

**THE BOARD OF COUNTY COMMISSIONERS
OF SANTA FE COUNTY
RESOLUTION NO. 2017- 112**

**A RESOLUTION ADOPTING THE THORNTON RANCH OPEN
SPACE MASTER PLAN, THORNTON RANCH OPEN SPACE
MANAGEMENT PLAN, PETROGLYPH HILL MANAGEMENT
PLAN, AND THE GALISTEO BASIN INTERPRETIVE PLAN;
DIRECTING STAFF TO IMPLEMENT PLANS**

WHEREAS, the Galisteo Basin is a spectacular landscape that is nationally recognized for its significant cultural history spanning thousands of years and representing diverse cultural groups; and

WHEREAS, Santa Fe County (County) purchased the Thornton Ranch Open Space to protect the significant cultural resources on the property from private development and to provide opportunities for public interpretation of the natural environment and cultural landscape of the Galisteo Basin; and

WHEREAS, the 2015 Sustainable Growth Management Plan identifies the Thornton Ranch Open Space as a priority open space project for the County; and

WHEREAS, the County has been engaged in a comprehensive public planning process regarding the Thornton Ranch Open Space since 2014 that involved extensive site analysis and input from stakeholders, including Native American Tribal Governments, community members, adjacent property owners, and relevant public agencies; and

WHEREAS, the planning process resulted in the development of four interrelated plans (Plans) that will guide the land use and management of the property as follows:

Thornton Ranch Open Space Management Plan – establishes goals and objectives for management and identifies projects, routine maintenance activities and a monitoring program necessary to implement the plan (Exhibit A);

Thornton Ranch Open Space Master Plan - identifies the program, physical improvements, and the process for implementation (Exhibit B);

Petroglyph Hill Management Plan – a site-specific management plan for Petroglyph Hill in accordance with the Galisteo Basin Archaeological Sites Protection Act (Exhibit C);

Galisteo Basin Interpretive Plan – establishes the interpretive goals, objective, themes, target audiences, and media to guide interpretation at all County Open Space properties within the greater Galisteo Basin, including the Thornton Ranch Open Space (Exhibit D); and

WHEREAS, the Plans identify actions, timelines, staffing requirements and estimated costs for implementation of the Plans; and

WHEREAS, the County Open Lands, Trails and Parks Advisory Committee has reviewed and recommends approval of the Plans.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners as follows:

1. The Board hereby adopts the attached Plans, specifically:

Exhibit A: Thornton Ranch Open Space Management Plan

Exhibit B: Thornton Ranch Open Space Master Plan

Exhibit C: Petroglyph Hill Management Plan

Exhibit D: Galisteo Basin Interpretive Plan

2. Staff is directed to:

- a. Implement the Plans to the extent possible with available resources;
- b. Initiate planning and budgeting requests for staffing, training, planning, programming, resource management, maintenance, and capital improvements required to implement the Plans; and
- c. Engage stakeholders in the implementation of the plans as appropriate.

PASSED, APPROVED, AND ADOPTED THIS 31ST DAY OF OCTOBER, 2017.

**BOARD OF COUNTY COMMISSIONERS
OF SANTA FE COUNTY**

By:

H P R
Henry P. Roybal, Chair

ATTEST

Geraldine Salazar
Geraldine Salazar, Santa Fe County Clerk

COUNTY OF SANTA FE)
STATE OF NEW MEXICO) ss

BCC RESOLUTIONS
PAGES: 341

I Hereby Certify That This Instrument Was Filed for
Record On The 1ST Day Of November, 2017 at 09:58:20 AM
And Was Duly Recorded as Instrument # 1840349
Of The Records Of Santa Fe County

Witness My Hand And Seal Of Office
Geraldine Salazar
County Clerk, Santa Fe, NM

Deputy *Geraldine Salazar*
Approved As To Form:

Gregory Shaffer
Gregory Shaffer, County Attorney

10/11/2017



SANTA FE COUNTY OPEN SPACE AND TRAILS PROGRAM **THORNTON RANCH OPEN SPACE MANAGEMENT PLAN**

OCTOBER 2017



ACKNOWLEDGMENTS

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Robert Anaya – District 3

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County Manager's Office

Planning Division

GIS Division

Inter Governmental Liaison

Public Works Department

Fire Department

The following agencies, community members and stakeholders participated in the Thornton Ranch Master Plan process which informed the development of this Management Plan:

BLM-Taos Field Office

State Land Office

New Mexico Department of Transportation

Tribal Representatives

GBASPA Working Group

Galisteo Community Foundation

Focus Groups

Artists/ Educators/ Writers

Mountain Bikers

Ecologists/Natural Resources

Equestrians

Hikers/Runners

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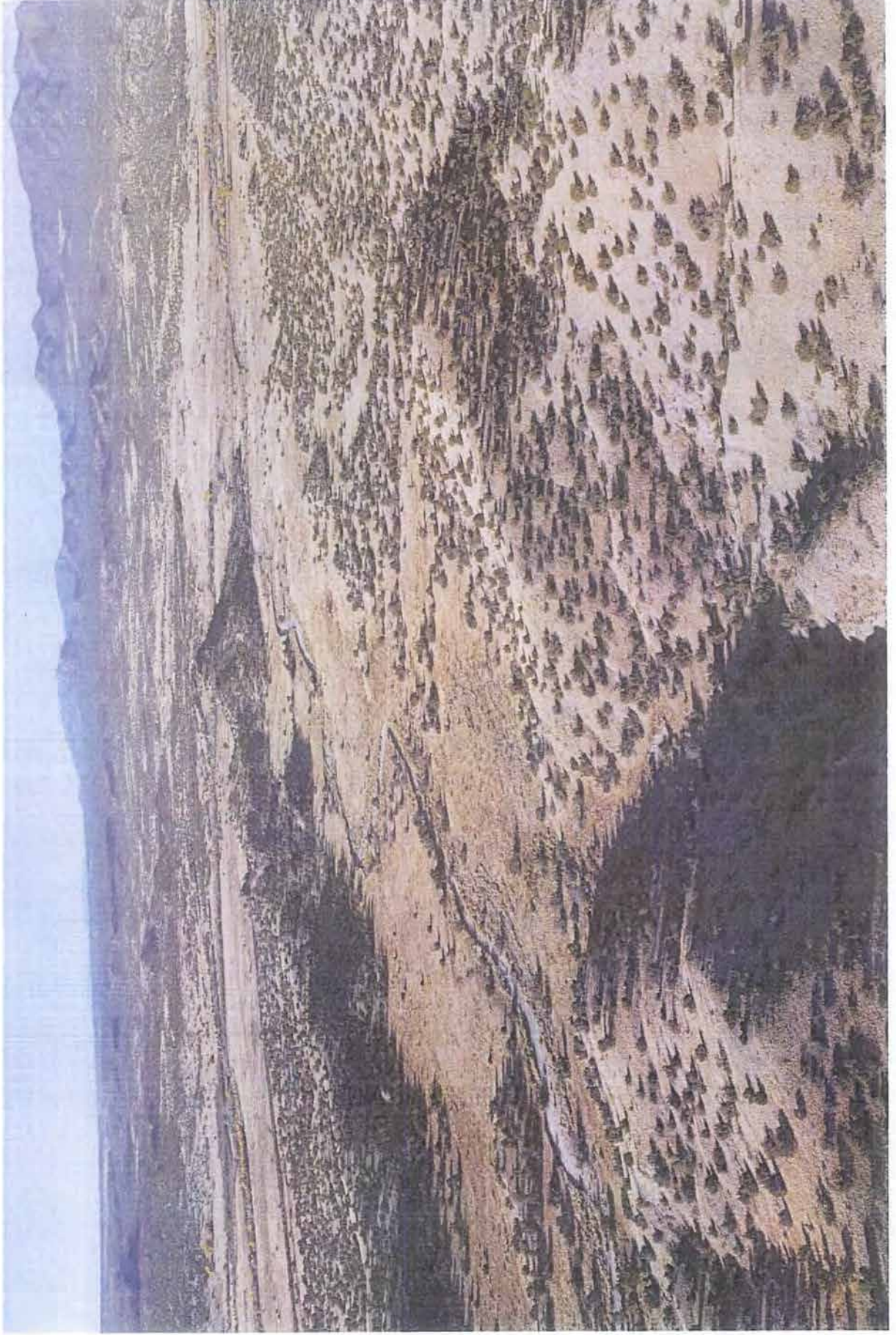
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THORNTON RANCH OPEN SPACE APPENDICES

APPENDIX A: Thornton Ranch Open Space Work Plan	
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Thornton Ranch Open Space is the largest Santa Fe County Open Space, located in the center of the Galisteo Basin. Santa Fe County purchased 1,904 acres over a period of nine years, and is currently working with Bureau of Land Management and State Land Office to manage additional acreage bringing the total Thornton Ranch Open Space area to 2,430 acres. Thornton Ranch Open Space was purchased to protect the significant cultural resources on the property from private development and to provide opportunities for public interpretation of the unique landscape of the Galisteo Basin. In 2004, the United States Congress passed the Galisteo Basin Archaeological Sites Protection Act to protect the nationally significant archaeological resources in the Galisteo Basin. One of the sites designated for protection under the Act is located within the Thornton Ranch Open Space. Santa Fe County has entered into a cooperative agreement with the Bureau of Land Management to manage the site in accordance with the Act and is collaborating with BLM and other partners on landscape-wide conservation of the Galisteo Basin.

Santa Fe County recognizes the importance of this landscape to the sense of place and cultural identity of the people and communities whose ancestors have occupied this landscape for generations. Santa Fe County has taken on the stewardship of these culturally significant places and fragile ecological and cultural resources in perpetuity. Santa Fe County is committed to protecting this land and managing it in a way that supports continued traditional use, appropriate recreational access, and educational opportunities of this area. The County plans to provide public access to the Thornton Ranch Open Space to encourage visitors to experience this landscape in a way that instills a meaningful connection to this place and inspires respect and commitment to its preservation.

The Thornton Ranch Open Space Management Plan complements the Thornton Ranch Open Space Master Plan. The Master Plan outlines the physical improvements on the site, including the development of a natural surface trail system for small-scale recreational uses and educational signage. The development of the trail system will preserve cultural, natural resources and wildlife habitat, and highlight the property's scenic beauty and cultural integrity.

The goal of the Thornton Ranch Open Space Management Plan is to provide practical and effective management strategies to maintain the significant cultural, natural, recreation and scenic resources on the property. This plan was developed to prioritize management tasks in a way that best protects and preserves the cultural landscape and natural resources of the Thornton Ranch Open Space once trails and facilities are developed to provide public access to the property.

The Thornton Ranch Open Space Management Plan identifies short-term, mid-term, and long-term management priorities for the property. The short term phase focuses on land restoration and management to provide a stable landscape and protected environment. In the mid-to long term, Santa Fe County will work with community and tribal stakeholders to develop partnerships that enhance the educational opportunities and effective management of the property.



1.0 INTRODUCTION

1.1. Plan Purpose and Need

The Thornton Ranch Open Space (TROS) Management Plan was developed in order to prioritize management tasks in a way that best protects and preserves the cultural landscape and natural resources of the property. The TROS Management Plan provides direction and specific action priorities for short-term, mid-term, and long-term phases. The Plan was written to:

- Describe the vision, goals, and objectives for management of the property;
- Help staff and the public understand terrain conditions and suitability of the land for different uses of the property;
- Clarify priorities for site restoration and maintenance;
- Identify projects for future investment and financing mechanisms to fund them;
- Streamline management protocols for Open Space staff within Santa Fe County.

The Plan arose from a growing need for:

- A strategic management plan that includes community outreach;
- A strong vision with clear objectives and strategies for resource conservation, cultural landscape preservation, passive recreation, and public access;
- An overview of existing conditions and a site-specific inventory report;
- A detailed maintenance plan to direct County staff in managing TROS with recommendations for labor and equipment needed;
- A conceptual plan that identifies, prioritizes and estimates timing and costs for key projects;
- An analysis of potential funding mechanisms to implement the plan.

Management Plan Need

The Thornton Ranch Open Space Management Plan has been a priority because of the cultural importance of conserving this site as it is opened to the public. In addition to the cultural importance, view corridors, wildlife habitat, natural resources and ecosystems are in need of protection. The development of a Master Plan for TROS which will allow access to the property has ushered the development of the management plan in order to protect the landscape and visitor use of the property.



1.2. Property Description

TROS is a 2,430 acre property that was formerly part of a 17,000 acre working ranch. It is the largest open space property that Santa Fe County has acquired to date. The property is in the heart of the Galisteo Basin on the north side of the Galisteo River. The property is located 15 miles southeast of Santa Fe, New Mexico, near the town of Galisteo. It is bounded on the east by County Road 42, on the south by the New Mexico Railrunner Express Railway (NMRX), on the north by West Basin Ridge Road, and on the west by Bureau of Land Management (BLM) lands. The property includes the historic town site of Kennedy, a railroad camp that was the staging ground for the construction of the New Mexico Central Railroad. The New Mexico Central Railroad intersected it at the Kennedy town site. Thornton Ranch Open Space offers exceptional opportunities to interpret the cultural landscape and history of the Galisteo Basin in the larger context of northern New Mexico (*Map 2*). The property contains numerous cultural sites as well as a site listed in the Galisteo Basin Archaeological Sites Protection Act. Thornton Ranch Open Space is adjacent to approximately 2,100 acres of Bureau of Land Management (BLM) land that could be made accessible to the public through a cooperative management agreement.

Over the period from 2001-2009, Santa Fe County acquired 1,904 acres of property and began planning the open space area currently known as TROS. The project area also includes 320 acres of State Trust Land and approximately 207 acres of BLM

With stunning vistas and layers of history, the TROS property is part of a unique landscape of significant cultural and environmental resources. Evidence of long-term Native American use, contact period of Spanish activity, homesteading and ranching are present on the site. Most recently part of a 17,000 acre cattle ranch owned by the Thornton family of Santa Fe and Texas through much of the 20th century, this area of land within the Galisteo Basin holds evidence of human passage and use for thousands of years. Existing site vegetation is primarily pinon and juniper cover with areas of grass ground cover and grassland meadows. North-facing slopes and outcrops that receive more concentrated precipitation also have herbaceous and woody shrub species. Arroyo bottoms support a limited quantity of riparian shrubs and trees, a small seep along the ephemeral arroyo at the center of the site sustains enough moisture for a small community of willow and cottonwood trees. Small mammals, reptiles and birds are evident on site and represent a typical sample of dry-woodlands, rocky sloped ecosystems of the Galisteo Basin. Deer mice, kangaroo rats, wood rats, desert cottontail and black-tailed jack rabbits provide a prey base for predators such as snakes, coyotes and raptors. Larger mammals include black bear and mule



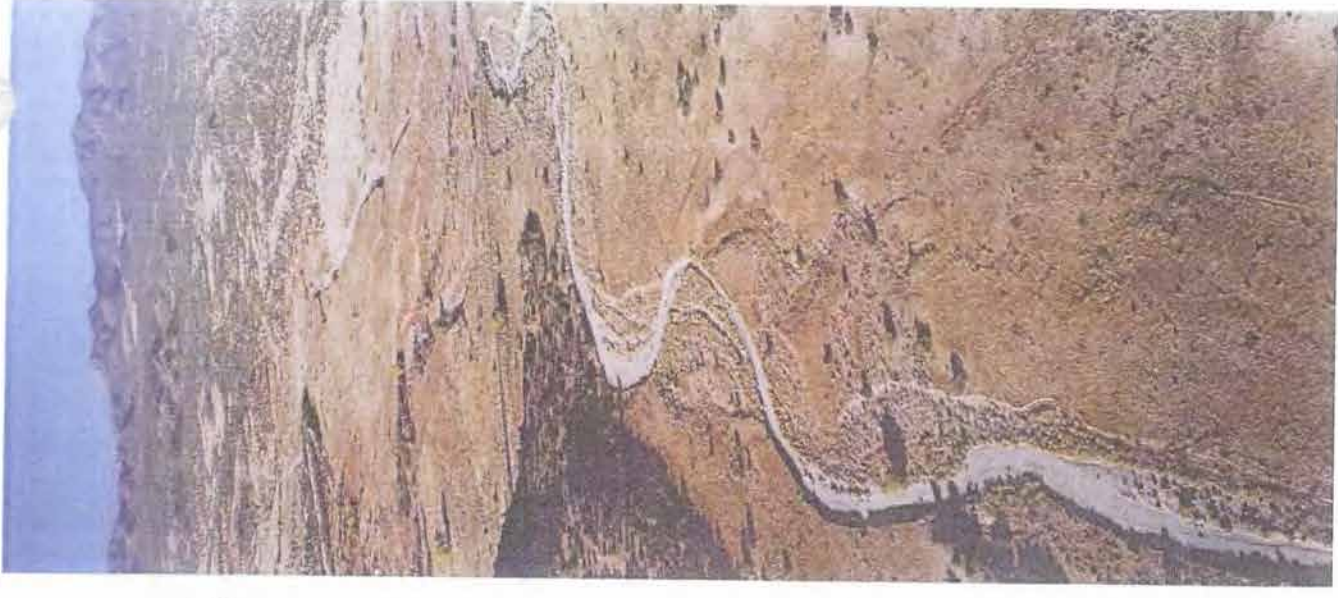
deer which frequent the two water tanks. The site is also a migratory route for cougar. In 2015, RCS Southwest inventoried plant and animal species found on site. Their report includes a list of plant and animal species observed and detected on site as well as a classification of distinct biotic communities inherent to the area.

On a broader scale, the Galisteo Basin, a 467,200-acre watershed, has long been recognized for its cultural, archaeological, and natural resources. It is a unique cultural landscape with significant large prehistoric and historic pueblos, Native American rock art, and early Spanish Colonial settlements. To protect these resources long-term, the 108th United States Congress passed the Archaeological Sites Protection Act (Public Law 108-208) which outlines the protection of 24 nationally significant sites on over 4,500 acres within the Galisteo Basin. "The purpose of this Act is to provide for the preservation, protection, and interpretation of the nationally significant archaeological resources in the Galisteo Basin in New Mexico."

The TROS is a desired location for potential future recreational facilities for local residents as well as for ongoing education and research programs about the area's unique ecological and historical characteristics. Residents will have access to an important new space for hiking, mountain biking, and horseback riding in a scenic and historic part of the County. The educational component of the docent led tours for the archaeological, cultural and historic resources on the property will add to residents' and visitors' understanding of the prehistory, history, ecology, and geology of the Galisteo Basin. Opening Thornton Ranch Open Space will elevate the profile of Santa Fe County for its excellence and progressive approach to managing a resource of national importance within the context of the Galisteo Basin."

Current conditions create needs for resource protection and restoration. Pressures on the property's resources and public safety include:

- Potential degradation of important cultural resources associated with pre-historic Puebloan artifacts and ongoing ancestral Puebloan connections to the land;
- Soils on the TROS land are primarily coarse sandy loam on summits, shoulders, and back slopes of low hills. This type of soil is thin, well drained and has a very low water capacity and it has a moderate to severe hazard of erosion;
- Mining of minerals and metals found in the surrounding hills and mountains has been an attraction for centuries and has shaped the landscape and industry of the basin;
- Degradation of wildlife habitat qualities due to lack of water and inappropriate fencing;
- Illegal uses on site, such as looting, dumping, shooting, off-road vehicle use, night use and campfires.





