safe and the neighbors are experiencing property damage at this location.
    - When wet (rain/snow), the clay of the road material creates slick conditions that are a safety hazard.
      - Neighbors have witnessed people getting stuck along the road and/or sliding off and have to help pull cars out of the ditches along PMR.
      - Please inform public there is an alternative way out of the Park when weather makes the road impassable.
  - PMR Speed Limit is too high
    - Neighbors have lost farm animals to visitors driving too fast.
    - People ride horseback and have livestock on the road.
    - Drivers need to slow down!
    - Speed limit signage and enforcement are needed.
  - Community Safety
    - The increase in visitatorship post covid has increased crime and vandalism to neighboring properties.
    - Trash along PMR is an issue.
  - Signage
    - All signage at PMIP needs to be durable, wind and sun proof. Existing temporary regulatory signage is not adequate.
    - Private property signage is needed for neighbors and PMIP West.
      - Neighbors report visitors driving down their driveway to try to access PMIP West.
    - No parking signage needed along PMR.
  - Enforcement
    - More rangers/staff are needed to patrol the park and enforce the rules. (This comment was mentioned many times)
    - Issue tickets/fines for climbing the geological formations
  - Park Capacity
    - Would like to see reservation and permitting system implemented to limit visitor use.
    - Feasibility study needed: how many people can the park hold?
    - Studies should be completed before any of the proposed improvements are implemented.

- Paint Mines Interpretive Park West
  - Visitors are exploring the western portion of the property.
    - What are the rules for this portion of the property?
    - This is not currently clear for existing conditions and the proposed improvements.
  - Signage and fencing are needed.
    - No plan is not a plan for this section of the park.
- Emergency Management:
  - Facilities for heat exhaustion are greatly needed.
  - The park is outside of the Town of Calhan's jurisdiction. Emergency response and community safety is the responsibility of the County, which is often slow to arrive.
  - Alternative routes during inclement weather should be advertised.
- Proposed Improvements:
  - Communication with the neighbors should have been first. Then PMR review, followed by conceptual design review.
  - Visitor Center:
    - The Visitor Center's impact to the ridge, as well as to the neighbors, would be less if moved to the north parking lot.
    - The north parking lot is a more central location for future PMIP facilities and trail expansion.
- Parking lot:
  - Stripe more spaces for RV parking

Door-to-Door Neighbor Outreach: August 30th, 2024 Comments

On August 30th 2024, Bachman PR made house calls to17 neighbors and 4 businesses adjacent to PMIP. Below are their comments

MP Email Address

Summary of Emailed Comments (4 total):

9/22/2024:

1. Astonished how many people were climbing on rock formations and taking selfies in delicate areas; not obeying the trail and park rules.
2. 2I'm an American citizen truly concerned about the site.

9/17/24:

1. Email from property owner within the study boundary area.
2. Serious concerns about the increased traffic on Paint Mine Road. Worries that park improvements will draw additional traffic, further exacerbating the existing road dangers.
3. Paint Mine Road, is already overcrowded and dangerous:
   - During wet conditions, the road becomes muddy and slippery, while in dry conditions, it is extremely dusty.
   - Neighbors experience issues with drivers speeding excessively, and some tourists appear unfamiliar with the need to share the road properly.
   - Experienced several near-misses pulling onto the road from their driveway due to a blind spot.
   - Drivers behind them have attempted to pass on the hill, nearly causing head-on collisions, especially when towing a trailer and needing to make a wider turn into my driveway from the West.

4. How does this project plan to address traffic control?
    - What is the current speed limit, and what measures will be taken to ensure the road remains safe for residents?
5. While paving may seem like a solution to dust and mud, I fear it would only encourage faster speeds, turning the road into even more of a hazard.
6. Historically, and until the repairs last year, the road has lacked adequate drainage and crowning, making it nearly impassable during heavy rains or wet snow requiring a 4-wheel drive vehicle just to drive on.
    - Winter visitors, many of whom are unprepared for the conditions, often find themselves in difficult or dangerous situations.
7. Unable to attend the upcoming open house in Calhan, but would appreciate it if you could keep me updated on any developments with this project.

9/6/2024:

1. I strongly encourage El Paso County to invite Ute Nation and surrounding nations that historically had involvement with the Paint Mines to be included in the discussion about the Paint Mines. Land acknowledgment is huge way to show how grand a historical site is, while also giving them an opportunity to help fund to protect the area.

9/2/2024:

1. How close is this going to be to my property? People already trespass through the barb wire so moving the parking lot closer just means more trespassers.

Social Media Comments:

Note: These comments were taken from two KOAA TV YouTube posts (on 6/28/24 and 9/18/24) about the PMIP Open Houses: https://www.youtube.com/watch?v=HRHYDIqpZ7U

Daily ranger/staff presence is needed to patrol the park and enforce the rules.

- Signs mean nothing if they are not enforced. Paint Mines will not exist for future generations if we keep letting people destroy it.
- Use drones to monitor visitors.

PMIP is being loved to death.

- Prevent climbing.
- Fine rule breakers.

Dog comments were divided:

- The existing “no dogs allowed” rule should be enforced. Dogs are seen in the park. People leave used poop bags on the trails.
- Dogs should be allowed but only on the outer trailer loop where formations are not at risk.
- Opening this area up for dogs would increase dog presence within the formations.

Trails:

- Additional walkways could further destroy the land/formations

Accessibility:

- Make PMIP ADA accessible.