1.3 Management Plan Development Process

The planning process was informed by the initial goals for the acquisition of the property and a set of planning principles. The planning principles were formulated based on public input and management conditions within Santa Fe County. The planning process included meeting with key stakeholders, tribal partners, and affiliate organizations to identify key issues and potential management strategies.

INITIAL GOALS FOR ACQUISITION

- Preservation of cultural resources
- Offer access for interpretive education
- Conservation of wildlife habitat
- Create recreational open space for regional residents and visitors coming from urban and rural areas

PLANNING PRINCIPLES

- Adhere to goals and purpose of the Santa Fe County Open Space program.
- Promote public access and safety based on the reasons for acquiring the property.
- Develop sustainable facilities to keep maintenance needs to a minimum.
- Minimize the disturbance of cultural and ecological resources.
- Involve youth and create educational opportunities.
- Collaborate with Native American Tribes who have ties to the area.

Information Management

Santa Fe County will streamline and enhance the procedures that help staff acquire, store, and share knowledge that is essential for effective resource management of TROS.

Plan Updating

This plan is a living document which will be updated and amended when necessary. The timeframe of the plan is approximately 15-20 years. Plan information is specific for the short-term (years 1-5), descriptive for the mid-term (years 5-10), and conceptual for the long-term (beyond 10 years).

Changing community needs, terrain conditions, and County management capacity will inevitably lead to the need for plan adjustments. Priorities and timelines may shift, and objectives for planned projects, maintenance activities, and community relations may change or expand. Following completion and assessment of actions beyond the mid-term span of this plan, this plan may need a thorough updating. This plan should be evaluated annually for benchmarks annual goals and to update property needs.

2.0 THORNTON RANCH OPEN SPACE MANAGEMENT PLAN

2.1. A Vision for Thornton Ranch Open Space

Vision Statement

The Thornton Ranch Open Space vision statement was developed as a result of the planning process after meeting with stakeholders, tribal members and County staff.

Thornton Ranch Open Space Vision Statement

In 2025, the TROS is a peaceful area for people and wildlife. The open space includes viewing areas, public access, some trails, and public education about the scenic, historic, and cultural landscape. The open land remains minimally developed to encourage a wide range of wildlife habitats. Local residents, tribal members, and younger generations are actively involved in the stewardship and maintenance.

In the longer term, the TROS may serve as a place for renewal and reflection for hikers, mountain bikers, and horseback riders to experience an untouched preserve in one of Santa Fe County's pristine cultural landscapes. The area may also include active educational programming to foster a sense of understanding and respect relating to the significant cultural landscape.

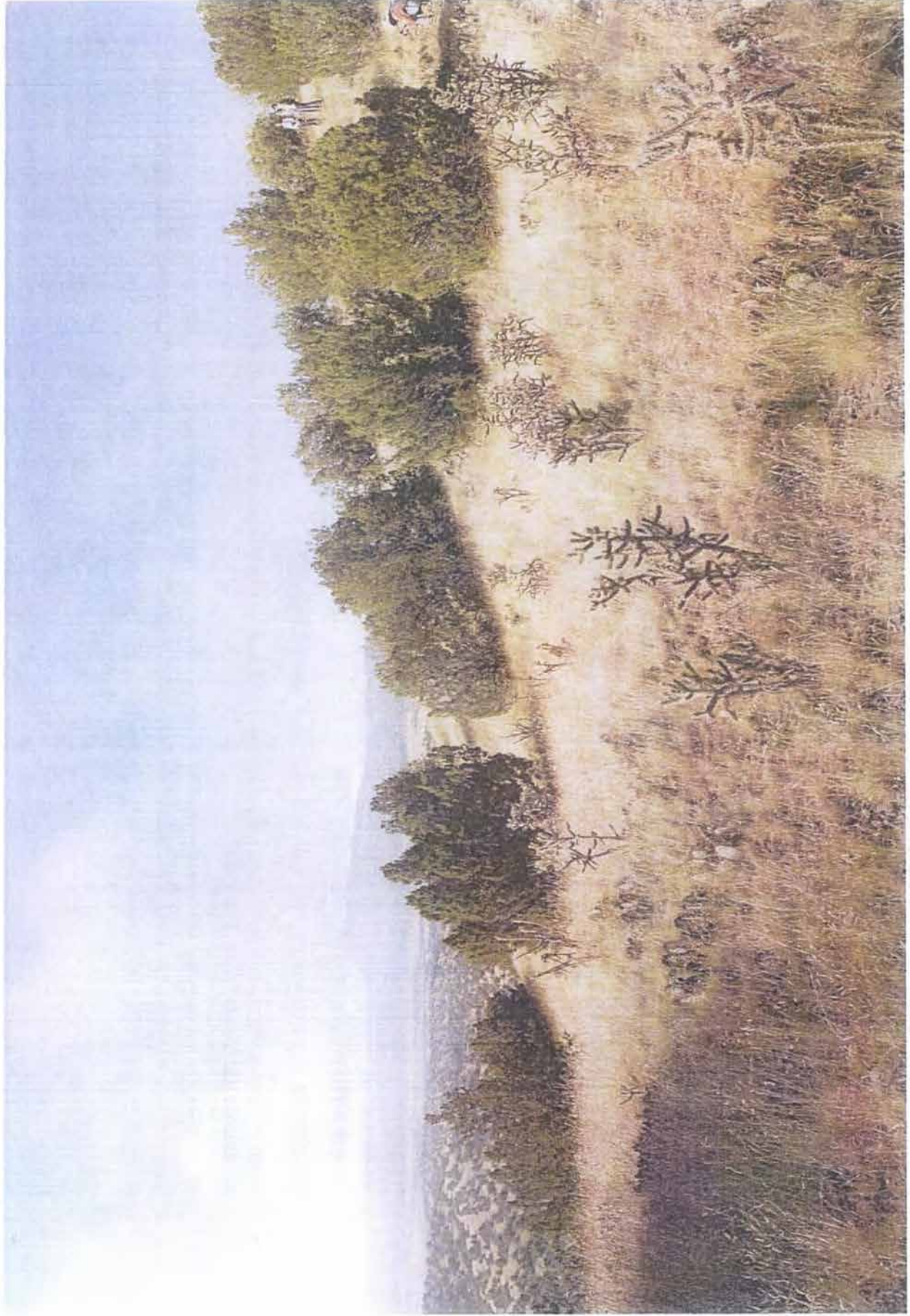
TROS may be co-managed by Santa Fe County and tribal governments in a way that celebrates and enriches the landscape, preserves the cultural sites, and provides educational opportunities to visitors to enhance cultural understanding and respect.

Thornton Ranch Open Space Management Goal

Based on the vision statement, the central management goal for TROS is:

Santa Fe County will provide long term sustainable stewardship in collaboration with descendant communities in order to provide an intimate experience of the landscape.

TROS management aims for the development of a preserve property that allows for access to public land and to trails in the wider region, including some simple trailhead and interpretive education facilities, at a scale that requires little maintenance, encourages community stewardship, and respects the area's significant cultural landscape.



Management Objectives

Thornton Ranch Open Space Specific Management Objectives

Specific management objectives in support of the vision and the central goal are:

1. **Effective Management.** Manage the TROS so that the different values and objectives are balanced as a whole in a way that is appropriate and transparent.
2. **Access Management.** Monitor access by managing easements, roads, trails, fences, gates, stiles, drainage crossings and signage in ways that best protect the landscape and cultural resources.
3. **Cultural Landscape Integrity.** Maintain the area's natural appearance and sweeping scenic views; maintain a rural, natural visual quality by using natural design principles and natural materials, and by allowing natural processes to assist in management activities when possible. Protect the area's cultural, historic, and pre-historic resources.
4. **Ecosystem Health.** Maintain the ecological health, resilience, and productivity of the TROS, and maintain wildlife habitat qualities and connectivity across the landscape.
5. **Meaningful Public Experience.** Provide and maintain interpretive education that highlights the significance of the property. Develop trail infrastructure that allows visitors to safely enjoy the property but that also protects resources.

Management of the TROS property will need to be done in coordination with activities and conditions of the larger landscape of the Galisteo Basin. All management objectives will need to be balanced in a way that is effective and appropriate for the cultural, natural, recreational and educational resources on the property.



2.2. Projects

2.2.1 Improvements/ Master Plan Projects

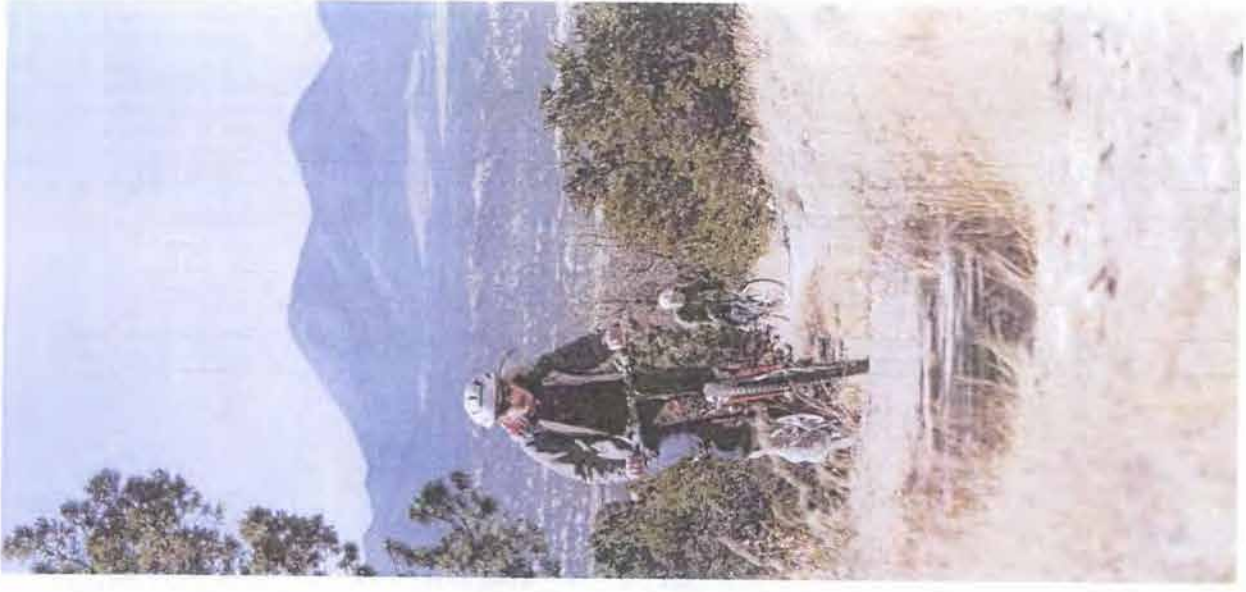
The Master Plan for TROS describes proposed land improvement projects and associated investments to support the TROS vision and management goals. The proposed projects result from stakeholder input and planning opportunities as limited by the suitability of the land. The Master Plan outlines the specific locations of projects, their purpose, priority, and strategies for implementation. The implementation of the Master Plan will initiate many of the resource management projects.

The TROS Master Plan includes projects to preserve cultural and natural resources, and in particular the property's scenic beauty, cultural integrity and wildlife habitat. Development of the Master Plan will include small-scale recreational uses, including natural surface trails and interpretive education signage. Such uses are secondary to the predominant preservation goal and will be in service to achieving the vision for the TROS. Trail routes have been designed to be sensitive to the cultural, natural and scenic resources of the property and will be constructed and managed in order to minimize impacts to those resources.

Area communities have expressed interest in expanded recreational trail networks as well as longer regional trails and improved connectivity between trail systems to address current and future needs. Santa Fe County long range plans illustrate off-road trail connections between the villages of Lamy, Galisteo, Eldorado, and Cerrillos. These plans identify a north/south regional trail along the abandoned New Mexico Central railway and an east/west regional trail parallel, outside the right-of-way of the active NMRX railway. Crossing both private and public land holdings, these regional trails are long-term planning efforts. A trail connection between the TROS and the Galisteo Basin Preserve system is also planned.

Master Plan Projects will focus on:

- **Trails** - The TROS Master Plan acknowledges the culturally and environmentally sensitive resources on the site and proposes a plan which emphasizes preservation with access for recreation. Hikers, runners, bikers, and equestrians will have access to 12 miles of internal trails and a 4-mile section of regional trail, from two new primary and secondary trailheads. The proposed network of trails will provide an immersive and fully sufficient recreational experience for visitors. All trails will be designed to be sustainable.



- o Regional Trail: New ca. 3.75 mi connector regional trail along south property boundary. This trail will be initially installed as a hard-packed 18"-24" wide trail. When offsite regional trail connections are made, this trail will be upgraded to a 6-8' wide crusher fines surface trail and a .25 mile extension will be made to connect to regional multi-use off-site trails to the west.

- o Accessible Trail: New ca. 1.5 mi accessible trail loop internal to site originating from the new trailhead with 1 historic site.

- o Multi-Use Trail: Existing / new ca. 3.5 mi connector trail (2.25 mi existing / 1.25 mi new) between regional trail and existing ranch road with 2 historic sites.

- o Backcountry Trail: New ca. 8.00 mi single track trail with 2 historic sites.

- **Trailhead/Parking lot** - New trailheads with short access roads will be placed at strategic locations to connect to the trails. All trails are intended to include some measure of interpretive information as an opportunity to educate the users of the trails of the historical and natural significance of the land within the Galisteo Basin.

One secondary trailhead is located near a major access road and will provide parking for up to 20 cars and basic amenities. Parking and trailer parking is located in low-lying terrain to reduce the visibility of vehicles from within the TROS. Parking is nestled within existing vegetation to mask its visibility and provide a sense of enclosure.

Santa Fe County proposes to use a combination of design elements and management practices to instill in visitors to the open space respect for culture and place. These include designing a threshold at the trailhead that visitors must cross in order to enter the property to capture their attention and make them aware of the fact that they are entering a sacred landscape and of the proper etiquette for being a guest in this landscape.

- **Windmill replacement/restoration** - Restore the windmill and install a water tank at the southwest windmill site, located near the mouth of the arroyo. This restoration project will provide a drinking area for equestrian and wildlife. The stock tanks and ponds attract wildlife such as birds, coyote, antelope, and deer, which have been observed via a County wildlife camera mounted on the east side windmill. This restoration project is also important in telling the story of the Galisteo Basin.

- **Signage**—Install wayfinding signage for the Thornton Ranch Open Space area. This includes orientation and regulatory signage as proposed in the draft signage master plan. The family of signs includes trailhead kiosks, trailhead signs, internal regulatory signs, internal orientation signs, and internal trail markers. Interpretive signs at major trailheads, historic sites, nature areas, and vantage points will provide information on the native ecology, geology, history of the site, etc

- **Relocate fence along ROW** - Plans identify a north/south regional trail along the abandoned New Mexico Central railway and an east/west regional trail parallel, outside the right-of-way of the active NMRX railway.



View from proposed multi-use trail



View from proposed backcountry trail.

2.2.2 Resource Management Projects

Resource Management Projects have been identified through the planning process and need to be completed as the property is developed. Many of these projects will be produced from the implementation of the Master Plan and will need to be coordinated with those activities.

Most management activities will commence upon development of facilities and trails and implementation of the Master Plan. Until the Master Plan is implemented, management will consist of planning activities and basic monitoring of the property.

Short term (1-5 years) activities focus on land restoration and management.

- **Reclaim all ranch roads**—Prioritize removing the ranch road to saddle on the hill and revegetate to restore the ecological habitat and to reduce erosion. This will also clarify where public access is allowed. The ranch road to the windmill can be reclaimed in the mid-term if necessary.
- **Fencing**—Determine appropriate fencing for BLM boundary and West Basin Rd; Maintain fence along CR 42 and along railroad right-of-way in order to control access and maintain safety. Any new fencing will be wildlife-friendly and constructed with similar materials to the historic ranch fences (barbed-wire and wood posts) so that it blends in and does not detract from the historic landscape. Where fencing is not necessary to control access along the western and northern boundaries, the County will install boundary markers to delineate the property boundary. The County will install No Trespassing and relevant regulatory signage at appropriate intervals along the property boundaries.

SHORT TERM

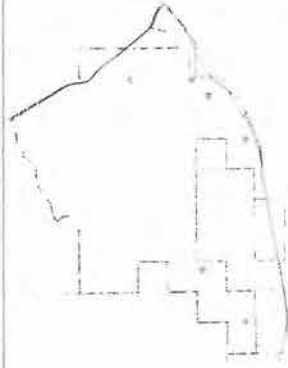
MANAGEMENT

- Baseline Assessments
- Special Use Permitting
- Regional Trail along NM Central Line
- Research and Photography Policy

PLANNING

- Develop new trails and ways
- Permitting and signage
- Research and Photography Policy

PROGRAMMING



- Interpretive Media
- Trailhead Orientation
- Interpretive Wayside Exhibits
- Interpretive Programming/Docent-Led Hikes

RESTORATION



- Replace West Basin Gate with ranch gate and combination lock
- Remove green gate to windmill and repair fence
- Access Control
- Implement Monitoring Protocol

IMPROVEMENTS



- Replace windmill near mouth of arroyo
- Install water tank / wildlife drinkers
- Trailhead / Parking lot
- Fences to Road Right-of-Way

MID TERM - LONG TERM

PLANNING

MANAGEMENT

- 10 to 15 mile wide planning office
- Stone/soil/land/landscape

RECORDING/REPORTING/ANALYSIS

- Collaboration with various local agencies for a 10 to 15 mile wide planning office
- Stone/soil/land/landscape

PROGRAMMING

MANAGEMENT

- Range for interpretation and Ranch



- 10 to 15 mile wide planning office
- Stone/soil/land/landscape
- Collaboration with various local agencies for a 10 to 15 mile wide planning office
- Stone/soil/land/landscape

IMPROVEMENTS

MANAGEMENT

- Monitor and protect Master Plan elements

- Replace/ remove gates—Replace West Basin gate with ranch gate and combination lock to facilitate landscape integrity. Remove green gate to windmill and repair fence to focus entry to designated access point.
 - Access Control—Develop access control structures at the arroyos off of La Jara Ranch Rd and General Goodwin Road and monitor effectiveness of structures.
 - Ecological restoration, wildlife habitat enhancement—In conjunction with ranch road reclamation, determine what ecological restoration/ wildlife habitat enhancements would be most beneficial (i.e. grassland improvements, riparian corridor restoration, erosion control, etc.) Santa Fe County will work proactively to reduce erosion on the site by improving the ground cover and by seeding native vegetation. Vehicles will be prohibited within the property so that the least amount of ground disturbance occurs.
- Mid-Long Term (5-10 year) activities focus on developing partnerships and capacity for management of the property.
- Stabilization of Stone Masonry-- As opposed to rebuilding or reconstructing stone walls and buildings, stabilization seeks to reduce the rate of degradation of such features over time. Use of appropriate local materials allows for low-impact and aesthetically appropriate stabilization efforts. Stabilization of stone masonry features would be planned, conducted, and monitored by specialists in this field to ensure that well-intended efforts do not inadvertently result in greater degradation of the resource in question.