Amenities:

- More shade areas needed.

Phase 4: Input Compilation, Analysis, and Recommendations (Final Design)

Final Concept Design:

- Feedback and analysis incorporated into the final designs

Presentation of the draft master plan to the Parks Advisory Board (November 13th, 2024)

Webpage update

Final Master Plan:

- The draft master plan was posted to the project and County websites and open for public comment between November 7 - 20th, 2024. Six comments were received. Comments were positive and primarily focused on plant and wildlife species, parking lots, signage, and fencing. Feedback was incorporated into the final master plan

E-newsletter promoting the Parks Advisory Board meeting

Park Advisory Board Hearing and endorsement (December 11th, 2024)

Phase 5: Adoption of Final Master Plan

Presentation of the master plan to the Board of County Commissioners and received final approval (December 17th, 2024)

Webpage update

Public Survey: June 11-Sept 6th 2024

Summary of Results:

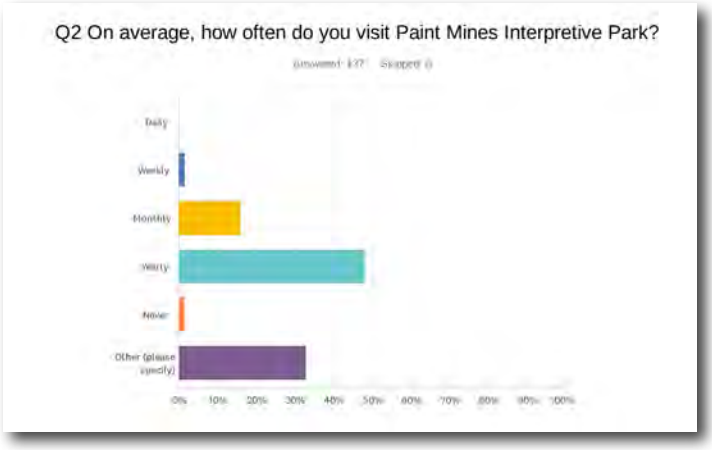
1. Where do you live?

Colorado (93%)

a. Colorado Springs (58%)
b. Calhan (7%)
c. Denver (5%)
d. CO other: (23%)

Out of State (7%)

a. PA
b. NJ
c. VA
d. MI
e. NM
f. KS
g. MA



2. How often do you visit PMIP?

The following is a breakdown of the 45 "Other" responses included:

(2) Have not been

(13) First time / Have been one time

(10) Once every few years

(13) Several times a year

(7) Other: For photo workshops, more if possible, twice in 30 yrs, not recently, several times, not since it's gotten so busy

3. What activities do you engage in at PMIP? Participants were able to select more than one.

a. 88% Hiking/walking
b. 70% Photography
c. 45% Geologic Interest
d. 37% Wildlife viewing
e. 34% Historic/ Cultural interest
f. 7% Other

4. If any of the following amenities were to be added, please pick the 2 most important to you:

Restrooms were the most requested, with 63 votes (47%), interpretive/Wayfinding signage came in second with 53 votes (39%). Shade Shelter was third with 39 votes (29%) and the fourth requested amenity were additional trails with 36 votes (27%).

5. What is the number one improvement you'd make at PMIP in regard to human impact to the park's sensitive features?

This question was answered by 125 of the 137 survey participants. The following is a summary of Key Trends and Themes for improvements at PMIP:

The Need for Increased Enforcement:

- Visible presence of rangers, law enforcement, park officials or security personnel to deter rule-breaking, issue fines, and ensure compliance with rules.

Barriers and Fencing:

- To protect sensitive rock formations, but some comments express concern that barriers could detract from the Park's natural beauty and suggest using less obtrusive methods.

Signage and Education:

- Clearer, more strategically placed, and durable wayfinding signage to indicate restricted areas.
- A staffed visitor center with educational exhibits would enhance visitor understanding of the Park's sensitivity and reduce human impact.
- The need for more interpretive and cultural signage to provide context about the Park's significance and to discourage damaging behaviors.

Visitor Management:

- Restricting the number of visitors or implementing a reservation system to better manage foot traffic and minimize impact.
- An entry fee could help fund Park management and protection efforts.

Trail Management:

- Improving trail delineation to prevent visitors from straying into sensitive areas.
- Blocking/restoring rogue trails.

Photography and Access:

- Some comments suggest allowing night photography with permits, while others advocate for restricting access to preserve the area.

Summary

- Overall, the balance between protecting the park's natural beauty and effectively managing visitor behavior is a recurring theme in the comment responses with a strong emphasis on enhancing enforcement and visitor education to reduce human impact.

6. Email Address Request

83 participants gave their email address to receive future communications regarding the PMIP Master Planning Project.

7. Other thoughts and Comments

This open-ended question was answered by 71 of the 137 survey participants. The following is a summary of key concerns and trends:

Key Concerns

1. Preservation of Geologic Features.
2. Overcrowding and Road Safety. The park is overcrowded, and Paint Mine Road is dangerous, with no current solutions presented in the proposed plan.
3. Concerns about the Impact of proposed physical barriers on the aesthetic of the park.
4. Suggested Alternative Solutions:
   - Increased ranger presence
   - Improved visitor management through rule enforcement
   - Additional signage

   A. Trail delineation

   B. Education to improve visitor understanding and respect for the site.
5. Incorporation of Indigenous Significance in future plans for Park
6. Amenity Improvements:
   - Some commenters suggest practical improvements like better parking, restrooms, and designated areas for RVs.

Trends

- Balance Between Preservation and Accessibility: Wanting to preserve the park's natural beauty while also addressing the issues of overcrowding and visitor misuse.
- Desire for Better Education and Management: Educational resources and management strategies will foster respect for the Park's features and reduce harmful behaviors.
- Mixed Feelings on Infrastructure Changes:
- Some support improvements to infrastructure.
- There is a strong preference towards minimal intervention. Heavy infrastructure will detract from Park aesthetic, exacerbate problems, or negatively impact visitor experience.

Summary

The survey feedback highlights the need for a thoughtful approach that balances preservation with improved visitor management and education.

APPENDIX 3 – PLANT AND WILDLIFE SPECIES LIST

PAINT MINES INTERPRETIVE PARK MASTER PLAN

APPENDIX 3 – PLANT AND WILDLIFE SPECIES LISTS

Note: These lists are intended to be a comprehensive compilation of information from a variety of data sources and represent species that have been verified, those that historically have occurred or were thought to occur, and/or species that could occur based on available habitat. Refer to Source column for more information regarding the document or dataset utilized.

Wildlife Species

Common Name	Scientific Name	Major Group	CNHP	State	Federal	Source
American avocet	*Recurvirostra americana*	Birds				1
American coot	*Fulica americana*	Birds				1
American crow	*Corvus brachyrhynchos*	Birds				1, 4
American goldfinch	*Carduelis tristis*	Birds				1, 4
American kestrel	*Falco sparverius*	Birds				1, 4
American redstart	*Setophaga ruticilla*	Birds				1
American robin	*Turdus migratorius*	Birds				1, 2, 4
American tree sparrow	*Spizelloides arborea*	Birds				1, 4
American white pelican	*Pelecanus erythrorhynchos*	Birds	G4/S1B	Tier 2		4
American widgeon	*Anas americana*	Birds				1
Arkansas darter	*Etheostoma cragini*	Fish				3
Bald eagle	*Haliaeetus leucocephalus*	Birds	G5/S1B, S3N	Tier 2, SC		1
Barn swallow	*Hirundo rustica*	Birds				4
Black-and-white warbler	*Mniotilta varia*	Birds				1
Black-billed magpie	*Pica pica*	Birds				1, 2, 4
Black-capped chickadee	*Poecile atricapillus*	Birds				1
Black-crowned night-heron	*Nycticorax nycticorax*	Birds				1
Black-necked stilt	*Himantopus mexicanus*	Birds				1
Black-rosy finch	*Leucosticte atrata*	Birds	G4/S4N	Tier 2		1
Black-tailed jackrabbit	*Lepus californicus*	Mammals				1
Black-tailed prairie dog	*Cynomys ludovicianus*	Mammals	G4/S3	Tier 2, SC		3
Bleached skimmer	*Libellula composita*	Invertebrates				5
Blue grosbeak	*Guiraca caerulea*	Birds				1
Blue jay	*Cyanocitta cristata*	Birds				1, 4
Blue-gray gnatcatcher	*Polioptila caerulea*	Birds				1
Blue-winged teal	*Anas disors*	Birds				1

Common Name	Scientific Name	Major Group	CNHP	State	Federal	Source
Bobcat	*Lynx rufus*	Mammals				1
Bohemian waxwing	*Bombycilla garrulus*	Birds				1
Botta's pocket gopher	*Thomomys bottae*	Mammals	G5/S1	Tier 2, SC		1
Brewer's blackbird	*Euphagus cyanocephalus*	Birds				1, 2, 4
Brewer's sparrow	*Spizella breweri*	Birds	G4/S2B	Tier 2		3, 4
Brown thrasher	*Toxostoma rufum*	Birds				1, 4
Brown-capped rosy finch	*Leucosticte australis*	Birds	G4/S3B, S4N	Tier 1		1
Brown-headed cowbird	*Molothrus ater*	Birds				1
Buff-breasted sandpiper	*Tryngites subruficollis*	Birds				1
Bullsnake	*Pituophis catenifer*	Reptiles				3
Burrowing owl	*Athene cunicularia*	Birds	G4/S4B	Tier 1, ST	T	1, 3
Canada goose	*Branta canadensis*	Birds				1
Canada warbler	*Cardellina canadensis*	Birds				1
Canyon towhee	*Melozone fusca*	Birds				1
Canyon wren	*Catherpes mexicanus*	Birds				1
Carolina wren	*Thryothorus ludovicianus*	Birds				1
Cassin's kingbird	*Tyrannus vociferans*	Birds				1
Cassin's sparrow	*Aimophila cassinii*	Birds	G4/S2B	Tier 2		3
Cedar waxwing	*Bombycilla cedrorum*	Birds				1
Central Plains milksnkae	*Lampropeltis triangulum*	Reptiles	G5/S2?	Tier 2		3
Chestnut-sided warbler	*Dendroica pensylvanica*	Birds				1
Chimney swift	*Chaetura pelagica*	Birds				1
Chipping sparrow	*Spizella passerina*	Birds				4
Cinnamon teal	*Anas cyanoptera*	Birds				1
Clay-colored sparrow	*Spizella pallida*	Birds				1, 4
Coachwhip	*Masticophis flagellum*	Reptiles				3
Colorado blue	*Euphilotes rita coloradensis*	Invertebrates				5
Common grackle	*Quiscala quiscula*	Birds				1
Common nighthawk	*Chordeiles minor*	Birds				1
Common raven	*Corvus corax*	Birds				1, 2, 4
Common redpoll	*Acanthis flammea*	Birds				1
Coyote	*Canis latrans*	Mammals				1