2.2.3 Key Planning, Research and Policy Development

Every proposed project requires planning, research and design development beforehand so that projects are well conceived, funded and implemented. Recommended planning, research and development work to achieve this plan are:

Short-Term

- **MOU with BLM** – Pursue an MOU with BLM so Santa Fe County can manage BLM inholdings within the open space area. Complete Environmental Analysis (EA) and Cultural Resources (CR) review.
- **Purchase property inholdings** to facilitate management of TROS and trail connections.
- **Perform Baseline Assessments** for wildlife, vegetation and other natural resources before and after implementation of Master Plan elements
- **Develop Monitoring Protocol** to best manage the properties sensitive cultural and environmental resources and to protect the County's investment.
- **Special Use Permitting**—Develop a special use permitting process to address research, filming and photography, etc. in accordance with possible future co-management agreement.
- **Coordinate with BLM** to perform trail planning on Burnt Corn SRMA.
- **Develop a staffing plan** that includes developing job classifications and descriptions for all required resource management and law enforcement staff at Thornton Ranch Open Space.
- **Regional Trail** – Regional Trail connections along the NM Central Line, north to Santa Fe and east-west along the BNSF rail line will need to need to be planned and programmed. These connections will provide users long distance routes that connect Santa Fe, Lamy, Galisteo, Cerrillos, and Madrid.

Mid to Long-Term

- **Land trade with SLO** – Plan a land trade or purchase, which would be more cost effective in the long run.
- **Collaboration with Commonweal on trail connection** – Commonweal Conservancy, a nonprofit conservation-based community development organization envisions having 50 miles of publicly-accessible trails.

- **State/ National Register Nomination**—Evaluate all of the eligible LA sites within the Thornton Ranch Open Space for potential nomination to the State and National Registers.
- **Scenic overlook along CR42 for interpretive exhibit** – evaluate potential locations and develop material consistent with the Galisteo Basin Interpretive Plan.
- **Site Documentation** – Complete additional historic resource documentation for the NM Central and Atchison, Topeka, and Santa Fe Railroads.
- **Visitor Management Plan** – Develop a visitor management plan for providing a limited number of carefully conducted, small group, off-trail tours to explore the natural features of the property including geology, ecology, night skies, and others.
- **Mining restrictions** – Work with the Bureau of Land Management to restrict the exploration and development of the locatable and saleable Federal minerals within the boundary of the Thornton Ranch Open Space and research the ownership of the subsurface mineral estate underlying approximately 350 acres of the surface estate that Santa Fe County owns and investigate the possibility of acquiring the mineral estate in order to protect the surface resources.
- **Collaborative management** – Explore co-management with Native American Tribal governments to manage Thornton Ranch Open Space which could include monitoring of cultural resources, law enforcement patrol, permitting, naming of sites, and interpretation opportunities.
- **Tribal access** – Develop agreements with Native American tribes to facilitate tribal access and collection for traditional purposes.
- **Traditional Cultural Properties** – Support tribes in identifying and listing Traditional Cultural Properties within the Thornton Ranch Open Space in the National Register of Historic Places (NRHP).
- **Site Watch** – Explore possibility of expanding monitoring program to other sites within Thornton Ranch Open Space.
- **Human Remains** — Develop a burial treatment plan for any sites within Thornton Ranch Open Space that may contain human remains.



2.2.4 Programming

Interpretive and educational programs are an integral part of the operations of the property. Educational programs will be developed to be consistent with the framework outlined in the Galisteo Basin Interpretive Plan. All interpretive media will be submitted for Tribal review prior to distribution to the public.

- **Interpretive Media** — Interpretive Media will include interpretive panels, wayside exhibits, docent led hikes, and interpretive tours and other educational programming.
 - **Trailhead Orientation** — Interpretive panels located at the trailhead will welcome visitors to the property, and convey what activities are allowed there and what is expected of visitors. Interpretation will establish Thornton Ranch Open Space as a place with a long history of human occupation.
 - **Interpretive Wayside Exhibits** — Located along the proposed trail network will be a series of five to seven wayside exhibits. These exhibits will be located at or near historic assets and will tell the stories of ranching and railroad history on the property. Interpretive content will bring the past alive by describing the activities, sights, sounds and smells that occurred there in the past, and relate historical persons' lifestyles to those of today's visitors. Off-site interpretation will also be developed.
 - **Interpretive Programming/Docent-Led Hikes** — Periodic docent-led hikes will provide guided visitor access to areas not accessible by trail. The cross-country hikes will interpret the site in a holistic manner, weaving together the Basin's geology, role as wildlife corridor, and archaeological significance. A docent toolkit developed for the project site, along with periodic interpretive training, will provide a consistent resource for docents. The County will develop an interpretive programming infrastructure that includes docent training protocol, educational program review guidelines, schedules, and staffing requirements. Etiquette will be developed to guide visitor use and respect of the numerous cultural resources on the TROS.
- Santa Fe County also plans to develop other venues and media for off-site interpretation of the Galisteo Basin including; Visitor Information Centers, Driving/Bicycling Tours, Traveling Exhibits, Mobile Apps, Web-Based Media, Guided Tours, school curriculum and lesson plans. The County's plans for off-site interpretation of the Galisteo Basin and the Act sites are described in more detail in the Galisteo Basin Interpretive Plan.
- **Coordinate signage with BLM** — Coordinate the design of signage and interpretive exhibits with BLM so that they have a consistent appearance across the Galisteo Basin.

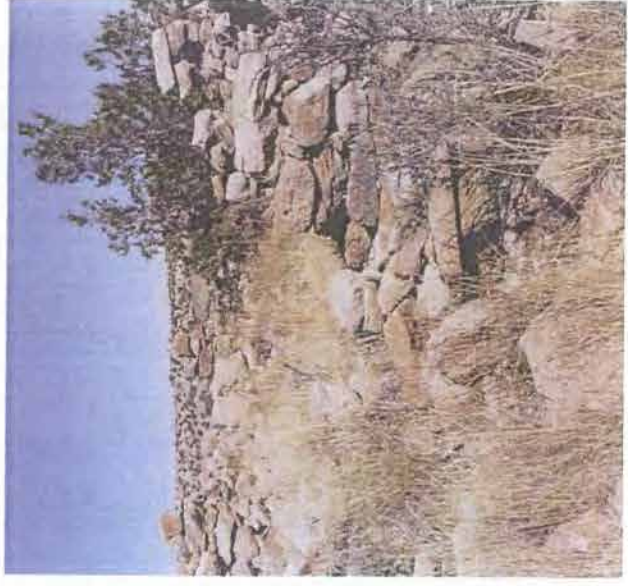
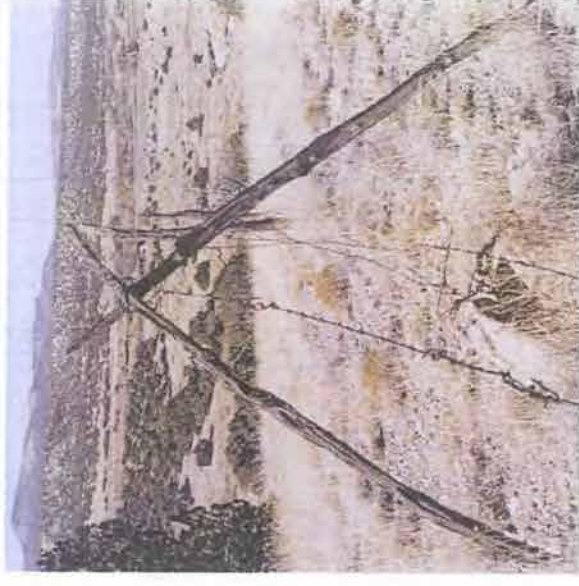
2.3. Monitoring

To ascertain that progress is made toward achieving management goals, County staff together with local community partners will periodically monitor certain indicators of progress (*Table 1*). Coordinate the design of signage and interpretive exhibits with BLM so that they have a consistent appearance across the Galisteo Basin

A basic set of monitoring activities for TROS includes measurements for which a baseline of data was established during the master planning process including species monitoring and existing conditions outlined in the master plan. These monitoring activities coordinate with terrain management units identified on the map (*Map 4*). Additional baseline data may need to be collected after the implementation of the Master Plan projects in order to determine trail conditions, etc.

Based on the monitoring overview described below, and as part of plan implementation, Santa Fe County staff will develop a detailed monitoring plan. A detailed monitoring plan enables staff and stakeholders to track progress made toward specific goals and objectives. Ideally, the monitoring plan will be updated annually.

A detailed monitoring plan specifies how the indicators will be measured or documented, when and where this will be done, who will do the outlined tasks, and what equipment or supplies are needed. Additionally, a detailed monitoring plan will establish numerical thresholds and conditions that serve to indicate whether corrective action will be needed.



TMU	Conditions Monitored	Mgmt. Objectives	Indicators and Monitoring Method	Monitoring Frequency and Season
TROS-PRSV	Condition of Cultural Resources	Cultural Landscape Integrity	Visual inspection with checklist, GPS/Photo documentation	Annually
TROS-PRSV	Condition of Petroglyphs	Cultural Landscape Integrity	Baseline, Random sample	Monthly
TROS-PRSV	Condition of Stone Masonry	Cultural Landscape Integrity	Visual inspection with checklist, GPS/Photo documentation	Annually
TROS-TRL	Trail Condition	Meaningful Public Experience	Visual inspection with checklist, GPS/Photo documentation	3 times per year (Spring, Summer, Fall)
ALL	Invasive plants	Ecosystem Health	Presence, type, extent / GPS	Annually
ALL	Unauthorized Access	Cultural Landscape Integrity	Cameras, patrol	Daily
TROS-TRL	Infrastructure Conditions	Meaningful Public Experience	Visual inspection with checklist, GPS/Photo documentation	Biannually (Spring, Fall)
TROS-ROAD				
ALL	Erosion	Ecosystem Health	Baseline	Annually
TROS-RIP	Arroyo channel stability	Ecosystem Health	Baseline	Annually
ALL	Wildlife	Ecosystem Health	Wildlife cameras, surveys	Daily
ALL	Camera function	Cultural Landscape Integrity	Visual Inspection	Annually
ALL	Unauthorized Publication of Petroglyph Images	Cultural Landscape Integrity	Internet Search	Annually
TROS-TRL	Windmills and Stock tank/Wildlife drinkers	Meaningful Public Experience	Visual Inspection	Seasonally

Table 1. Monitoring Matrix

Note:

The table indicates the minimum suggested monitoring frequency. In some circumstances frequencies may need to be increased if/when staff time and funds allow, or if, monitoring activities can be conducted by community volunteers.

2.4. Resource Management

For purposes of maintenance and land use suitability, the TROS Management Plan identifies several Terrain Management Units (TMUs) (*Map 4*). Each TMU encompasses an area with similar landscape features and maintenance requirements. The identification of TMUs organizes the spatial management aspects of this plan. Resource management includes land restoration and maintenance. Resource management activities are specific for each TMU. Each TMU requires a discrete set of management activities to maintain their ecological functions in support of the central management goal for the TROS. An overview of regular maintenance activities is included in *Table 2*. Resource management activities are ongoing and recurring to best manage the site.

The County will face challenges to achieve all the maintenance needs at TROS that will arise in the future. Strategies that can be useful to optimize maintenance efforts, include:

- Collaboration with adjacent properties, agencies and community stewards to leverage working together to address maintenance needs;
- Invest smaller and consistent amounts of time and labor on well-planned maintenance activities;
- Conduct maintenance activities at the optimum time based on monitoring information or a regular schedule.

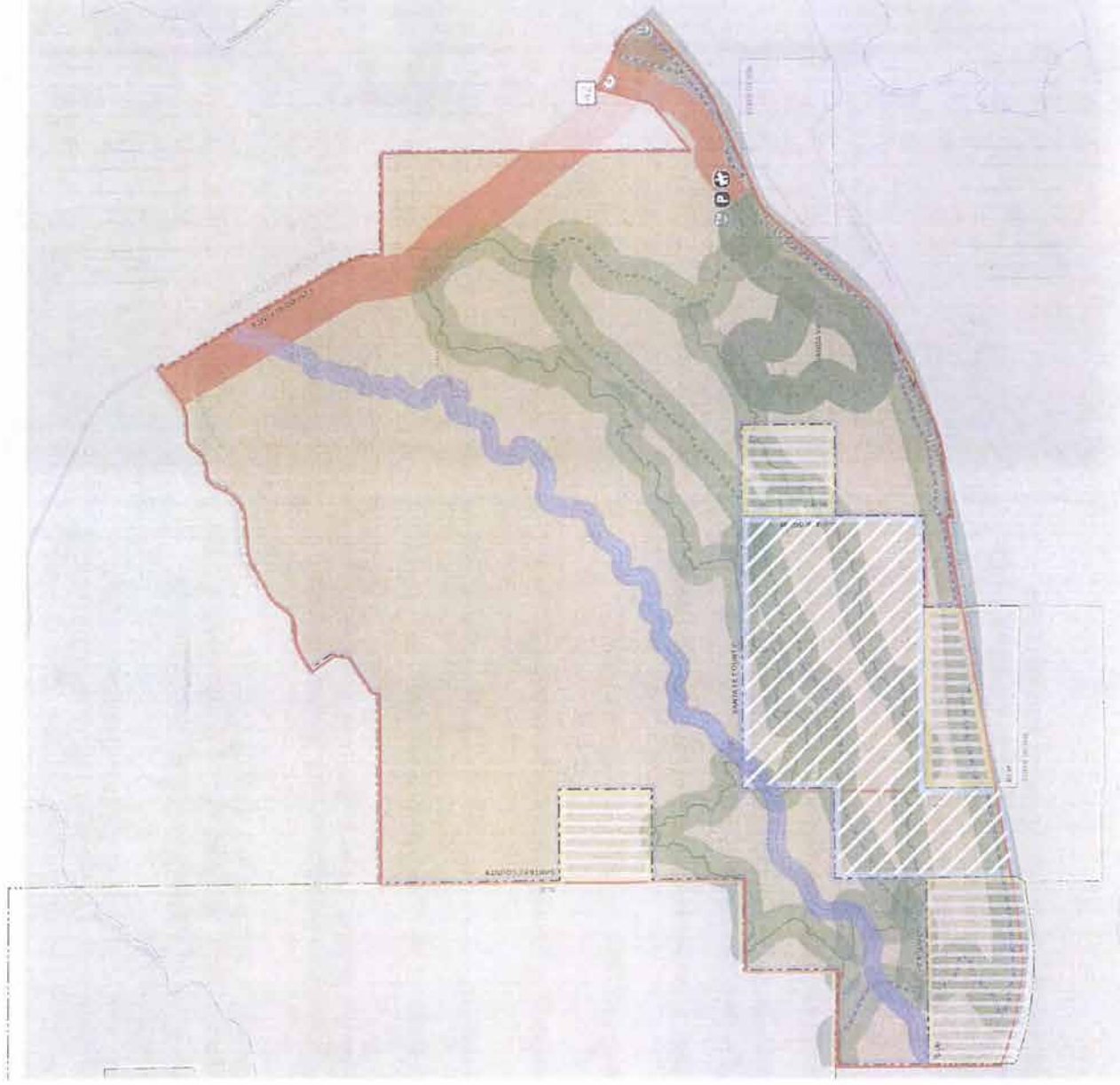
2.4.1 Resource Management Activities and Policies:

- **Trails**— develop trail maintenance resource guide for the property to guide volunteer maintenance of trails at TROS
- **Backcountry Trail**—Repair and monitor erosion, widening, meandering; remove invasive weeds, litter, etc. This trail may be particularly sensitive to visitor impact. Special attention must be paid to trail conditions.
- **Weed control**—Incorporate a simple grassland plan, revegetation strategies, weed management, and soil improvement. In a few locations, however, Class C noxious weeds exist (Cheat grass, Russian olive and Siberian Elm). Removal and monitoring of these nonnative species would help reestablish native plant communities.
- **Soil Stability and Vegetation Cover**—Manage soils to protect integrity and reduce erosion that would damage cultural sites or impair downstream water quality. Native vegetation along all natural open space trails shall be preserved to the greatest extent possible to protect the aesthetic quality of the trail.



TERRAIN MANAGEMENT UNITS LEGEND

TR-PRSV	PRESERVE
TR-ROAD	ROAD CORRIDOR
TR-TRL	TRAIL CORRIDOR
TR-RIP	RIPARIAN
TR-BLM	BUREAU OF LAND MANAGEMENT
TR-SLO	NM STATE LAND OFFICE



Map 4. Thornton Ranch Open Space--Terrain Management Units Map

Where	What	Why	When
TMU	Anticipated Regular Maintenance Activities	Objective	Maintenance Frequency*
TROS-PRSV TROS-RIP	Ecological Restoration/Wildlife Habitat Enhancement	Ecosystem Health	Annually
TROS-ROAD TROS-TRL TROS-RIP	Weed Management	Ecosystem Health	Annually
All TMUs	Erosion Control	Ecosystem Health	Annually
TROS-ROAD, Rail Road	Inspect and repair boundary fence	Cultural Landscape Integrity	Annually
TROS-TRL	Inspect and repair trails	Meaningful Public Experience	3 x per year
TROS-TRL	Infrastructure maintenance and repair:	Meaningful Public Experience	Biannually
	Access road	Meaningful Public Experience	
	Drainage crossings	Meaningful Public Experience	
	Fence/Gates/Stiles	Meaningful Public Experience	
	Restroom	Meaningful Public Experience	
	Shade structures	Meaningful Public Experience	
	Educational area	Meaningful Public Experience	
	Public Art	Meaningful Public Experience	
	Seating	Meaningful Public Experience	
	Trash/Recycling Receptacles	Meaningful Public Experience	
	Interpretive Exhibits/Signage	Meaningful Public Experience	
	Windmills, Stock tanks/wildlife drinkers	Ecosystem Health	Biannually
West Basin Rd.	Gate/Road	Cultural Landscape Integrity, Ecosystem Health	Biannually



- **Interpretive Rangers**—Hire fully commissioned law enforcement officers as Interpretive Rangers to oversee the educational programming that occurs at the Open Space in order to foster respect and awareness of the cultural heritage of the site. This is particularly important to protect the cultural and natural resources on the property. Rangers should be able to patrol and monitor sites with some law enforcement capacity. However, the most important aspect is the ability to engage visitors in order to instill respect and provide education on the significance of the property.
- Operate a **volunteer site steward program** to monitor all sites on Santa Fe County. Interagency agreements may be executed and put in place as necessary to establish protocols and ensure smooth communication among the various agencies involved.
- **Access Restriction**—The property includes a federally-protected archaeological resource of cultural significance to more than a dozen Native American tribes. Integrity of the site's extensive rock art images and the site's overall sacred nature would be damaged by public disclosure and access. Discussion of the feature from other areas of the property may draw attention to this archaeological resource. Access to this part of the TROS is restricted unless part of a docent led hike.
- **Monitoring**--Provide clear site monitoring, reporting, and restoration guidelines to manage open space areas and cultural resources. Install security cameras / sensors at major breach points into the Thornton Ranch Open Space property through drainage ways along the rail line.