Common Name	Scientific Name	Major Group	CNHP	State	Federal	Source
Curve-billed thrasher	*Toxostoma curvirostre*	Birds	G5/S3			1
Dark-eyed junco	*Junco hyemalis ssp.*	Birds				1
Deer mouse	*Peromyscus maniculatus*	Mammals				1
Desert cottontail	*Sylvilagus audubonii*	Mammals				1
Dickcissel	*Spiza americana*	Birds				1
Eastern bluebird	*Sialia sialis*	Birds				1
Eastern kingbird	*Tyrannus tyrannus*	Birds				1
Eastern Red Bat	*Lasiurus borealis*	Mammals				3
Eurasian widgeon	*Mareca penelope*	Birds				1
European starling	*Sturnus vulgaris*	Birds				1
Ferruginous hawk	*Buteo regalis*	Birds	G4/S3B, S4N	Tier 2, SC		1, 3
Fox sparrow	*Passerella iliaca*	Birds				1
Gadwall	*Anas strepera*	Birds				1
Golden eagle	*Aquila chrysaetos*	Birds	G5/S3S4B, S4N	Tier 1		1, 3
Golden-winged warbler	*Vermivora chrysoptera*	Birds				1
Grasshopper sparrow	*Ammodramus savannarum*	Birds	G5/S3S4B	Tier 2		1
Gray catbird	*Dumetella carolinensis*	Birds				1
Gray-crowned rosy finch	*Leucosticte tephrocotis*	Birds				1
Great blue heron	*Ardea herodias*	Birds				1
Greater sandhill crane	*Grus canadensis tabida*	Birds	G5T4/S2B, S4N	Tier 2, SC	T	1, 3
Greater short-horned lizard	*Phrynosoma hernandesi*	Reptiles				3
Great-homed owl	*Bubo virginianus*	Birds				1, 4
Green-tailed towhee	*Pipilo chlorurus*	Birds				4
Green-winged teal	*Anas crecca*	Birds				1
Gyrfalcon	*Falco rusticolus*	Birds				1
Harris' sparrow	*Zonoctrichia querula*	Birds				1
Hoary Bat	*Lasiurus cinereus*	Mammals	G5/S5B	Tier 2		3
Horned lark	*Eremophila alpestris*	Birds				1, 2, 4
House finch	*Carpodacus mexicanus*	Birds				1
House mouse	*Mus musculus*	Mammals				1
House sparrow	*Passer domesticus*	Birds				1
House wren	*Troglodytes aedon*	Birds				4

Common Name	Scientific Name	Major Group	CNHP	State	Federal	Source
Killdeer	*Charadrius vociferus*	Birds				1, 2, 4
Lapland longspur	*Calcarius lapponicus*	Birds				1
Lark bunting	*Calamospiza melanocorys*	Birds	G5/S4	Tier 2		1, 2, 3
Lark sparrow	*Chondestes grammacus*	Birds				1, 2, 4
Lazuli bunting	*Passerina amoena*	Birds	G5/S5B	Tier 2		1, 4
Lesser earless lizard	*Holbrookia maculata*	Reptiles				3
Lesser goldfinch	*Spinus psaltria*	Birds				4
Lincoln's sparrow	*Melospiza lincolnii*	Birds				1
Loggerhead shrike	*Lanius luovicianus*	Birds	G4 / S3S4B	Tier 2		1, 2, 4
Long-billed curlew	*Numenius americanus*	Birds	G5 / S2B	Tier 2, SC		1
Long-eared owl	*Asio otus*	Birds				1
Long-tailed weasel	*Mustela frenata*	Mammals				1
MacGillivray' s warbler	*Oporornis tolmiei*	Birds				1
Magnolia warbler	*Dendroica magnolia*	Birds				1
Mallard	*Anas platyrynchos*	Birds				1
McCowan's longspur	*Calcarius mccownii*	Birds				1
Merlin	*Falco columbarius*	Birds				1
Mountain bluebird	*Sialia currucoides*	Birds				1
Mountain plover	*Charadrius montanus*	Birds				1, 3
Mourning dove	*Zenaida macroura*	Birds				1, 4
Mule deer	*Odocoileus hemionus*	Mammals				1, 2, 3
Nashville warbler	*Vermivora ruficapilla*	Birds				1
Northern flicker	*Colaptes auratus ssp.*	Birds				1
Northern grasshopper mouse	*Onychomys leucogaster*	Mammals				1
Northern harrier	*Circus cyaneus*	Birds	G4 / S3B	Tier 2		1, 3, 4
Northern leopard frog	*Lithobates pipiens*	Amphibians	G4/S1	Tier 1, SE	P	1, 3
Northern many-lined skink	*Plestiodon multivirgatus multivirgatus*	Reptiles				3
Northern mockingbird	*Mimus polyglottos*	Birds				1, 4
Northern parula	*Parula americana*	Birds				1
Northern pintail	*Anas acuta*	Birds				1
Northern pocket gopher	*Thomomys talpoides*	Mammals				1
Northern shoveler	*Anas clypeata*	Birds				1

Common Name	Scientific Name	Major Group	CNHP	State	Federal	Source
Northern shrike	*Lanius excubitor*	Birds				1, 4
Olive-backed pocket mouse	*Perognathus fasciatus*	Mammals	G5/S3	Tier 1		3, 5
Orange-crowned warbler	*Vermivora celata*	Birds				1
Ord' s kangaroo rat	*Dipodomys ordii*	Mammals				1
Ornate box turtle	*Terrapene ornata*	Reptiles				3
Palm warbler	*Dendroica palmarum*	Birds				1
Peregrine falcon	*Falco peregrinus*	Birds	G4T4 / S2B	Tier 2 , SC		1
Pine siskin	*Carduelis pinus*	Birds				1
Pine warbler	*Dendroica pinus*	Birds				1
Plains gartersnake	*Thamnophis radix*	Reptiles				3
Plains leopard frog	*Lithobates blairi*	Amphibians	G5/S3	Tier 2, SC		1, 3
Plains pocket gopher	*Geomys bursarius*	Mammals				1
Plains pocket mouse	*Perognathus flavescens*	Mammals				1
Plateua fence lizard	*Sceloporus tristichus*	Reptiles				3
Prairie falcon	*Falco mexicanus*	Birds	G5/ S4B,S4N	Tier 2		1, 3, 4
Prairie rattlesnake	*Crotalus viridis*	Reptiles				3
Preble's meadow jumping mouse	*Zapus hudsonius preblei*	Mammals	G5/S1	Tier 1, ST	T	1
Pronghorn	*Antilocapra americana*	Mammals				1, 2, 3
Red fox	*Vulpes vulpes*	Mammals				1
Red-breasted nuthatch	*Sitta canadensis*	Birds				1
Red-tailed hawk	*Buteo jamaicensis*	Birds				1, 2, 4
Red-winged blackbird	*Agelaius phoeniceus*	Birds				1, 2, 4
Ring-necked pheasant	*Phasianus colchichus*	Birds				1
Rock dove	*Columba livia*	Birds				1, 4
Rock squirrel	*Otospermophilus variegatus*	Mammals				1
Rock wren	*Salpinctes obsoletus*	Birds				1, 4
Rough-legged hawk	*Buteo lagopus*	Birds				1
Ruby-crowned kinglet	*Regulus calendula*	Birds				1
Rufous hummingbird	*Selasphorus rufus*	Birds				3
Sage thrasher	*Oreoscoptes montanus*	Birds				1, 4
Sandhill fritillary	*?*	Invertebrates				5
Savannah sparrow	*Passerculus sandwichensis*	Birds				1

Common Name	Scientific Name	Major Group	CNHP	State	Federal	Source
Say's phoebe	*Sayornis saya*	Birds				1, 2, 4
Scaled quail	*Callipepla squamata*	Birds				1, 3
Scarlet tanager	*Piranga olivacea*	Birds				1
Short-eared owl	*Asio flammeus*	Birds	G5/S2B	Tier 2		1
Silky pocket mouse	*Perognathus flavus*	Mammals				1
Silver-haired Bat	*Lasionycteris noctivagans*	Mammals				3
Six-lined racerunner	*Cnemidophorus sexlineatus*	Reptiles				3
Snow bunting	*Plectrophenax nivalis*	Birds				1
Snow goose	*Chen caerulescens*	Birds				1
Song sparrow	*Melospiza melodia*	Birds				1
Spotted towhee	*Pipilo maculatus*	Birds				1, 2, 4
Striped skunk	*Mephitis mephitis*	Mammals				1
Swainson's hawk	*Buteo swainsonii*	Birds	G5/S5B	Tier 2		1, 3, 4
Swainson's thrush	*Catharus ustulatus*	Birds				1
Swamp sparrow	*Melospiza georgiana*	Birds				1
Swift fox	*Vulpes velox*	Mammals	G3/S3	Tier 2, SC		1
Tennessee warbler	*Vermivora pelegrina*	Birds				1
Thick-billed longspur	*Rhynchophanes mccownii*	Birds				3
Thirteen-lined ground squirrel	*Ictidomys tridecemlineatus*	Mammals				1, 2
Townsend's warbler	*Dendroica townsendi*	Birds				1
Turkey vulture	*Cathartes aura*	Birds				1
Upland sandpiper	*Bartramia longicauda*	Birds				1
Veery	*Catharus fuscescens*	Birds				1
Vesper sparrow	*Pooecetes gramineus*	Birds				1, 2, 4
Virginia's warbler	*Vermivora virginiae*	Birds	G5/S5B	Tier 2		1, 4
Western bluebird	*Sialia mexicana*	Birds				1
Western harvest mouse	*Reithrodontomys megalotis*	Mammals				1
Western kingbird	*Tryannus verticalis*	Birds				1, 2, 4
Western meadowlark	*Sturnella neglecta*	Birds				1, 2, 4
Western painted turtle	*Chrysemys picta bellii*	Reptiles				3
Western tanager	*Piranga ludoviciana*	Birds				1
Western terrestrial gartersnake	*Thamnophis elegans*	Reptiles				3