- **Visitor Use Management /Impacts**—Trails within TROS will be designated as multi-use as appropriate. All users will be accommodated unless trail design prohibits such multi-use. Impacts to the backcountry trail will be specially monitored and use/users will be limited dependent on visitor impacts. All areas of the property may be closed due to visitor impacts as necessary.
- **Dogs**—Do not allow dogs within the Thornton Ranch Open Space to allow for a user experience that instills respect and appreciation for cultural significance, natural qualities, and environmental integrity of the area. Santa Fe County recognizes that dogs are an important part of the local culture and that prohibiting dogs within the open space will be a challenge for management and enforcement. County staff will further investigate and consider strategies for managing dogs in sensitive environments as part of the best management practices for designated open space preserves county-wide. The Thornton Ranch Open Space is designated as a preserve within the Santa Fe County Open Space Program. The best management practices adopted by the County for preserves will ultimately determine how dogs are managed at the Thornton Ranch Open Space.
- **Night Access**—Night access is not allowed without a docent on a sanctioned night hike. Research topics and site-specific art projects that take place after hours will be allowed with permission, especially as they relate to the goals of preserving and educating people about this cultural landscape and as they are consistent with possible co-management agreement.
- **Livestock grazing** — Livestock grazing will not be allowed at Thornton Ranch Open Space.
- **Avoid disturbance** of cultural resources.
- **Place names** --Encourage the use of historic Native American and Spanish place names at Thornton Ranch Open Space.





2.5 Communication

- **Community Relations** — Effective communications among agencies, landowners, and other stakeholders will be critical in ensuring the successful implementation of this plan. Collaboration is imperative to the success of the implementation of this plan.
- **Tribal Relations** — The General Management Plan states, “Communication and collaboration with Native American entities, including both government officials and cultural resource specialists within pueblos and tribes, are essential prerequisites for the successful long-term management of the archaeological resources designated by the Act. Santa Fe County believes traditional tribal knowledge is critical to the protection and management
- **Rangers** — Rangers will communicate with visitors relating to the preservation of the site both in terms of cultural and natural resources. Direct contact with visitors will protect the site. Activities to foster respect and cultural understanding will be regularly programmed to communicate with visitors and residents.
- **Collaboration with BLM on Burnt Corn SRMA** — Continue planning efforts with BLM on Burnt Corn SRMA to provide regional trail connections to the east and to the north to connect to County Road 42.
- **Collaboration with GBASPA** — Santa Fe County, in cooperation with BLM is developing a site-specific management plan for the GBASPA site within the planning area in compliance with the Act. The management of the site as a whole will be coordinated with this management plan.
- **Collaboration with Commonweal** — Santa Fe County will continue to collaborate with Commonweal Conservancy as trails develop in the Galisteo Basin Preserve.

2.6. Plan Implementation

Plan implementation will start by identifying priorities and timelines among staff for activities regarding maintenance, planning and project preparation, community outreach, and community stewardship involvement. Prioritization will be based on balancing the tasks at hand, and the staff and funds available to accomplish the tasks.

First Year Implementation

Implementation of this plan will start upon approval of the plan by the County. Most management activities will commence upon development of facilities and trails and implementation of the Master Plan. Until the Master Plan is implemented, management will consist of planning activities and basic monitoring of the property.

Recommended Year-1 implementation activities include:

1. Coordination with Master Plan Activities.
2. Implementation of terrain inspection, baseline data collection (for future monitoring), and maintenance activities by County maintenance staff.
3. Regional Trail Planning analysis and inventory.
4. Collaboration with tribal and federal and state agencies to effectively manage TROS.



APPENDIX A

This work plan is intended to be used a tool to implement the plan. Staff will monitor progress on the implementation of the plan and update the work plan annually.

TROS # (Term and Priority)		Project or Management Activity		Type	Management Objective		Location Code	Actor	Implementation Timeframe	Recurring (R) or Not Recurring (NR)	
1.1		Develop a map and panorama of Galisteo Basin similar to the map of the GBASPA Sites but with natural landmarks (mountains, etc.) and current towns.		Programming	Meaningful Public Experience			Planning Consultants	ST		NR
1.2		Coordinate the design of signage and interpretive exhibits with BLM so that they have a consistent appearance across the Galisteo Basin and the Act sites.		Programming	Meaningful Public Experience			Planning Consultants	ST		NR
1.3		Create a historical timeline for the Galisteo Basin in relation to what was going on in other parts of the world: Europe, China, Central America.		Programming	Meaningful Public Experience			Planning Consultants	ST		NR
1.4		Regional Trail along NM Central		Planning and Policy Development	Meaningful Public Experience			Planning Consultants	ST		NR
1.5		Renew Memorandum of Understanding with the New Mexico Historic Preservation Division Department of Cultural Affairs for the SiteWatch Program. Expires February 2018.		Planning and Policy Development	Cultural Landscape Integrity Effective Management			Planning	ST		NR
1.6		Develop a communications plan for the management of Thornton Ranch including cultural sites.		Planning and Policy Development	Effective Management			Planning	ST		NR
1.7		Evaluate the west and north property boundary to determine where fencing and signage is necessary to control unauthorized access. Investigate options to control access through the arroyos under the railroad trestles along the southern boundary of the property.		Resource Management	Cultural Landscape Integrity			SFC-M (Crew)	ST		R
2.1		Develop Cultural Tour Etiquette and Training		Programming	Meaningful Public Experience			Planning Consultants	ST		NR
2.2		Develop process for tribal review of any interpretive media that will be provided to the public.		Programming	Meaningful Public Experience			Planning Consultants	ST		NR
2.3		Initiate a collaborative planning process with Native American Tribal Governments to develop a plan for interpretation of Petroglyph Hill and the cultural history of the Galisteo Basin prior to Spanish contact.		Programming	Meaningful Public Experience			Planning Consultants	ST		NR
2.4		Encourage Native American Tribes to provide interpretation of the Galisteo Basin from their perspective in a way that is culturally appropriate.		Planning and Policy Development	Meaningful Public Experience			Planning Consultants	ST		NR
2.5		Develop Interpretive Programming and Tours		Programming	Meaningful Public Experience			Planning Consultants	ST		NR
2.6		Develop a public education campaign to create awareness and appreciation of the cultural heritage of the Galisteo Basin.		Programming	Meaningful Public Experience			Planning Consultants	ST		R
2.7		Collaborate with interested Native American Tribes to develop a visitor management plan for providing a limited number of carefully conducted, small group tours of cultural sites within the Thornton Ranch Open Space.		Planning and Policy Development	Cultural Landscape Integrity Effective Management			Planning	ST		NR
2.8		Baseline assessments		Planning and Policy Development	Ecosystem Health		Entire property	Planning Consultants	ST		
2.9		Develop a protocol with criteria and parameters for monitoring visitor impact to the site.		Resource Management	Ecosystem Health Cultural Landscape Integrity		TR-PRSV TR-TRL	Planning Projects	ST		R
2.10		Develop monitoring protocol for natural and cultural resources		Planning and Policy Development	Ecosystem Health Cultural Landscape Integrity		Entire property	Planning Projects	ST		
2.11		Develop arrangements with Native American tribes to facilitate tribal access and collection and to minimize public interference with traditional cultural practices.		Planning and Policy Development	Cultural Landscape Integrity Access Management			Planning	ST		

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TRO5		Project or Management Activity		Type	Management Objective	Location Code	Actor	Implementation Timeframe	Returning (R) or Not Returning (NR)
# (Term and Priority)									
	2.12	Develop a procedure for handling inadvertent discoveries during construction or routine maintenance.	Planning and Policy Development	Effective Management	_____		Planning	ST	R
	2.13	Develop co-management agreement with a tribe or group of tribes to manage the cultural resources within the Thornton Ranch Open Space.	Planning and Policy Development	Effective Management	_____		Planning	ST	
	2.14	Develop an MOU between BLM and Santa Fe County to allow the County to manage the Kennedy Allotment 926 and a portion of the Burnt Corn Allotment 917 as part of the Thornton Ranch Open Space.	Planning and Policy Development	Effective Management	TR-BLM		Planning	ST	R
	2.15	Develop burial treatment plans and protocols for determining ancestral affiliation based on archaeological and osteological evidence for sites where human remains are likely to be present.	Planning and Policy Development	Cultural Landscape Integrity	_____		Planning	ST	R
	2.16	Hire fully commissioned law enforcement officers to patrol the Thornton Ranch Open Space on a regular basis to insure compliance with all applicable rules and regulations and to provide interpretation and interact with visitors.	Resource Management	Meaningful Public Experience Cultural Landscape Integrity	Entire property		Planning	ST	R
	2.17	Develop policies regarding:	Planning and Policy Development	Effective Management	_____		Planning	ST	NR
		Geocaching							
		Research							
		Filming							
		Special Use Permits							
		Human Remains Avoidance							
		Inadvertent Discoveries							
		Tribal Access and Collection							
		Cultural Research and Photography							
		Unmanned Aircraft Systems							
Non-tribal Offerings									
		Cremated Remains and Memorials							
	2.18	Update the Memorandum of Agreement (MOA) between BLM and Santa Fe County for the protection, preservation, maintenance, and administration of the GBASP Act sites that are wholly or in part on lands owned by Santa Fe County to incorporate provisions for implementation of the Petroglyph Hill Management Plan. Expires 7/31/20.	Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____		Planning	ST	NR
	2.19	Develop a procedure for tribal review and approval of research proposals.	Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____		Planning	ST	NR
	2.20	Change the name of Petroglyph Hill to an appropriate Native American place name.	Resource Management	Cultural Landscape Integrity	Petroglyph Hill		Planning	ST	NR
	2.21	Review and update the site field records and photographs to provide a complete record of the petroglyphs and site features, and their current conditions in order to create a baseline for monitoring the site conditions.	Resource Management	Effective Management	_____		Planning	ST	NR
	2.22	Research the ownership of the subsurface mineral estate underlying approximately 350 acres of the surface estate that Santa Fe County owns and investigate the possibility of acquiring the mineral estate in order to protect the surface resources.	Resource Management	Effective Management	Preserve		Planning	ST	R
	3.1	NEPA for BLM parcels	Resource Management	Effective Management	TR-BLM (West)		Contractor	ST	NR
	3.2	Purchase and install wireless cameras to monitor the property and access points and to monitor wildlife.	Resource Management	Meaningful Public Experience Cultural Landscape Integrity Ecosystem Health	_____		SFC-M (Crew)	ST	NR
	3.3	Develop a pledge to respect/non-collection agreement	Planning and Policy Development	Cultural Landscape Integrity	_____		Planning	ST	NR

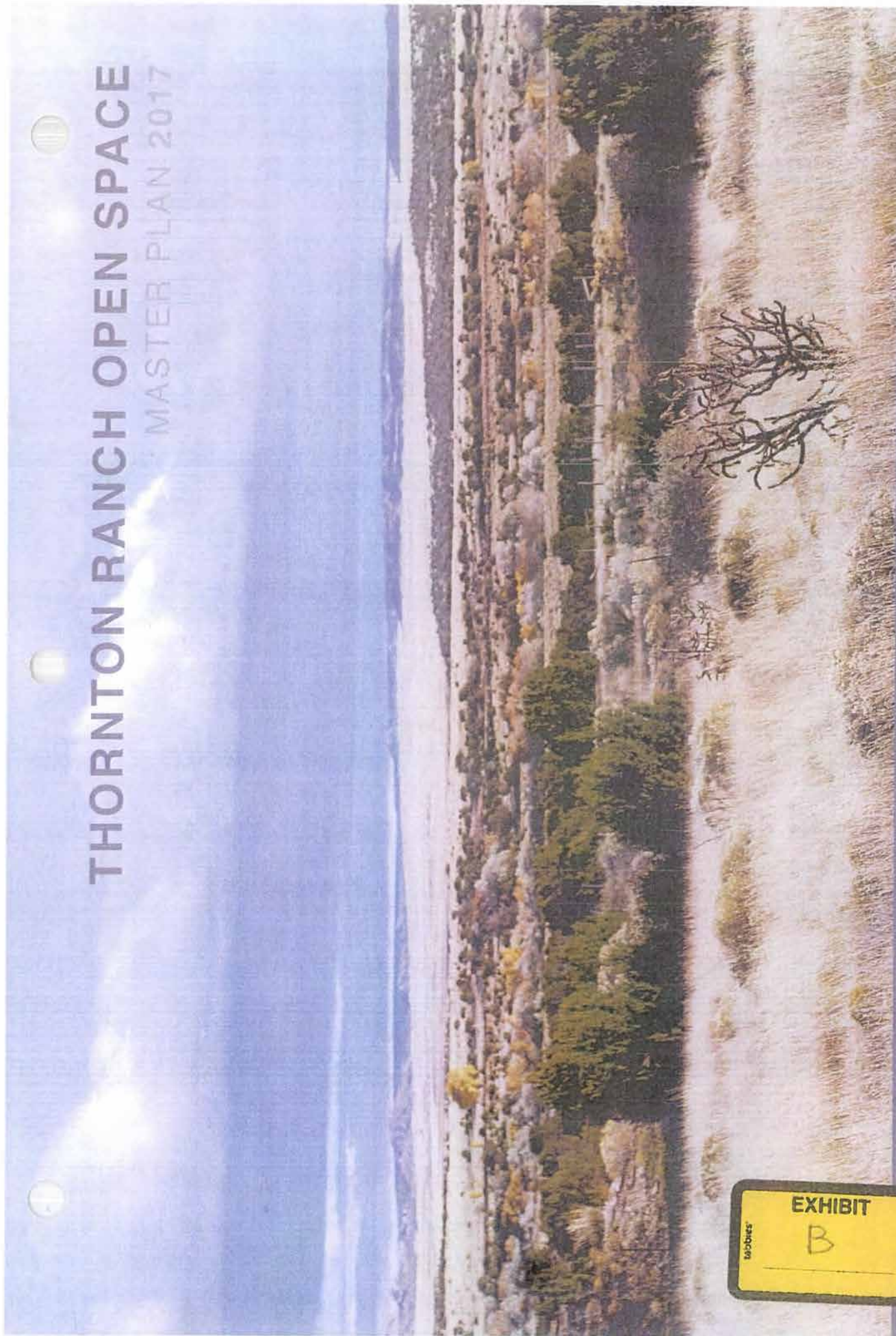
TROS # (Term and Priority)							Project or Management Activity		Type	Management Objective	Location Code	Actor	Implementation Timeframe	Recurring (R) or Not Recurring (NR)
3.4							Invasive weed species removal and weed management		Resource Management	Ecosystem Health	Entire property	SFC-M (Crew) or contractor	ST	R
3.5							Develop a procedure for identifying, removing and disposing of non-tribal offerings. Amend Santa Fe County Ordinance 2001-1 Section 4 to include leaving object or offerings on County parks, trails and open space.		Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____	Planning	ST	NR
3.6							Develop Interpretive Media and off-site interpretation		Programming	Meaningful Public Experience	_____	Planning staff Consultants	ST	NR
3.7							Work with the Bureau of Land Management to restrict the exploration and development of the locatable and saleable Federal minerals within the boundary of the Thornton Ranch Open Space.		Planning and Policy Development	Effective Management	Entire property	Planning	ST	NR
4.1							Replace windmill near mouth of arroyo		Improvements	Cultural Landscape Integrity	TR-RIP	SFC-M (Crew) or contractor	ST	NR
4.2							Install water tank/ wildlife drinkers		Improvements	Ecosystem Health	TR-PRSV Selected locations on property	Contractor	ST	NR
4.3							Trailhead/ parking lot		Improvements	Meaningful Public Experience	TR-ROAD	SFC-M (Crew) or contractor	ST	NR
4.4							Trail Development		Improvements	Meaningful Public Experience	TR-TRL	Contractor	ST	NR
4.5							Fence at Railroad ROW		Improvements	Access Management	Along Railroad ROW	SFC-M (Crew) or contractor	ST	NR
4.6							Repair priority fence problems		Improvements	Access Management	Entire property: select locations	SFC-M (Crew) or contractor	ST	NR
4.7							Installation of interpretive education signs		Improvements	Meaningful Public Experience	TR-TRL TR-ROAD	SFC-M (Crew) or Contractor	ST	NR
4.8							Create a "threshold" at the trailhead to draw visitors' attention to the fact that they are entering a sacred place and make them aware of the proper etiquette as a guest in this place.		Improvements	Meaningful Public Experience	Trailhead	Contractor	ST	NR
4.9							Purchase inholdings and buffer properties		Planning and Policy Development	All management goals (effective management)	_____	Planning staff	ST	NR
4.10							Reclaim and revegetate ranch road to windmill		Resource Management	Ecosystem Health	TR-ROAD	SFC-M (Crew) or contractor	ST	NR
4.11							Replace W. Basin Gate with ranch gate and combination lock		Resource Management	Access Management	W. Basin Gate	SFC-M (Crew)	ST	NR
4.12							Remove green gate to windmill and repair fence		Resource Management	Access Management	TR-ROAD	SFC-M (Crew)	ST	NR
4.13							Remove arroyo fence		Resource Management	Ecosystem Health	TR-RIP (General Goodwin Access)	SFC-M (Crew)	ST	NR
4.14							Install boulder grade controls at General Goodwin		Resource Management	Access Management	TR-RIP (General Goodwin Access)	SFC-M (Crew) or contractor	ST	NR
4.15							Reclaim and revegetate ranch road to saddle on the hill		Resource Management	Ecosystem Health	TR-TRL	SFC-M (Crew)	ST	NR
4.16							Post appropriate signage to inform the public of the laws and penalties for violating the laws and enforce the laws.		Resource Management	All Management Goals	_____	SFC-M (Crew)	ST	NR
4.17							Boundary fence upgrades and gates as appropriate (and wildlife-friendly fencing)		Improvements	Access Management	Entire property: along roads and around perimeter	SFC-M (Crew) or contractor	ST	NR

TROS							
# (Term and Priority)	Project or Management Activity	Type	Management Objective	Location Code	Actor	Implementation Timeframe	Recurring (R) or Not Recurring (NR)
5.1	Seek partnerships with interested tribes to provide tribal patrols of the site.	Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____	Planning	MT	R
5.2	Pursue interagency agreements with BLM and interested tribal governments and cross-deputization of officers to provide law enforcement for the site.	Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____	Planning	MT	R
5.3	Seek partnerships with interested tribes and/or a tribal SiteWatch chapter to monitor the site.	Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____	Planning	MT	R
5.4	Improve the ground cover on the site by seeding native vegetation to reduce erosion.	Resource Management	Ecosystem Health	Entire property	SFC-M (Crew) or contractor	MT	R
5.5	Inspection and repair of fences, gates, stiles, and signs	Resource Management	Access Management	At BLM and W. Basin Ridge	SFC-M (Crew)	MT	R
5.6	Field inspection of riparian conditions	Resource Management	Ecosystem Health	TR-RIP	SFC-M (Crew)	MT	R
5.7	Grassland restoration	Resource Management	Ecosystem Health	Entire property	SFC-M (Crew) or contractor	MT	NR
5.8	Inspection and repair of drainage and erosion on road sides, bridges, and trails	Resource Management	Ecosystem Health	TR-ROAD	SFC-M (Crew)	MT	R
6.1	Collaboration with Commonweal Conservancy on trail connections	Planning and Policy Development	Effective Management	_____	Planning	MT	R
6.2	Return any artifacts collected by previous research projects to the site	Resource Management	Cultural Landscape Integrity	_____	Planning	MT	NR
6.3	Collaborate with Native American Tribes and other stakeholders to prepare National Register of Historic Places Nomination Form for the Galisteo Basin as a Cultural Landscape.	Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____	Planning	MT	NR
6.4	Collaborate with Native American Tribes and other stakeholders to pursue designation of the Galisteo Basin as a National Heritage Area.	Planning and Policy Development	Cultural Landscape Integrity Effective Management	_____	Planning	MT	NR
6.5	Monitor and request removal of photographs of the petroglyphs at the site from the internet.	Resource Management	Effective Management	_____	Planning	MT	R
6.6	Work proactively with publishers to remove the name Petroglyph Hill or the site altogether as appropriate from future editions of reference and guide books.	Resource Management	Effective Management	_____	Planning	MT	R
7.1	Land Trade with State Land Office	Planning and Policy Development	Effective Management	TR-SLO	Planning	LT	NR