Common Name	Scientific Name	Major Group	CNHP	State	Federal	Source
Western wood pee-wee	*Contopus sordidulus*	Birds				1
Whimbrel	*Numenius phaeopus*	Birds				1
White-breasted nuthatch	*Sitta carolinensis*	Birds				1
White-crowned sparrow	*Zonotrichia leucophrys*	Birds				1, 4
White-tailed Deer	*Odocoileus virginianus*	Mammals				3
White-tailed jackrabbit	*Lepus townsendii*	Mammals	G5/S4	Tier 2		1, 3
White-throated sparrow	*Zonotrichia albicollis*	Birds				1
White-throated swift	*Aeronautes saxatalis*	Birds				1
Wilson's warbler	*Wilsonia pusilla*	Birds				1
Wood thrush	*Hylocichla mustelina*	Birds				1
Worm-eating warbler	*Helmitheros vermivorus*	Birds				1
Yellow warbler	*Dendroica petechia*	Birds				1
Yellow-breasted chat	*Icteria virens*	Birds				1
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*	Birds				1
Yellow-rumped warbler	*Dendroica coronata*	Birds				1

Source:
1 - Baseline Inventory for the Freeman Property Conservation Easement (Hall 2001)
2 - DHM Design Ecological Site Assessment 2024
3 - CPW Species Activity Mapping Range Data
4 - Relative Abundance Study Data- Bruder Bird Surveys
5 - CNHP

Plant List

Common Name	Scientific Name	Family	CNHP	State	Federal	Noxious Weed List	Source
Four-winged saltbush	*Atriplex canescens*	Amaranthaceae					2, 5
Goosefoot	*Chenopodium sp.*	Amaranthaceae					1
Russian thistle	*Salsola tragus*	Amaranthaceae					2
Wild onion	*Allium textile*	Amaryllidaceae					1
Three-leaf sumac	*Rhus trilobata*	Anacardiaceae					1,2,5
Hall's Milkweed	*Asclepias hallii*	Apocynaceae	G3/S3				3
Sand lily	*Leucocrinum montanum*	Asparagaceae					2
Chiming bells	*Mertensia lancelata*	Asparagaceae					2
Yucca	*Yucca glauca*	Asparagaceae					1,2
Musk thistle	*Carduus nutans*	Asteraceae				List B	1,2,5
Diffuse knapweed	*Centaurea diffusa*	Asteraceae				List B	1,2,5
Canada thistle	*Cirsium arvense*	Asteraceae				List B	1,2,5
Scotch thistle	*Onopordum acanthium*	Asteraceae				List B	5
Lesser burdock	*Arcticum minus*	Asteraceae				List C	5
Western yarrow	*Achillea millefolium var. occidentalis*	Asteraceae					1,2,5
Colorado bursage	*Ambrosia linearis*	Asteraceae	G3/S3				3, 5
Naked-spike ambrosia	*Ambrosia psilostachya*	Asteraceae					5
Pussytoes	*Antennaria sp.*	Asteraceae					1,2
Silvery wormwood	*Artemisia cana*	Asteraceae					1,2
Fringed sage	*Artemisia frigida*	Asteraceae					1,2, 5
Pasture sage	*Artemisia ludoviciana*	Asteraceae					1,2
Creamy thistle	*Cirsium canescens*	Asteraceae					1
Tansyaster	*Dieteria sp.*	Asteraceae					5
Fetid Marigold	*Dyssodia papposa*	Asteraceae					5
Rubber rabbitbrush	*Ericameria nauseosa*	Asteraceae					1,2, 5
Horseweed	*Erigeron canadensis*	Asteraceae					5
Spreading daisy	*Erigeron divergens*	Asteraceae					1,2,5
Curly cup gumweed	*Grindelia squarrosa*	Asteraceae					1,5
Broom snakeweed	*Gutierrezia sarothrae*	Asteraceae					1,2,5

Common Name	Scientific Name	Family	CNHP	State	Federal	Noxious Weed List	Source
False goldenaster	*Heterotheca sp.*	Asteraceae					5
Hairy false goldenaster	*Heterotheca villosa*	Asteraceae					1,2
Dotted gayfeather	*Liatrus punctata*	Asteraceae					5
Rush skeletonplant	*Lygodesmia juncea*	Asteraceae					5
Pineapple weed	*Matricaria discoidea*	Asteraceae					1
Oppositeleaf false bahia	*Picradeniopsis oppositifolia*	Asteraceae					5
Broom-like ragwort	*Senecio spartoides*	Asteraceae					5
Missouri goldenrod	*Solidago missouriensis*	Asteraceae					5
Goldenrod	*Solidago sp.*	Asteraceae					1
Aster	*Symphyotrichum sp.*	Asteraceae					5
Common dandelion	*Taraxacum officinale*	Asteraceae					1,2
Stiff greenthread	*Thelesperma filifolium*	Asteraceae					5
Yellow salsify	*Tragopogon pratensis*	Asteraceae					1,2
Houndstongue	*Cynoglossum officinale*	Boraginaceae				List B	5
Tansy mustard	*Descurainia incana*	Brassicaceae					1,2
Western wallflower	*Erysimum capitatum*	Brassicaceae					1,2
Spreading yellowcress	*Rorippa sinuata*	Brassicaceae					5
Hedgehog cactus	*Echinocereus viridiflorus*	Cactaceae					2, 4
Prickly pear	*Opuntia sp.*	Cactaceae					1,2
Western snowberry	*Symphoricarpos occidentalis*	Caprifoliaceae					1,2,5
Snowberry	*Symphoricarpos sp.*	Caprifoliaceae					1
Western spiderwort	*Tradescantia occidentalis*	Commelinaceae					1
One-seed juniper	*Juniperus monosperma*	Cupressaceae					2,5
Sun sedge	*Carex inops*	Cyperaceae					2
Nebraska sedge	*Carex nebrascensis*	Cyperaceae					5
Sedge	*Carex sp.*	Cyperaceae					1
Sand spikerush	*Eleocharis mentevidensis*	Cyperaceae	G5/SNR				1
Common spikerush	*Eleocharis palustris*	Cyperaceae					1

Common Name	Scientific Name	Family	CNHP	State	Federal	Noxious Weed List	Source
Russian olive	*Elaeagnus angustifolia*	Elaeagnaceae				List B	5
Drummond's milk vetch	*Astragalus drummondii*	Fabaceae					1
Wild licorice	*Glycyrrhiza lepidota*	Fabaceae					5
Lance-leaved scurf-pea	*Ladeania lanceolata*	Fabaceae					5
Purple peavine	*Lathyrus sp.*	Fabaceae					1
Lupine	*Lupinus sp.*	Fabaceae					1,5
Yellow sweet-clover	*Melilotus officinalis*	Fabaceae					1
Purple locoweed	*Oxytropis lambertii*	Fabaceae					1,2
Colorado locoweed	*Oxytropis sp.*	Fabaceae					1
Slimflower scurf-pea	*Pediomelum tenuiflorum*	Fabaceae					5
Golden banner	*Thermopsis montana*	Fabaceae					2
American vetch	*Vicia americana*	Fabaceae					1
Green Gentian	*Frasera speciosa*	Gentianaceae					5
Common wild geranium	*Geranium caespitosum*	Geraniaceae					1
Golden currant	*Ribes aureum*	Grossulariaceae					2,5
Wax currant	*Ribes cereum*	Grossulariaceae					2
Baltic rush	*Juncus balticus*	Juncaceae					5
Mountain rush	*Juncus balticus var. montanus*	Juncaceae					1
Smallhead rush	*Juncus brachycephalus*	Juncaceae	G5/S1				1
Interior rush	*Juncus interior*	Juncaceae					1,2
Rush	*Juncus sp.*	Juncaceae					1
Rough pennyroyal	*Hedeoma hispida*	Lamiaceae					1
Catnip	*Nepeta cataria*	Lamiaceae					5
Mintweed	*Salvia reflexa*	Lamiaceae					5
Scarlet globemallow	*Sphaeralcea coccinea*	Malvaceae					1
Four O'Clock	*Mirabilis sp.*	Nyctaginaceae					5
Scarlet guara	*Gaura coccinea*	Onagraceae					1
Prairie evening primrose	*Oenothera albicaulis*	Onagraceae					1,2
Crownleaf evening primrose	*Oenothera coronopifolia*	Onagraceae					5

Common Name	Scientific Name	Family	CNHP	State	Federal	Noxious Weed List	Source
Whole-leaf Indian Paintbrush	*Castilleja integra*	Orobanchaceae					1, 2, 4
Downy paintedcup	*Castilleja sessiliflora*	Orobanchaceae					4
Broom-rape	*Orobanche sp.*	Orobanchaceae					1
Yellow toadflax	*Linaria vulgaris*	Plantaginaceae				List B	5
White penstemon	*Penstemon albidus*	Plantaginaceae					1
Woolly plantain	*Plantago patagonica*	Plantaginaceae					1,2
Cheatgrass	*Bromus tectorum*	Poaceae				List C	1,2
Quackgrass	*Elymus repens*	Poaceae				List C	1
Redtop	*Agrostis gigantea*	Poaceae					1
Big bluestem	*Andropogon gerardii*	Poaceae					1
Purple three-awn	*Aristida purpurea*	Poaceae					1
Side-oats grama	*Bouteloua curtipendula*	Poaceae					1, 5
Buffalo grass	*Bouteloua dactyloides*	Poaceae					1,2,5
Blue grama	*Bouteloua gracilis*	Poaceae					1,2,5
Smooth brome	*Bromus inermis*	Poaceae					1,2
Saltgrass	*Distichlis spicata*	Poaceae					1,2
Barnyard	*Echinochloa sp.*	Poaceae					5
Squirrel tail	*Elymus elymoides*	Poaceae					1
Pine needlegrass	*Eriocoma pinetorum*	Poaceae					1
Needle and thread	*Hesperostipa comata*	Poaceae					1
Foxtail barley	*Hordeum jubatum*	Poaceae					1, 5
June grass	*Koeleria macrantha*	Poaceae					1
Tumblegrass	*Muhlenbergia paniculata*	Poaceae					5
Tussock grass	*Nassella sp.*	Poaceae					5
Switchgrass	*Panicum virgatum*	Poaceae					5
Western wheatgrass	*Pascopyrum smithii*	Poaceae					1
Canada bluegrass	*Poa compressa*	Poaceae					1
Kentucky bluegrass	*Poa pratensis*	Poaceae					1
Little bluestem	*Schizachyrium scoparium*	Poaceae					1
Winged buckwheat	*Eriogonum alatum*	Polygonaceae					5