THORNTON RANCH OPEN SPACE

MASTER PLAN 2017



October 2017

THORNTON RANCH OPEN SPACE MASTER PLAN

PREPARED FOR:

SANTA FE COUNTY

PREPARED BY:

design office
landscape planning urbanism

SANTA FE CONSERVATION TRUST . land conservation
with
ECOTONE . ecology
AOS ARCHITECTS . architecture

Acknowledgements

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Katherine Miller

County Commissioners

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Anna Hansen, *District 2*
Robert A. Anaya, *District 3*
Anna T. Hamilton, *District 4*
Ed Moreno, *District 5*
Former Commissioners
Miguel M. Chavez, *District 2*
Kathy Holian, *District 4*
Liz Stefanics, *District 5*

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Susan Murphy, *District 2*
Rubén Cedeño, *District 3*
Dave Dannenberg, *District 4*
John Parker, *District 5*
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Jean Pike, *At Large*
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THORNTON RANCH OPEN SPACE **MASTER PLAN**

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Acronym List

AASHTO	American Association of State Highway and Transportation Officials	MSL	Mean Sea Level
ADA	Americans with Disabilities Act	NEPA	National Environmental Policy Act
ADAAG	American Disabilities Act Accessibility Guidelines	NCTD	North Central Regional Transit District
AT&SF	Atchison, Topeka and Santa Fe Railroad	NM	New Mexico
ATV	All Terrain Vehicle	NMRX	New Mexico Railrunner Express
BCC	Board of County Commissioners	NMDOT	New Mexico Department of Transportation
BLM	Bureau of Land Management	NVC	U.S.National Vegetation Classification
BNSF	Burlington Northern Santa Fe Railway	OHV	Off Highway Vehicle
COLTPAC	County Open Lands, Trails, and Parks Advisory Committee	PROWAG	Public Rights of Way Accessibility Guidelines
CR	County Road	ROW	Right of Way
FED	Federal	RUR	Rural Zoning
FEMA	Federal Emergency Management Agency	SFCT	Santa Fe Conservation Trust
FS	Forest Service	SGMP	Santa Fe County Sustainable Growth Management Plan
GBASPA	Galisteo Basin Archaeological Sites Protection Act	SHPO	State Historic Preservation Office
GIS	Graphic Information Systems	SLDC	Santa Fe County Land Development Code
IMBA	International Mountain Bicycling Association	SLO	State Land Office
MOA	Memorandum of Agreement	SRMA	Special Recreation Management Area
MOU	Memorandum of Understanding	TROS	Thornton Ranch Open Space
MRCOG	Mid-Region Council of Governments	USDA	United States Department of Agriculture

Executive Summary

The Galisteo Basin, known for its picturesque setting and natural resources, shows evidence of human occupation for thousands of years. However, the wide open grasslands, sweeping 360° views of surrounding mountain ranges, and sparse development that defines the Galisteo Basin's landscape continues to be threatened by encroaching development and resource extraction proposals.

In response to the gradual development pressure, Santa Fe County recognizes the importance of supporting landscape-wide conservation efforts to preserve open space for view corridors, wildlife habitat, natural resource protection, ecosystem health, and cultural landscapes. Likewise, the County is also committed to opening access to public lands for recreation and experiencing the outdoors.

The Thornton Ranch Open Space, a 2,430-acre area of land, holds not only a central location within the basin but is also a site of significant cultural importance. Many native tribes trace their ancestry or maintain traditional connections with this area. Tribes are particularly concerned with protecting these important cultural resources.

The cultural identity of this place is one marked by passage and movement: the land reveals signs of geological forces, wildlife migration, Pueblo Indian and Plains Indian movements, Spanish trails, sheep and cattle ranching, rail lines, and preservation initiatives. Adding to these layers, the Thornton Ranch Open Space

Master Plan will overlay outdoor recreational trails in discreet locations.

Santa Fe County, as the largest landholder of the Thornton Ranch Open Space property, acts as lead agency for this planning effort. The County also manages a portion of BLM lands and leases a portion of NM State Trust land within the property boundary.

Planning Process

As one of three plans regulating the Thornton Ranch Open Space, the Master Plan outlines program elements and physical improvement projects as well as design standards for improvements on the property to enable public access and recreation.

Santa Fe County has proceeded with the planning of the Thornton Ranch Open Space in a careful and deliberate way. Beginning with the gradual acquisition of land, use agreements, and leases over a period of 16 years, the County has assembled the current planning area known as the Thornton Ranch Open Space.

In addition, a series of studies and research initiatives were commissioned to piece together a comprehensive view of what exists within the site. These included cultural inventories, a biological assessment, and a mineral assessment. In 2014, a multidisciplinary team of experts led by Design Office (landscape architect) was selected to lead a planning effort to generate a master plan for the property.

Early planning analysis illuminated the complexity of land ownership, cultural ties, jurisdictional overlays, and stakeholders, sometimes with competing interests. The process acknowledges the full range of these many stakeholders with interests on this land, both those with voices and without: wildlife, plants, tribes, recreationists, land owners, lessees, local community members, and the general public. Extensive research documented information on cultural resources, minerals, biological resources, and geological history.

Although the site could physically accommodate miles of diverse recreational trails, the planning process revealed that this approach was neither needed (given surrounding recreational trail expansions) nor advisable. A moderate, high quality trail system was consciously chosen to preserve the character of the landscape and provide an enriching recreational and educational experience. The proposed plan strikes a balance between purposely planned recreational use and preservation.



THORNTON RANCH OPEN SPACE MASTER PLAN

Master Plan

The Thornton Ranch Open Space Master Plan acknowledges the culturally and environmentally sensitive resources on the site to propose a plan which emphasizes preservation with limited access for recreation. Hikers, runners, bikers, and equestrians will have access to 12 miles of internal trails and a 4-mile section of regional trail, from two new primary and secondary trailheads. An educational/informational hub introduces visitors to the site. Trail alignments link select historic sites, which are enriched with interpretive information intended to animate history and connect people to the many layers of cultural history present on the site. Ranching stories, railroad expansion, and geological / ecological processes are some of the many stories that visitors can explore on the trails.

Guided hikes in significant areas within the site provide glimpses into the geological, ecological, cultural, and historical aspects of the region. The strategically placed trails provide a broad overview of the site and an enjoyable recreational experience while safeguarding the majority of the site as an open space preserve.

The large area of preserved open space allows migratory birds, mountain lions, bears, coyotes, and other animals a place of refuge and a corridor of free-roaming in an area where open space remains under threat of encroachment and fragmentation. This approach also shelters cultural resources by keeping recreational trails away from sensitive sites.

The plan acknowledges that avoidance alone may not be sufficient to protect sensitive areas on the property. Efforts must be made to curb curious adventurers by providing compelling education reinforced with security measures to protect these areas. A major feature of the plan is the implementation of an educational threshold for visitors to instill respect for the land and instruct them of the importance of staying on trails and preserving resources.

Master Plan Documents

The Thornton Ranch Open Space Master Plan offers a vision and guiding framework to safeguard this public open space property while providing opportunities for recreational trail use. The plan balances public access with preservation and conservation of resources. It outlines the development of a trail network that offers a unique recreational and educational experience. It can be implemented in phases, depending on funding availability and priorities set by the County.

The plan outlines a set of design standards that strengthens the sense of place and creates low-impact, sustainably designed projects that are durable and low maintenance. New construction, materials, and names should clearly relate to the history and resources of this place.

Legacy

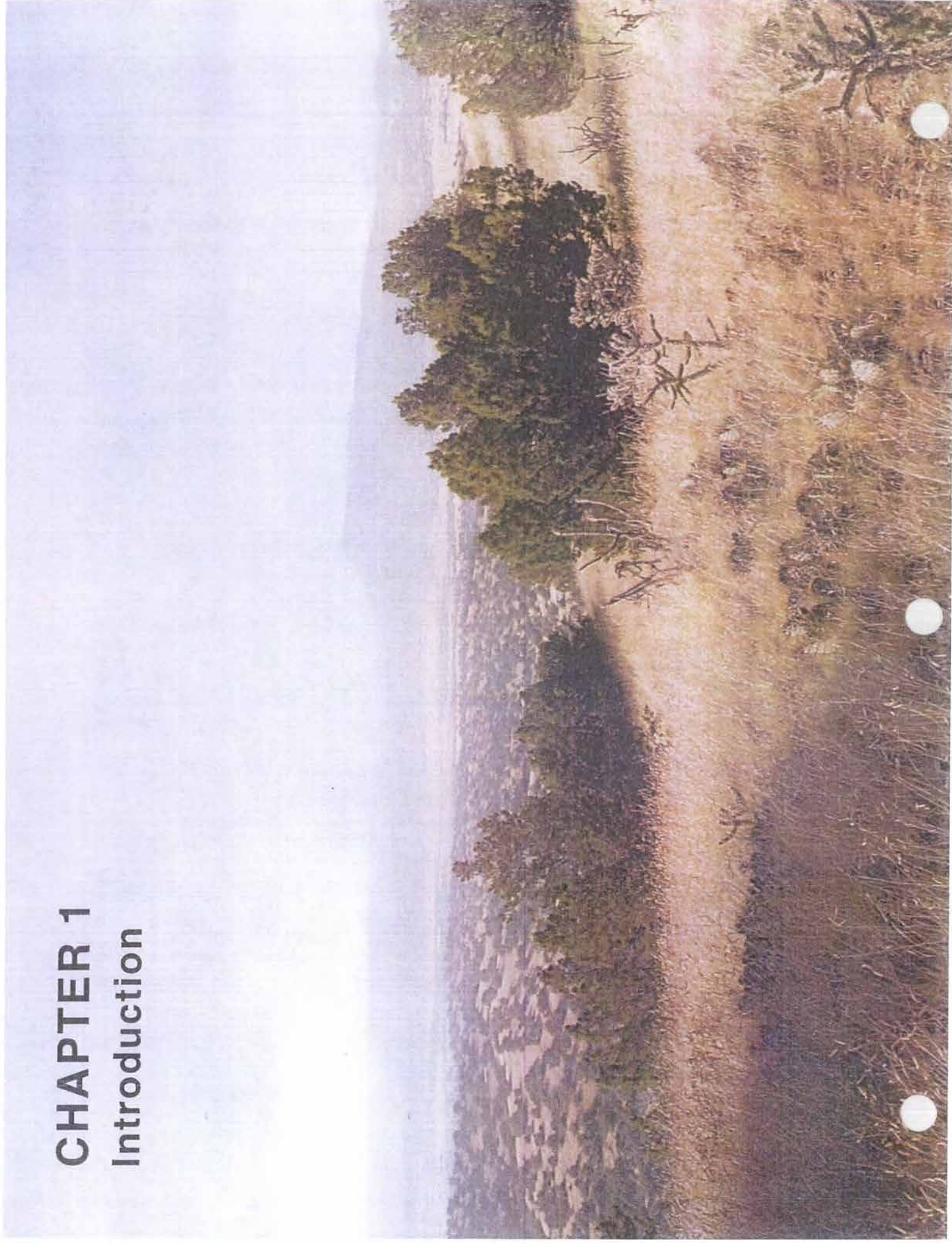
A legacy project for Santa Fe County, the Thornton Ranch Open Space trails will be a unique destination in the Galisteo Basin for recreation, education, and preservation. Set within a stunning setting and open space preserve, 16 miles of enjoyable recreational trails will be integrated and enriched with stories of the many facets of history of this land.

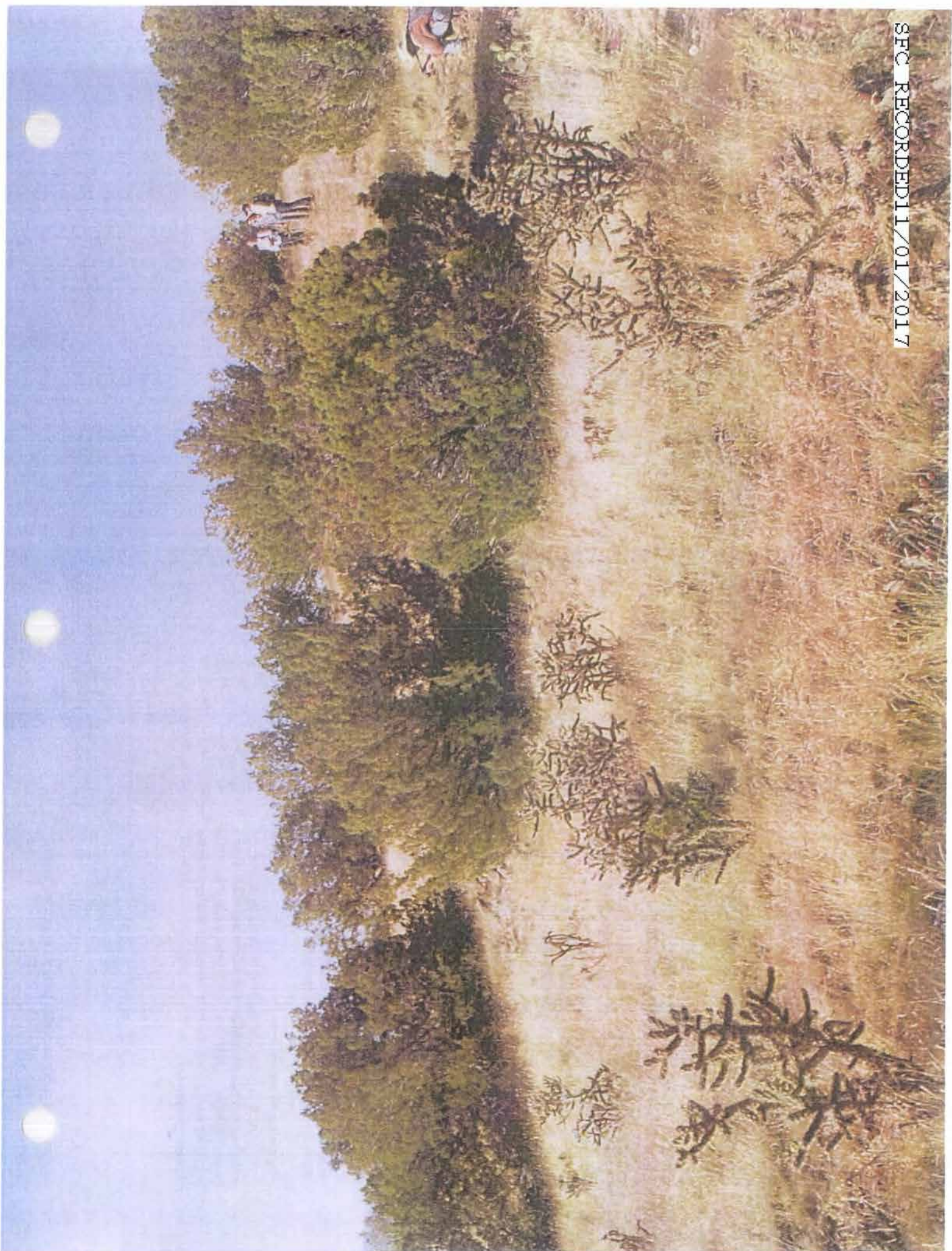
Acknowledging that human settlement will continue to impact the distinctive character of the Galisteo Basin, both visually and from a resource standpoint, this project and the stewardship of this open space will protect important wildlife corridors, viewsheds, cultural landscapes, and night skies within the Galisteo Basin and allow recreational enjoyment in this setting for generations to come.



CHAPTER 1

Introduction





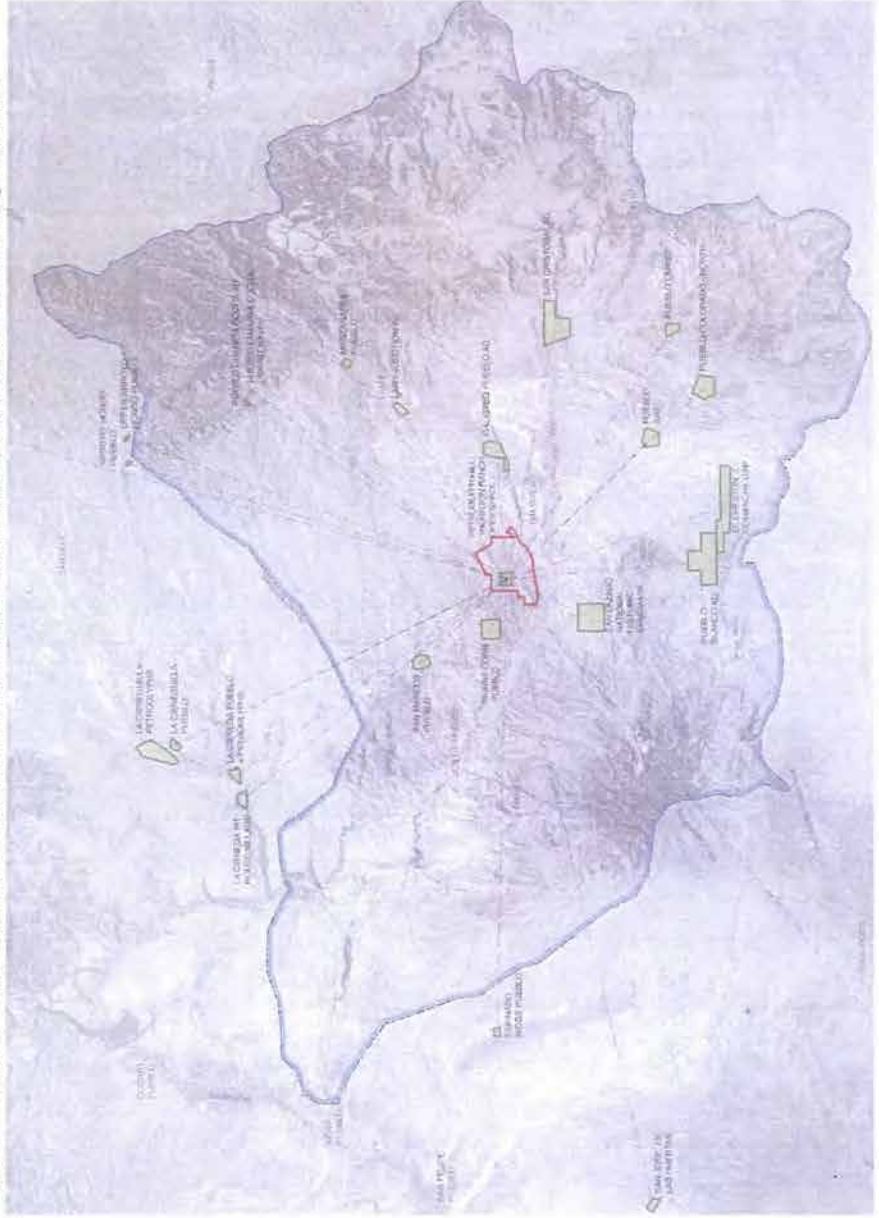
Galisteo Basin Archaeological Sites Protection Act, 2004 (GBASPA)

On a broader scale, the Galisteo Basin, a 467,200-acre watershed, has long been recognized for its cultural, archaeological, and natural resources. It is a unique cultural

"The purpose of this Act is to provide for the preservation, protection, and interpretation of the nationally significant archeological resources in the Galisteo Basin in New Mexico."