Common Name	Scientific Name	Family	CNHP	State	Federal	Noxious Weed List	Source
Spreading buckwheat	*Eriogonum effusum*	Polygonaceae					5
Curly dock	*Rumex crispus*	Polygonaceae					5
White willow dock	*Rumex triangulivalvis*	Polygonaceae					5
False buckwheat	*Polygonum scandens*	Polygonaceae					1
Mountain mahogany	*Cercocarpus montanus*	Rosaceae					2, 5
Prairie cinquefoil	*Potentilla cinquefoil*	Rosaceae					5
Bessey's plum	*Prunus pumila besseyi*	Rosaceae					5
Chokecherry	*Prunus virginiana*	Rosaceae					1,2
Western chokecherry	*Prunus virginiana demissa*	Rosaceae					5
Prairie rose	*Rosa arkansana*	Rosaceae					1,2
Wild rose	*Rosa sp.*	Rosaceae					1, 5
Coyote willow	*Salix exigua*	Salicaceae					1,2
Common mullein	*Verbascum thapsus*	Scrophulariaceae				List C	2,5
Narrow-leaved cattail	*Typha angustifolia*	Typhaceae					5
Broadleaf cattail	*Typha latifolia*	Typhaceae					5
Cattail	*Typha sp.*	Typhaceae					1,2
Bigbract Verbena	*Verbena bracteata*	Verbenaceae					5

Source:
1 - Baseline Inventory for the Freeman Property Conservation Easement
2 - DHM Design Ecological Site Assessment 2024
3 - CNHP
4 - CONPS
5 - Janet Wingate and Jennifer Ackerfield 2024 Surveys

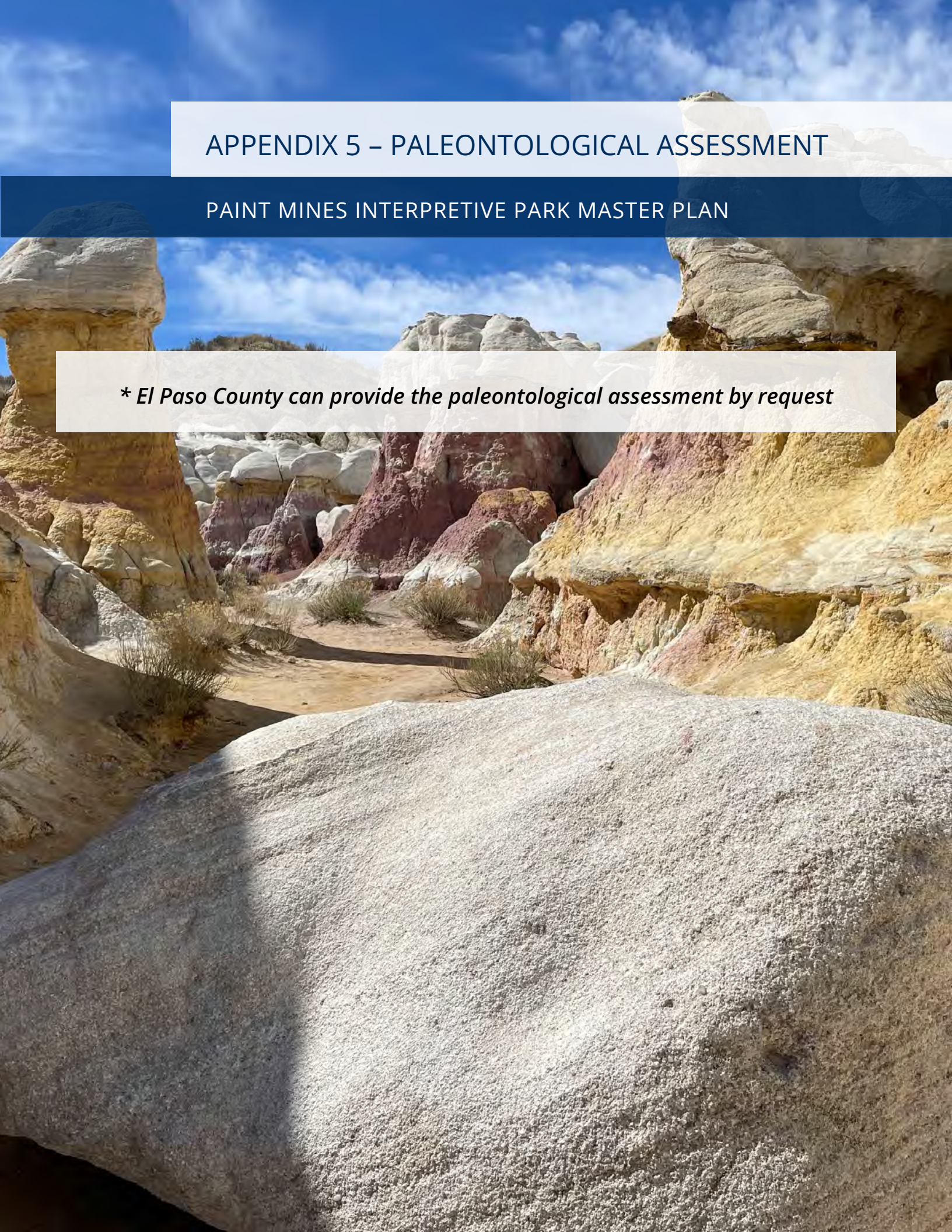
APPENDIX 4 – ARCHAEOLOGICAL ASSESSMENT

PAINT MINES INTERPRETIVE PARK MASTER PLAN

**** El Paso County can provide the archaeological assessment by request***

APPENDIX 5 – PALEONTOLOGICAL ASSESSMENT

PAINT MINES INTERPRETIVE PARK MASTER PLAN



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