On a broader scale, the Galisteo Basin, a 467,200-acre watershed, has long been recognized for its cultural, archaeological, and natural resources. It is a unique cultural landscape with significant large prehistoric and historic pueblos, Native American rock art, and early Spanish Colonial settlements. To protect these resources long-term, on March 19th, 2004 the 108th United States Congress passed the

Figure 1-1: Galisteo Basin Watershed (blue) with Thornton Ranch Open Space site (red) and GBASPA designated sites



Purpose of Thornton Ranch Acquisition

The goal of the Thornton Ranch property acquisition, as indicated in the Santa Fe County Wildlife, Mountains, Trails and Historic Places Program Application in 2000 was "...the preservation of the significant archaeological sites on the property." This application pointed out that "[t]here may also be an opportunity for an interpretive trail discussing the archaeological resources of the Basin as well as the unique geologic formations in the area."

Two primary documents, one federal and the other regional, establish the framework for the preservation, protection, and interpretation of the cultural landscape on the Thornton Ranch Open Space property.

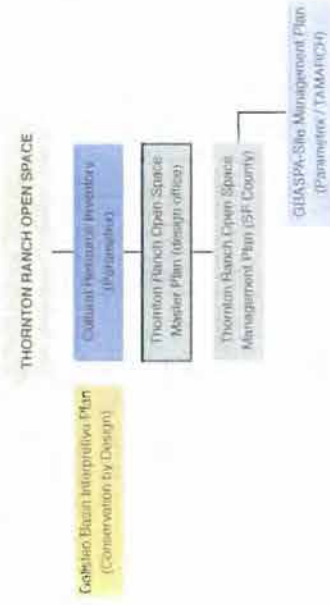
Santa Fe County Sustainable Growth Management Plan, 2015 (SGMP)

The Santa Fe County Sustainable Growth Management Plan sets forth policies to support and require the conservation of open spaces, parks, recreation areas, trails, scenic lands with vistas to meet the needs of County residents, support a healthy natural environment, and preserve the rural, agricultural and scenic character of the County.

As the largest of 35 open space properties owned by Santa Fe County, the Thornton Ranch Open Space accounts for 35% of open space lands managed by the County.

In the 2015 SGMP, the Thornton Ranch Open Space is listed as a high priority open space project for Santa Fe County that will include "development of interpretive programming and construction of low impact visitor facilities for managed public access (p. 119, SGMP)." Residents and visitors will be able to access "... an important new space for hiking, mountain biking, and horseback riding in a scenic and historic part of the County." An educational component will "...add to residents' and visitors' understanding of the prehistory, history, ecology, and geology of the Galisteo Basin (p. 120)."

Figure 1-2: Thornton Ranch Open Space - Plans



Santa Fe County recognizes the importance of this resource and the need to carefully determine an appropriate approach to conservation and access. For this reason, the careful documentation and planning of the Thornton Ranch Open Space property has been incremental and thorough.

Existing conditions of cultural, biological, and mineral resources have been documented for most of the area, with remaining studies slated for completion prior to plan implementation.

Prior Planning Efforts

Thornton Ranch Open Space Draft Management Plan Report (Design Workshop, 2005)

This report collected stakeholder and community input on potential site planning scenarios to plan for appropriate use and protection of the site.

Current Planning Efforts

Thornton Ranch Open Space Master Plan

This plan identifies the proposed open space program, physical improvements on the land, and outlines the process for implementation.

Management Plan (Santa Fe County)

The TROS Management Plan outlines the operations and maintenance needs and processes for the property.

GBASPA Listed Site - Management Plan (Parametrix / TAMARCH)

Santa Fe County is collaborating with BLM to develop a Management Plan for the GBASPA listed site within the Thornton Ranch Open Space area to support implementation of the Act.

Galisteo Basin Interpretive Plan

(Conservation by Design)

An interpretive plan for Galisteo Basin County Open Space properties provides an overview of the cultural, archaeological, and environmental significance of this area. It includes site-specific interpretive information for historic locations.

Existing Conditions Studies

Cultural Resources Inventory (Parametrix)

The update and completion of the cultural resource inventory for the entire project area. Ethnographic investigations are included as part of the background research.

GBASPA - Site Assessment Project (Office of Archaeological Studies / NM Department of Cultural Affairs, 2008)

Systematic assessment of 18 of the 24 archaeological sites listed in the federal legislation to standardize the quality of information and establish valid archaeological boundaries for the sites.

Thornton Ranch Open Space Biological Assessment (Robert Svinski, 2015)

Biological inventory of the project area, including plants and wildlife.

Thornton Ranch Open Space Mineral Assessment (R. T. Hicks Consultants, 2015)

Surface mineral assessment of the project area to determine locatable surface minerals.

Project Area

The Thornton Ranch Open Space property is located 15 miles southeast of Santa Fe, New Mexico, near the town of Galisteo. It is bounded on the east by County Road 42, on the south by the NMRX Railway, on the north by West Basin Ridge Road, and on the west by BLM lands.

The approx. 2,430-acre planning area referred to as the 'Thornton Ranch Open Space' (TROS) is owned by three separate public entities. As the largest open space land holding in Santa Fe County's possession, the property is comprised of 1,904 acres of County-owned land and an additional 527 acres of publicly-owned land. Santa Fe County is working cooperatively with these land owners to plan and manage this resource.

The Thornton Ranch Master Plan area is comprised of the following land holdings:

1,904 acres	Santa Fe County
207 acres	Bureau of Land Management
320 acres	State Land Office
2,431 acres	Total project area

Over a period of nine years (2000-2009), Santa Fe County strategically acquired property, secured lease holdings, and established MOAs to piece together and begin planning the open space area currently known as the Thornton Ranch Open Space (see *Figure 1-1 and Appendix C: Property Agreements for more details*). In 2016, during the process of planning and site investigations, two publicly owned parcels of land were recommended for inclusion in the planning area, leading to the current 2,431-acre project area.

Resources on this property range from ecological to cultural, historical and geological. Existing features on the property include archaeological remnants from the Archaic (1000 B.C.) period to present day and represent the changing cultural landscape in Galisteo Basin. Cultural resources within the property are significant to area tribes in the Rio Grande Valley and the Great Plains.

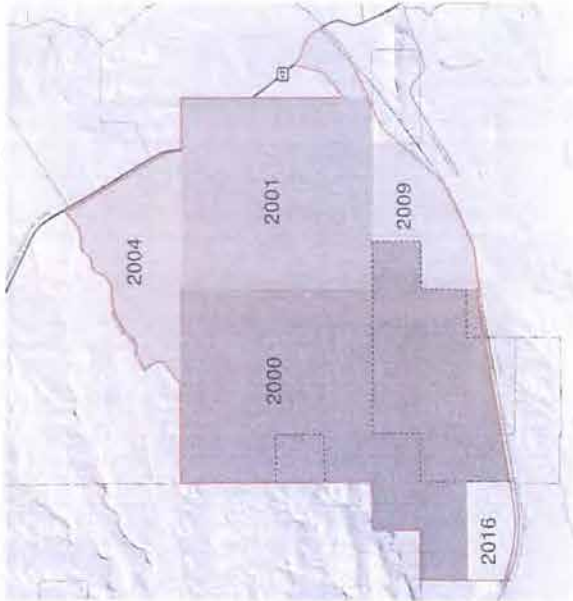
The site encompasses the historic town site of Kennedy, a railroad camp and staging ground for construction of the New Mexico Central Railroad and the still used New Mexico Railrunner Express Railway (NMRX). These two railways intersect along the site's southeastern edge, east of the Kennedy site.

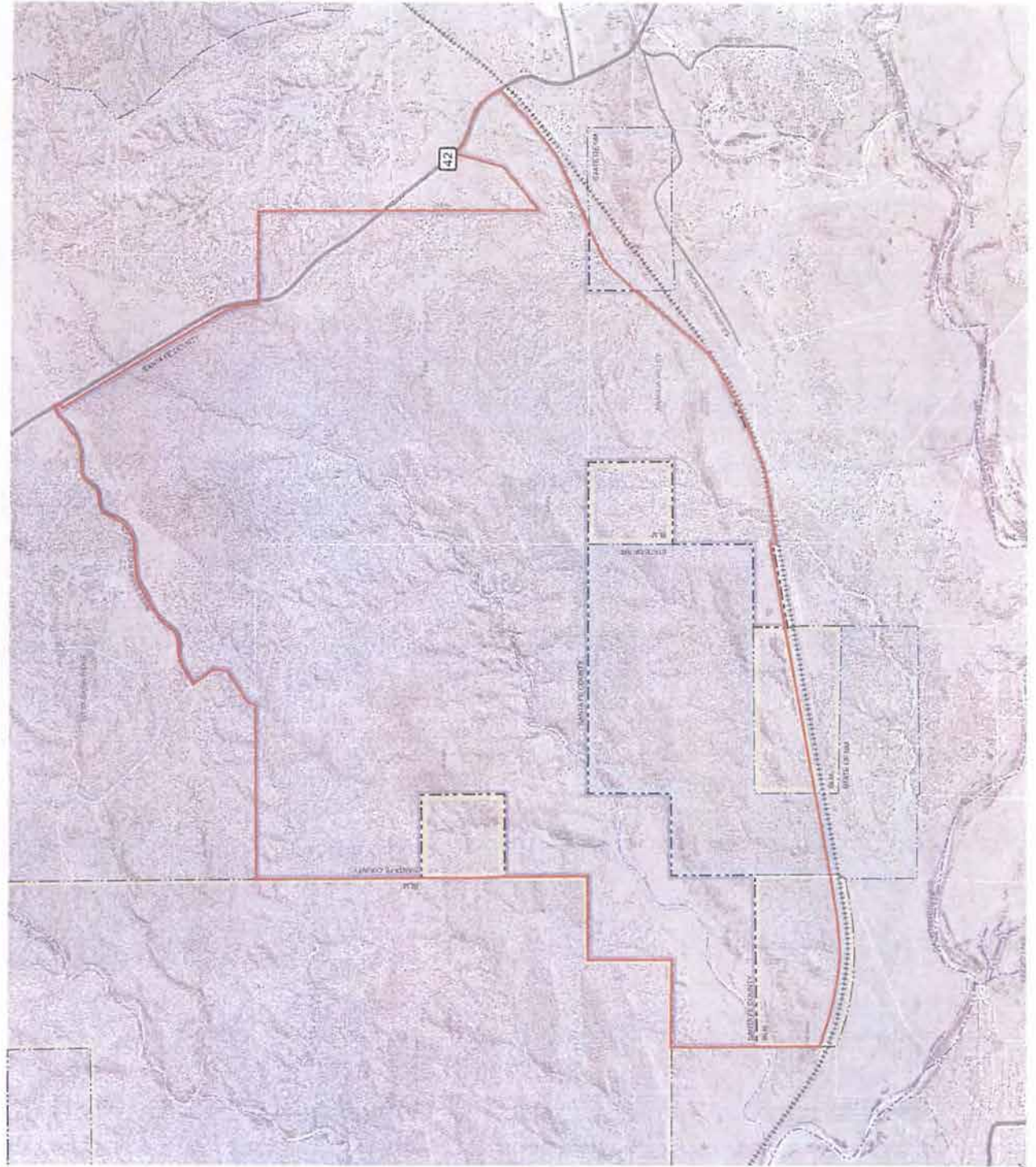
A drainageway traverses the site diagonally and connects to the Galisteo Creek, a 45 mile waterway that feeds into the Rio Grande near Kewa (Santo Domingo) Pueblo.

Image 1-1: Project Area looking northwest towards the Sangre de Cristo Mountains, the rail line along the south edge is visible



Figure 1-3: Project Area land acquisition history





- LEGEND**
- Master Plan Project Boundary
 - County Land Boundary
 - State Land Boundary
 - BLM Land Boundary
 - Commonweal Conservancy Boundary
 - Building Footprint
 - Road, Major
 - Road, Minor
 - Road, Dirt (Jeep Trail)
 - Easement
 - Parcels
 - Topography, 100-ft Contour
 - Topography, 20-ft Contour
 - Drainageway, Major Arroyo
 - Drainageway, Minor Arroyo
 - Railroad, Existing Tracks (active)
 - Railroad, Existing Grade (inactive)

Figure 1-4: Aerial Map of Thornton Ranch Open Space site

Master Planning Process

The Thornton Ranch Open Space Master Plan public process included an incremental and broad input process that paralleled simultaneous data collection efforts on the property. Taking cues from widespread public input for the Draft Thornton Ranch Open Space Management Plan Report (Design Workshop, 2005), with two public meetings and an open space questionnaire, the Master Plan reestablishes the public's desire for appropriate management of the site. The Master Plan public process focused on outlining and refining a recreational program for the site that balances recreation with preservation of cultural and ecological resources.

The Thornton Ranch Open Space Master Plan public process consisted of meetings with diverse interest groups, tribal representatives, agencies, neighboring property owners, neighborhood associations, and the public at large.

A range of electronic, paper, and visual media was used to facilitate attendance (e-mail notices, letters, phone calls). Meetings were held at the Galisteo Community Center close to the project site to allow for site visitation and encourage local attendance. Meetings were recorded and can be found in *Appendix A: Programming / Public Process*.

A significant component of the public process involved asking interest groups for feedback on the potential open space program, access desires, long term goals, trail elements and their arrangement on the site. This input directly impacted the direction of the master plan.

Interest Group Meetings

Informational meetings were conducted with key representatives from user groups affiliated with activities outlined in an initial program set by Santa Fe County. The goal was to acquire preliminary input on how each group might utilize the open space in order to anticipate a range of appropriate uses. Each interest group met with the planning team over the course of two days.

The following interest groups were represented at the meetings:

- Hikers / Trail Runners
- Mountain Bikers
- Equestrians
- Ecologists
- Educators
- Artists

A dominant theme that surfaced from these meetings was the importance of establishing a regional trail through the site that could connect to a larger open space trail system.

Image 1-2: Focus Group Meeting



Tribal Input Meetings

In recognition of the longstanding ties Native Americans have with the Galisteo Basin, a special emphasis was placed on tribal input during the planning process. Tribal representatives were invited to attend three informational meetings to discuss the master plan program, the management plan, and visit the site.

Over these three sessions, representatives from nine area tribes participated and provided valuable insights to help guide the plan. The purpose of the sessions was to acquire input on how Native American groups might use the site and how sensitive areas might be experienced by the public. Some of the main concerns voiced by attendees included:

- Managing public access to cultural sites
- Conferring with tribes to confirm trail alignments and program elements
- Generating policies that protect cultural sites
- Allowing tribal access and facility closures for ceremonial purposes
- Engaging tribes with direct ties to site
- Respecting tribal interests / cultural resources

Image 1-3: Tribal Input Meeting



Agencies

As partners, leaseholders, and neighbors to the property, the following agencies were consulted and included in the planning process:

- Bureau of Land Management (BLM)
- State Land Office (SLO)
- New Mexico NMDOT Rail Bureau
- Santa Fe County

Neighboring Property Owners / Associations

Neighbors of the property were invited to meet and provide insight during early planning stages. On May 18, 2016, the conceptual plan was presented to the Galisteo Community Association for feedback. Some of the issues voiced by attendees to these meetings included:

- Restricting trespassing onto adjacent private land
- Revealing the history and pre-history of the area through interpretive signage
- Generating policies that protect cultural sites

GBASPA - Working Group

A draft Master Plan was presented to the Working Group that included background site analysis and public input as well as the proposed program and physical improvements. Feedback from members of this group included:

- Involving the All Pueblo Council of Governors in the decision making process
- Staying away from culturally sensitive sites
- Organizing a "Friends of Thornton Ranch" group to help serve as stewards of the property
- Anticipating the range of potential visitation and its physical impacts to the GBASPA site on the property
- Recognizing the multiple ethnicities on the site and including tribal members in the process

Public Meeting

A public meeting was held on October 20, 2016, at the Galisteo Community Center to collect input on the draft master plan. 55 individuals attended the meeting and voiced some of the following concerns:

- Include equestrians on all trails, except in situations that compromise cultural resources
- Add equestrian trailer parking to primary trailhead parking area
- Provide narrower trail tread to lessen impacts to the site
- Respect tribal concerns and outline how tribal input has been addressed
- Educate trail users on proper trail etiquette to increase safety and awareness between different trail users

Image 1-4: Public Meeting



Public / Interest Group Involvement

Interest Group Meetings

- December 11 + 12, 2015*
- input on appropriate use
 - desired programming elements
 - potential conflicts
 - regional context

Tribal Input Meeting 1

- Tuesday, July 8, 2015*
- project introduction
 - tribal concerns
- Wednesday, July 9, 2015*
- field visit
 - discussion

Tribal Input Meeting 2

- Wednesday, November 4, 2015*
- project introduction
 - tribal concerns
 - overview of existing conditions analysis
- Thursday, November 5, 2015*
- proposed draft program
 - discussion
 - field visit

Tribal Input Meeting 3

- Thursday, March 10, 2016*
- project introduction
 - overview of management plan
 - overview of draft open space master plan

Galisteo Community Association

- Wednesday, May 18, 2016*
- project overview and history
 - public question + answer session

GBASPA - Working Group

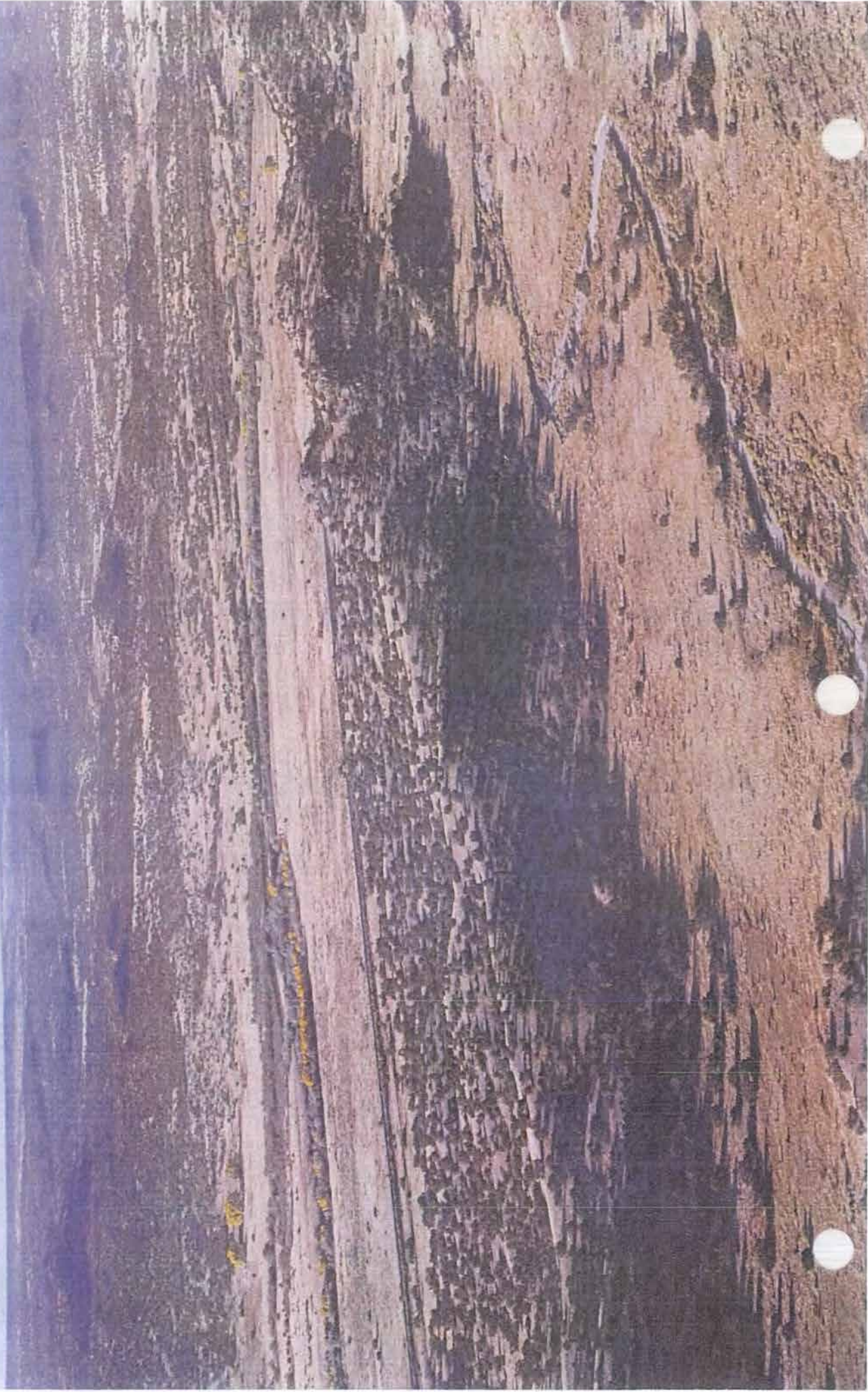
- Tuesday, June 7, 2016*
- open space master plan draft presentation
- Tuesday, July 12, 2016*
- open space master plan draft feedback

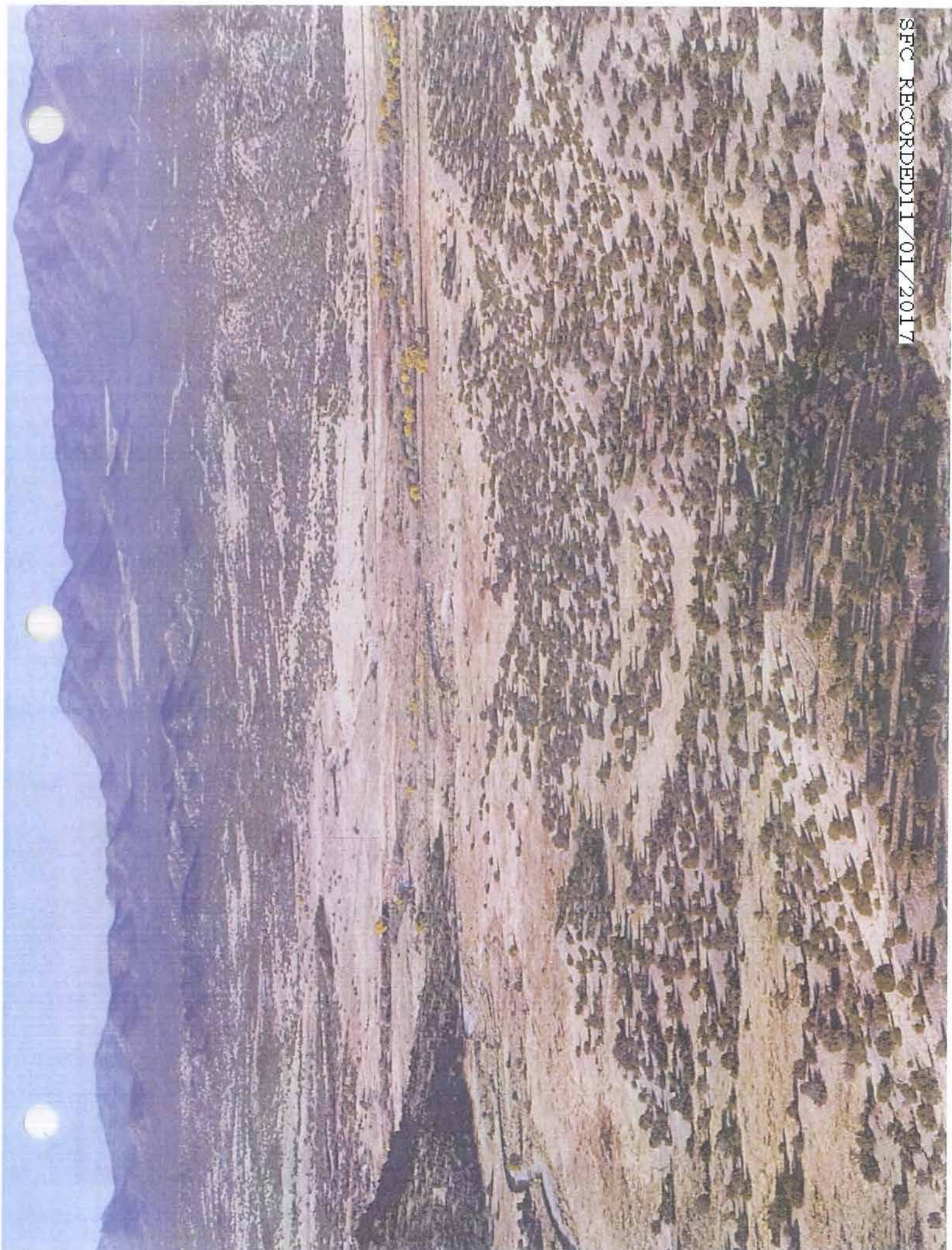
Public Meeting

- Thursday, October 20, 2016*
- open space master plan draft presentation

CHAPTER 2

Existing Conditions





History

PRE-HISTORY (PRE 1500'S)

The Thornton Ranch Open Space lies in a region rich in human history, in which occupation stretches back to 10,500 B.C. and spans the development and arrival of numerous peoples, cultures, and technologies. To date, more than 3,000 archaeological sites and 160 historic structures have been recorded in the Galisteo Basin, likely only a fraction of the cultural resources present in the area.

Large Classic Period (A.D. 1325-1600) ancestral Puebloan settlements and their associated ceremonial and subsistence landscapes (agricultural, resource procurement, processing sites) hold important archaeological information about the dynamic cultural history of the Galisteo Basin. Some of these sites are protected as part of 24 sites identified in the Galisteo Basin Archaeological Sites Protection Act of 2004.

An archaeological survey on the 2,430 acre Thornton Ranch Open Space area was conducted 2014-16. Areas not included in the survey are a few sections of BLM and NM State Trust land that were added later to the planning area. The survey recorded archaeological sites with varying levels of significance on the property.

Image 2-1: View of the Ortiz Mountains from Thornton Ranch



While no direct evidence exists of pre-historic settlement within the planning area, visible records of human activity on the site span from Archaic (5,500 B.C. to A.D. 200) to present. A high density of Coalition period (A.D. 1200-1325) features and a lesser number of Classic period (A.D. 1325-1600) have been documented across the site. Some of these sites are highly fragile. Ethnographic research indicates that many Native American tribes maintain traditional connections with this area or trace their ancestry to the basin.

The Galisteo Basin played a key role in the development of American archaeology beginning with Nels C. Nelson of the American Museum of Natural History in New York, who conducted early 20th century excavations at many of the Galisteo Basin's sites. A number of subsequent researchers have surveyed the area and contributed to our understanding of the greater Galisteo Basin's cultural dynamics and associated landscapes.

Image 2-2: Rock Art



SPANISH / MEXICAN (1500 -1880)

The beginning of series of arrivals of Spanish explorers and missionaries in New Mexico in the mid-1500s sent the region on a new trajectory, irrevocably altering the existence of native tribes in the Galisteo Basin. While exact accounts of explorations are not readily available, physical evidence of Spanish occupation exists in various forms. Small missions were established at various times at the established nearby pueblos in the basin known as San Lazaro, San Marcos, Galisteo, San Cristobal, and La Cieneguilla.

In the 1600s, tensions between secular rulers beholden to the Spanish kingdom and religious missionaries mounted, adversely impacting native communities forced to provide economic tribute and repress traditional ceremonial practices. Unrelenting demands coupled with a long period of drought in the 1660's and 1670's led the to the coordinated Pueblo Revolt of 1680. For a period of twelve years, Europeans were not to be found within present day New Mexico and Arizona.

Around 1800, large land grants of San Cristobal and Galisteo were established by the Spanish Crown, beginning centuries of ownership disputes. Raiding within the basin by Plains Indians made it a dangerous place.

For a more in-depth history of the Thornton Ranch Open Space site and the Galisteo Basin, see the TROS Cultural Resource Inventory (Parametrix, 2016), and the bibliography.

RANCHING (1700 -1880)

With the arrival of the Spanish, herding and ranching operations became a form of subsistence for growing populations in the area. Sheep served as the dominant livestock in the area until the late 1800's. In 1860 New Mexico was the largest sheep producing territory in the United States, providing mutton and also wool to various markets during the civil war.

Ranching operations fluctuated in response to homesteading, drought, and raiding by the southern Plains Indians. Homesteaders arriving in New Mexico beginning in 1866 as part of the Homestead Act of 1862 limited large ranching operations. Drought forced many homesteaders to leave their cultivated land, opening up contiguous lands for cattle ranching.

Lands granted by Spain, Mexico, and the Homestead Act increased settlement, cultivation, and use of the lands. In the absence of precise documentation, surveying, and oversight, many grants overlap and do not have clear boundaries. Land grants associated with the current Thornton Ranch Open Space parcel are unclear.

The Village of Galisteo was established along a branch of the Santa Fe Trail in the early 1800's.

Image 2-3: Ranch Era Homestead ruins



RAILROAD (1880 - PRESENT)

Like much of rail expansion throughout the west, the laying of tracks in New Mexico was a frenzy to see who could make the most opportune connections first. 1880 marked the beginning of a period with rapid expansion in New Mexico: track distance expanded from 8 miles in 1878 to 3,078 miles in 1915.

The Thornton Ranch site stood at the crossroads of two important lines: the Atchison, Topeka & Santa Fe line and the north/south NM Central line. Still in use today, the AT&SF line abutting the south property edge was completed in 1880 and connected ultimately to Los Angeles and Kansas City. The north/south NM Central line, known locally as the "Pinto Line", connected Santa Fe with Torrance (116 miles south). Only in operation for 26 years (1903-1929), evidence of the rail line is still highly visible in the Galisteo Basin landscape. The Kennedy station town site, its ruins still visible on the property, served as a way station during construction, and for travelers transferring between the two rail lines.

This history is full of multicultural efforts and is directly connected with ranching, facilitating the moving of herds of cattle, sheep, and horses.

(Encyclopedia of Western Railroad History, Donald B. Robertson)

Image 2-4: Active rail line with NM Central flyover berm



PRESENT

With the railroad came a dramatic increase in mining and settlement. Mining operations instigated the growth of many small towns, including current-day Madrid (coal) and Cerrillos (turquoise, lead, silver). Lamy became a town at the junction to Santa Fe. As these operations waned in the 20th century and the automobile became the dominant means of transportation, the populations of these towns diminished.

Nearby communities and isolated developments began to appear in the mid-1900's. The Eldorado subdivision, one of a group of subdivisions north of Lamy, was once part of a 28,614 acre cattle ranch that was developed into a 2,887-home community (2000 US Census).

As the 17,000-acre Thornton Ranch cattle operations ceased at the end of the 20th century, the lands were gradually sold. Local preservationists feared the fate of this ranch would follow others in the area and end up as a sprawling community. They made efforts to conserve the open space areas quintessential to the basin.

The Thornton Ranch Open Space property serves as a reminder of the vast open space and holds remnants of multiple eras of human occupation.

Image 2-5: Kennedy Well active windmill



Ecology

VEGETATION

The dominant vegetation patches are piñon and juniper shrub-tree cover with patches of grass undergrowth, alternated with open grassland meadows. North-facing slopes and outcrops that receive more concentrated precipitation also have herbaceous and woody shrub species not found on drier upland slopes. Arroyo bottoms support a limited quantity of riparian shrubs and trees where roots can take advantage of shallower groundwater. A small seep along the arroyo at the center of the site sustains enough moisture for a small community of willow and cottonwood trees.

The area may have lost a considerable number of piñon trees after 1996, shifting to a dominance of juniper trees, likely due to recent piñon die-off during bark beetle infestation and drought (1996-2002).

Noxious weeds and sparse Cheatgrass growth are not a major problem, but may warrant future mitigation. Siberian Elm trees are stunted and scattered near drainage areas and have not attained problematic densities. A few large-sized Russian Olive trees are established near the riparian woodland areas.

Image 2-6: Prairie Zinnia (*Zinnia grandiflora*)



WILDLIFE

Small mammals, reptiles and birds are evident on site and represent a typical sample of dry-woodland, rocky sloped ecosystems of the Galisteo Basin. Deer Mice, Kangaroo Rats, Wood Rats, Desert Cottontail and Black-tailed Jack Rabbits provide a prey base for predators such as snakes, coyotes and raptors. Birds of prey include the Red-tailed Hawk and American Kestrel and others depending on seasonal migration patterns.

Smaller bird species utilizing juniper and piñon habitat include: Spotted Towhees, Rock Wrens, Black-throated Sparrows and the Mourning Dove albeit most of the bird activity is located along the central drainage way. Riparian woodland habitat near the center of the site is too miniscule to support a wide diversity of species inherent to cottonwood-willow forests.

Larger mammals include Black Bear and Mule Deer which frequent the two water tanks. The site is also a migratory route for cougar. The site is not viable habitat for pronghorn and no prairie dogs have been found on the open space property.

Image 2-7: Rattlesnake



In July 2015, RCS Southwest inventoried plant and animal species found on site between May 1st and July 26th. Their report included a list of plant and animals species observed and detected on site as well as a classification of distinct biotic communities inherent to the area. Their findings suggest that:

- Much of the wildlife habitat in the area is dry and homogenous pinon-juniper woodland that does not support an especially diverse vertebrate-animal fauna.
- The area of greatest diversity is located in the central drainage way across the middle of the site.
- There is very little nesting activity of perching birds. Gray Vireo was not detected on the property.
- Small rock outcrops may provide roosting for migratory bats, but none were observed on site. The threatened Spotted Bat is unlikely to breed in the open space area.
- Limited development of trails and roads for management and public access will have an insignificant impact on local biota.

Image 2-8: Arroyo with adjacent grassland meadow



SOILS

Soils on the Thornton Open Space land are primarily coarse sandy loam on summits, shoulders, and back slopes of low hills. This type of soil is thin, well drained and has a very low water capacity (Soil Survey of Santa Fe County Area). It has a moderate to severe hazard of erosion and requires over-excavation and importation of engineered soils for construction.

Soil deposits found along valley floors are typically fine sandy loam, which is more fertile and has a deeper soil horizon and water capacity. Soil types found on the property are moderately to severely susceptible to erosion, typically consisting of deposited sandy, gravely, and cobbly loam. These soils exhibit a distinct gully erosion tendency when disturbed, which can be seen along dirt roads located on site. Steeply eroded gullies as high as 20 ft. highlight the need to deliberately locate program elements in order to mitigate erosion and protect loose soils from foot traffic.

Image 2-9: Highly erodible soils



GEOLOGY

Geology, combined with the presence of water figure large in the human interaction with the Galisteo Basin. Beginning as a large inland sea during the Cretaceous period, the basin was pushed up by the Ferilon plate from the west. As the Sangre de Cristo Mountains were formed to the west, rivers left deposits within the basin, forming the Galisteo Formation layer. Volcanic activity to the south and west shaped the Ortiz Mountains and Cerrillos Hills, along with long dikes radiating out from them, forming Cerro Pelon and the Creston. During the ice age (2 mil years ago) the landscape became an erosive basin.

Mining of minerals and metals found in the surrounding hills and mountains has been an attraction for centuries and has shaped the landscape and industry of the basin. Turquoise found in the Cerrillos Hills was collected by Native Americans for centuries. Silver, lead, coal, and gold were mined in the Cerrillos Hills and Ortiz Mountains.

More recently, exploration for oil and gas in the basin has threatened the natural and historic cultural landscape.

Image 2-10: Andecite rock formation with lichen



CLIMATE

Climate has directly impacted settlement patterns, population counts, and the livelihood of people in the Galisteo Basin. With only intermittent streams in the basin and few springs, the presence or absence of rainfall has resulted in a shifting landscape.

The climate of the Galisteo Basin is marked by little rainfall, large diurnal temperature swings, and a high number of days with clear skies. Water resources are scarce and in summer months during the day, there is little shade.

Some of the average climate statistics for the Galisteo Basin and the Thornton Ranch property in particular are as follows:

- elevation:	5,870 - 6,338 MSL
- latitude:	35.4° North
- rainfall:	12-14 inches / year
- snowfall:	30 days/accumulation
- sunshine days:	300 / year
- high temperature:	86.2°F (July)
- low temperature:	17°F (January)
- first frost:	October 1
- last frost:	May 15

Image 2-11: Prickly pear cactus with fruit



Site Context

A vast and sparsely-populated setting with long vistas and dramatic open skies, the Galisteo Basin is being slowly transformed by expanding adjacent communities, incremental development, and threats of oil and gas extraction. In reaction to this, multiple parallel initiatives have heralded a conservation approach to future development. Efforts to preserve this cultural landscape and open space area is evident in recently adopted zoning overlays and conservation development initiatives. Preservation-minded private land owners have begun to establish conservation easements on portions of their lands. Federal and county land holdings limit development and allow public access for recreation. While still patchy and incomplete, this emphasis has helped piece together and preserve some significant areas of the quintessential Galisteo Basin landscape.

Within this setting, the Thornton Ranch Open Space property serves as a key land holding to set the stage for balancing open space preservation with recreational development.

NEIGHBORHOOD CONTEXT

The Thornton Ranch Open Space is located in the sparsely populated Galisteo Basin 25 miles south of Santa Fe (pop. 83,875, 2016). The nearest town is the historic village of Galisteo (pop. 260, 2016) 3 miles to the east. Its proximity to Santa Fe, the Eldorado area community (15 miles, population 6,130), Lamy (11 miles, population 218) and Cerrillos to the west (10 miles, population 321) makes it primarily a drive-to destination for most residents and visitors of Santa Fe County (2012 US Census). The low population and scarcely distributed housing contributes to the rural, open feel of the land. The site is centrally located within the greater Galisteo Basin, just north of the Galisteo Creek at the junction of County Road 42 and the NMRX (New Mexico Railrunner Express) railway.

The Thornton Ranch Open Space borders both private and public land. These include the Galisteo Basin Preserve to the northeast and a large parcel of BLM property to the west. Nearby County open space includes Mt. Chalchihuitl to the west (13 miles, pending acquisition) and Lamy Open Space in the town of Lamy. Cerrillos Hills State Park, near the town of Cerrillos, is owned by Santa Fe County and managed by the state.

Existing Trails

Existing trails within the Galisteo Basin consist of independent recreational trail networks in the Galisteo Basin Preserve, Eldorado subdivision, and Cerrillos Hills State Park, as well as the Santa Fe Rail Trail, a 17-mile multi-use trail extending from downtown Santa Fe to Lamy. While no existing trails currently link to the Thornton Ranch Open Space, a number of plans illustrate future trail connections to this area.

Proposed Trails

Area communities have expressed interest in expanded recreation trail networks as well as longer regional trails and improved connectivity between trail systems to address current and future needs. Currently boasting a total of 25 miles of recreational trails, the Galisteo Basin Preserve has plans to build a total of 50 miles of hiker, biker, and equestrian trails. Efforts are underway to secure a trail connection to the eastern corner of the TROS in a easement paralleling the NMRX active railway.

Santa Fe County long range plans illustrate off-road trail connections between the villages of Lamy, Galisteo, and Cerrillos and the Eldorado community. These plans identify a north/south regional trail along the abandoned New Mexico Central railway and an east/west regional trail parallel to but outside the ROW of the active NMRX railway. Crossing both private and public land holdings, these regional trails are long-term planning efforts that will require ROW acquisition prior to development.



LAND OWNERSHIP

The 2,430-acre Thornton Ranch Open Space site encompasses land owned by three separate entities: Santa Fe County, the Bureau of Land Management, and the NM State Land Office. The site is being planned and managed by Santa Fe County, in cooperation with the other land holders, as a single site.

Santa Fe County

Santa Fe County owns 1,904 acres within the Thornton Ranch Open Space, its largest and most significant open space land holding. Santa Fe County has taken the lead on preparing a master plan and management plan for the Thornton Ranch Open Space.

NM State Land Office

Santa Fe County holds a lease for a 320-acre parcel of New Mexico State Trust Land that lies centrally within the Thornton Ranch Open Space planning area. In 2017, the lease agreement with the NM State Land Office was transitioned from a grazing lease to a business lease (see Appendix C: BL-2351) to allow for recreational use of the land by the public and to facilitate the protection of its natural and cultural resources. The proceeds from this lease benefit the New Mexico Public Schools.

The lease of an additional approximate 7-acre tract of state land along the rail line is being considered to provide a contiguous management area bounded on the south by the rail line.

Bureau of Land Management

The BLM owns a 4,811 acre recreation area to the west of the Thornton Ranch Open Space designated as the Galisteo Basin - Cerrillos Hills / Burnt Corn SRMA (Special Recreation Management Unit). A portion of this area (207 acres) lies in four separate parcels within the Thornton Ranch Open Space planning boundary and is intended to be jointly managed with Santa Fe County (pending MOU).

A MOA (Memorandum of Agreement) between the BLM and SF County exists to “work jointly on planning, preservation, protection, resource management, and other matters, including preparation of a site assessment, site management plan, and a general management plan.” (see Appendix C: MOA No. 2016-0059-PW/BT).

The management objective of the Cerrillos Hills / Burnt Corn SRMA is “to provide access to trails and open space, opportunities for routine exercise and escape, and learning local history and prehistory in this front country and middle country setting” (BLM Taos Resource Management Plan, May 2012, p.74). This area is closed to motorized access, shooting and is also unavailable for livestock grazing.

Figure 2-2: BLM SRMA Land Area



Adjacent Land Ownership

Land holdings adjacent to the Thornton Ranch Open Space site include a mix of public and private lands. BLM, State Land Office, and NMRX parcels abut most of the western and southern edges. Land along the northern and eastern boundary is privately held. With the exception of one existing residence north of West Basin Ridge Road, there are no other residences on private properties adjacent to the site.

Railway

The NMRX (New Mexico Railrunner Express) railway forms a distinct southern boundary to the Thornton Ranch Open Space planning area. The New Mexico Department of Transportation (NMDOT) owns the track, infrastructure, and fenced right of way along this line. BNSF railway has trackage rights for freight trains and Amtrak has trackage rights for the Southwest Chief Train along this line.

Private Inholding

One privately held inholding off of County Road 42 is a 30.6-acre residential parcel with a dedicated building site and remaining land held in a conservation easement. With the exception of a fence and access gate along its border with CR 42, no other improvements have been made on this parcel.

LEGEND

- Master Plan Project Boundary
- County Land Boundary
- State Land Boundary
- BLM Land Boundary
- Commonweal Conservancy Boundary
- Building Footprint
- Road, Major
- Road, Minor
- Road, Dirt (Jeep Trail)
- Easement
- Parcels
- Topography, 100-ft Contour
- Topography, 20-ft Contour
- Drainageway, Major Arroyo
- Drainageway, Minor Arroyo
- Railroad, Existing Tracks (active)
- Railroad, Existing Grade (inactive)
- Fence
- Railroad, Powerline
- Scenic Road (County Designated)
- Bike Lane, On-Road (Proposed)
- Trail *, Santa Fe County Route (Proposed)
- Trail *, Multi-Purpose Path in ROW (Proposed)
- Well
- Windmill
- Gate
- 100-yr Flood Zone, Zone A Floodway
- Slope, 0% - 5%
- Slope, 5.1% - 10%
- Slope, 10.1% - 15%
- Slope, 15.1% - 20%
- Slope, 20.1% - 25%
- Slope, 25.1% - 30%
- Slope, < 30.1%

** Proposed Route, prior to development, proper ROW acquisition will be obtained*

Source Data - see appendix

- Proposed Route, prior to development, proper ROW acquisition will be obtained

Source Data - see appendix



LAND USE AND ZONING

In an effort to preserve the character of the Galisteo Basin, zoning and regulatory overlays dictate development rules and density.

Santa Fe County

The Thornton Ranch Open Space site is designated as Santa Fe County Open Space as part of the official 2015 Sustainable Land Development Code map series. Zoning for county-owned property is primarily "Agricultural / Ranch" (A/R) with a small portion to the east zoned 'Rural' (RUR). Improvements on Santa Fe County land are subject to the Santa Fe County Sustainable Land Development Code (SLDC). BLM and SLO parcels are not under the jurisdiction of County zoning.

The San Marcos Community Planning District overlays the Thornton Ranch Open Space minimally on its western edge.

By ordinance, Santa Fe County prohibits the use of projectiles of all forms and motorized vehicles on open space properties.

Zoning Key

FED/STATE	Federal or State Land	AGR/RANCH	1 dwelling unit / 160 AC
RUI	1 dwelling unit / 40 AC	RUR-R1	1 dwelling unit / 10 AC

Figure 2-4: Santa Fe County Zoning Map



THORNTON RANCH OPEN SPACE MASTER PLAN

State

New Mexico state lands are subject to the conditions of the lease agreement (see Land Ownership, p. 16). All improvements on these lands must follow state designated regulations.

Federal

BLM-owned parcels are subject to the regulations set forth in the BLM SRMA for BLM lands and the conditions of the MOU with Santa Fe County (see Land Ownership, p. 16).

An additional federal overlay on the TROS land includes those areas designated in the Galisteo Basin Archaeological Sites Protection Act.

Galisteo Basin Archaeological Sites Protection Act
The Galisteo Basin Archaeological Sites Protection Act (GBASPA) is a federally mandated act "to provide for the preservation, protection, and interpretation of the nationally significant archaeological resources in the Galisteo Basin in New Mexico" (Public Law 108-208, HR 506, adopted March 19, 2004). The Act requires the developed management plans for the 24 protected sites listed in the act in consultation with the Governor, Land Commissioner, affected Native American pueblos, and other interested parties.

The General Management Plan - GBASPA (2012, BLM, Taos Field Office) sets the broader management framework for the preservation and protection of the sites identified in the Act. Santa Fe County, in cooperation with BLM is developing a site-specific management plan for the GBASPA site within the planning area in compliance with the Act. The management of the site as a whole will be coordinated with this management plan.

Overlays and Encumbrances

In addition to use and management guidelines established by the BLM and SLO lease agreements for those parcels, other overlays and encumbrances exist within the Thornton Ranch Open Space site. These include easements that allow for access / utilities and dictate conservation encumbrances as well as regulations that prescribe use and management requirements and outline zoning regulations.

Conservation Easement

As part of the 2004 purchase of the 263.63-acre Tract 10 parcel on the north corner of the site, a conservation easement encumbers a 186-acre portion of the tract. The easement permits the development of trails, a parking area, and a visitor center with the goal of minimizing their impact on the watershed of the West Basin Preserve parcels. Originally held by Commonweal, a New Mexico non-profit corporation, the easement was transferred to Santa Fe County.

Access / Utility Easements

There are a number of access and utility easements on the edges and internal to the site (see Appendix B: Site Analysis Maps).

- County Road 42: 60' public access and utility easement.
- West Basin Ridge Road: 50 ft. non-exclusive private access and public utility easement.
- CR 42 heading west into the site (2 locations): 50 ft. access / underground utility easement.
- Southeast corner (Section 33): 30 ft. ingress and egress easements along N/S and E/W section lines
- Section 28: 20 ft. north/south utility easement

LAND FEATURES

Adjacent Land Planning Context

Traditional settlement in the Galisteo Basin is marked by the small village housing clusters of Galisteo, Lamy, Madrid, and Cerrillos. Modern day rural settlement is gradually spreading at very low densities across this landscape leaving little open space for public access. The exception to this is the Galisteo Basin Preserve.

Galisteo Basin Preserve Master Plan

The Galisteo Basin Preserve is a 13,522-acre conservation-based master-planned community adjacent to TROS on the east. As the original 17,000-acre Thornton Ranch was being sold, efforts were made by the Commonweal Conservancy, a nonprofit conservation-based community development organization, to prevent encroaching development and provide an emergent "regenerative development" that concentrates density in select areas and preserves large sections of land with conservation easements. At full buildout, the community is intended to have 50 miles of trails, 275 homes, up to 71,000 sf of commercial / civic, and 13,000 acres of preserved open space.

Figure 2-5: Galisteo Basin Preserve - context map (credit: Galisteo Basin Preserve)



Topography

The site is marked by gentle sweeps of ridge lines and valleys that traverse the site from east to west. Elevations range from 5,870 MSL (mean sea level) at the base of the primary drainageway on the western boundary to a high of 6,338 MSL. The most prominent land forms are a pair of conical volcanic plugs rising ca. 400 ft. above the adjacent valley floor, the summit of the one to the west slightly higher than the other to the east. Parallel with the railway, an intermittent basaltic dike extends for miles further east and is locally referred to as the northern "Creston", or "Hogback".

A site analysis map (see Figure 2-3) illustrates slope classifications in 5% increments. Darker colors reveal steeper slopes that are more prone to erosion. Gently sloping terrain exists along much of the northern, eastern, and southern areas of the site with steep and difficult terrain occurring at volcanic outcroppings and along the major central drainageway.

Image 2-12: Thornton Ranch Open Space topography



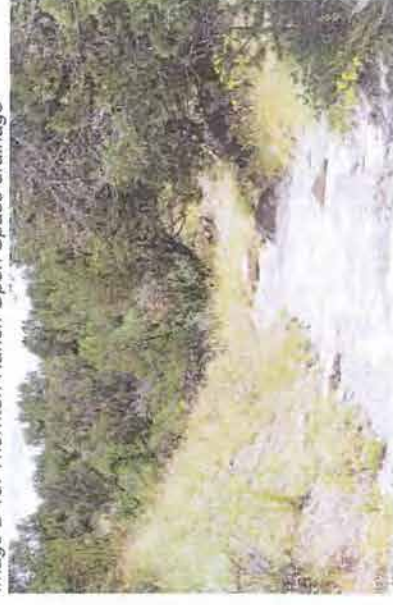
Drainage

An unnamed arroyo running northeast to southwest serves as a distinct feature and the primary drainageway for the property. It begins as a gentle drainageway that gradually gives way to a deep canyon until it opens up to a wide grassy valley. Numerous smaller drainageways and tributaries flow into this central arroyo. The lower 1,000 feet of this arroyo on SF County property is mapped as a FEMA flood zone.

Stormwater falling on the southern section of the property drains south toward the rail berm and exits the site through a series of culverts that range in size from 2 ft. diameter to (2) 10 ft. x 7 ft. wide concrete culverts. A total of 14 culverts exist along the rail berm south of the property.

All arroyos and drainageways are intermittent streams that lead to the Galisteo Creek, the basin's primary waterway, located just west of the property which continues to its confluence with the Rio Grande near Kewa Pueblo, 22 miles downstream. The Galisteo Creek, a ca. 54-mile waterway, drains the 730-square mile (467,000-acre) Galisteo basin land area.

Image 2-13: Thornton Ranch Open Space drainage



CIRCULATION / ACCESS

Currently, public access to the site is allowed only by limited guided tours conducted by Santa Fe County staff. Periodic access is granted to members of Site Watch, a volunteer organization that monitors archaeological sites. Unauthorized access to the site has been curbed since Santa Fe County assumed ownership / management of the property and implemented perimeter security and access control measures. However, there is still evidence of unauthorized access to the property from the south in locations where large drainage culverts and trestles along the railroad tracks intersect with major drainageways.

Roads

Due to the site's relative remoteness, vehicular roadways currently serve as the primary means of access to the property.

Access Roads

County Road 42 (CR 42) along the site's eastern edge is designated as a "Major Collector - Rural" road and serves as the main access to the site. Paved in July 2010, the two lane CR 42 connects to major regional roadways and serves as the Galisteo Basin's primary east-west route between Cerrillos, Galisteo and Lamy. West Basin Ridge Road, a gated private unpaved road, runs along a portion of the site's northern property boundary and provides access to private residential lots north of the site.

Internal Roads

A network of unpaved utilitarian ranch roads traverse the site providing rugged vehicular access to the site's interior. They were constructed for ranching purposes to access livestock, structures, windmills / water tanks. Sections of these road alignments were not designed or constructed sustainably, have not been maintained, and are causing soil degradation and point source erosion.

Trails

While no regional trails currently exist that serve the Thornton Ranch Open Space property, Santa Fe County SLDC identifies a N/S regional trail corridor along the NM Central railway that enters the east corner of the site and an E/W regional trail corridor running parallel with the NMRX ROW. The Galisteo Community Plan also illustrates a multi-use trail along CR 42 that would connect the town of Galisteo with the Thornton Ranch Open Space property.

Recreational Trails

There are no recreational trails on site. Santa Fe County leads periodic tours of culturally significant areas along unimproved routes.

Bike Routes

As a Priority 3 project, the 2015 Santa Fe County SLDC identifies adding on-road bike lanes on CR 42. It is envisioned that this improvement would be accomplished as a retrofit through widening the roadway. This route along CR 42 currently serves as the official route for the annual Santa Fe Century bike race (half-century route).

Public Transit

No public transit stops exist along or in close proximity to the site, but regional connections are available.

Bus

Since September 2011, the North Central Regional Transit District (NCRTD) operates a commuter bus route serving the communities of Edgewood, Moriarty in Torrance County, Stanley, and Galisteo with stops in the City of Santa Fe. The 290 Edgewood NCRTD bus service to Galisteo (ca. 5 miles southeast of site) runs Monday through Friday with a north-bound morning run into Santa Fe and an evening south-bound run stopping in Galisteo before continuing to communities in southern Santa Fe County.

Train

Amtrak operates the Southwest Chief, a high speed passenger train, on the NMRX railway that runs along the southern border of the property. Trains run daily between Los Angeles, CA and Chicago, IL with stops in Albuquerque and Lamy (ca. 10 miles northeast of the site). Trains pass the site twice a day (northbound at approx. 1:17 p.m., southbound at approx. 2:24 p.m.).

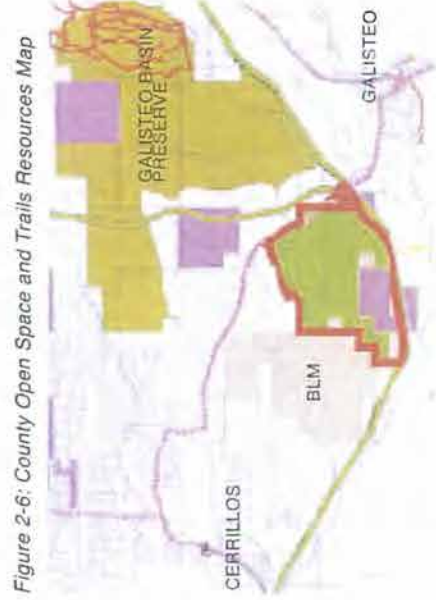


Figure 2-6: County Open Space and Trails Resources Map



Figure 2-7: Existing Access Control Diagram

Fencing

Fences and gates along the property perimeter identify property boundaries and help control unwarranted access to the site.

Perimeter Fencing

The site is fenced with a 5-strand barbed fence along County Road 42 and is marked periodically with "No Trespassing" signs. Along the entire southern property edge, the site is bounded by an old barbed wire fence located approximately on the edge of the NMRX railway right of way (ROW), parallel with the tracks. This fence is well maintained by MRCOG on behalf of NMDOT to restrict public access within the high-speed railway ROW.

Shared borders with BLM land have some sections of old barbed-wire fence intact, but not along the entire length. Some of these existing fence sections are dilapidated and provide access into the site from the west.

Gates

Two locked ranch gates along CR 42 provide access to the site's interior and are controlled by Santa Fe County. The southern-most gate provides access to the railroad easement. Along the private gated West Basin Ridge Road, a cable barrier with a combination lock serves as an access point from the north. A locked ranch gate along the site's western boundary provides access to the BLM inholding from BLM lands to the west. No gates exist along the NMRX railway ROW.

UTILITIES

Due to the rural location of the Thornton Ranch Open Space, typical urban utility infrastructure is not available, nor is service planned in the near future. Area residences rely on localized utilities.

Electric / Gas / Telephone

Electrical, gas, and telephone service is not present on the Thornton Ranch Open Space site or in its vicinity. At higher points of elevation cellular service is available inconsistently depending on the carrier.

Water

Municipal water line connections are not present in the vicinity of the Thornton Ranch Open Space. However, the property has rights to both domestic water and livestock water.

Santa Fe County is eligible for 3 acre/ft. of water with a Section 72-12-1 NM State Water Permit on the Tract 10 land situated in the north portion of the property. Water could be used for irrigation, domestic, and limited institutional uses. These water rights have not been claimed to date.

Two wells exist on the property that are associated with previous ranching efforts and have 72-12-1 Livestock Watering water rights. Each well consists of a metal windmill pumping water into a nearby stock tank with an overflow pond downhill.

- Kennedy Well - RG 58669 (east side well)
- Canyon Well - RG 58678 (west side well)

The stock tanks and ponds attract wildlife such as birds, coyote, antelope, and deer, which have been observed via a County wildlife camera mounted on the east side windmill.

Wastewater / Solid Waste

There is no sanitary sewer infrastructure located on or near the site. All area homes have septic or other localized systems.

The land owner is responsible for disposing of solid waste. The San Marcos Waste Convenience Station run by Santa Fe County is located 1.5 miles north of the site along CR 42. This station accepts payment for waste and is free for recyclables.

SERVICES

Fire / Emergency Response

Fire and emergency response service for the Thornton Ranch Open Space property is provided by the Galisteo Volunteer Fire District located 4.5 miles southeast along CR 42 in Galisteo. This station houses 4 response vehicles with the support of 16 members (11 with medical training). The district assists and receives aid from other local, state, and national agencies.

The nearest hospital, Saint Vincent's Hospital, is located approx. 25 miles north in Santa Fe.

Police / Sheriff

Public safety and law enforcement for the Galisteo area is conducted by Santa Fe County Sheriff officers.

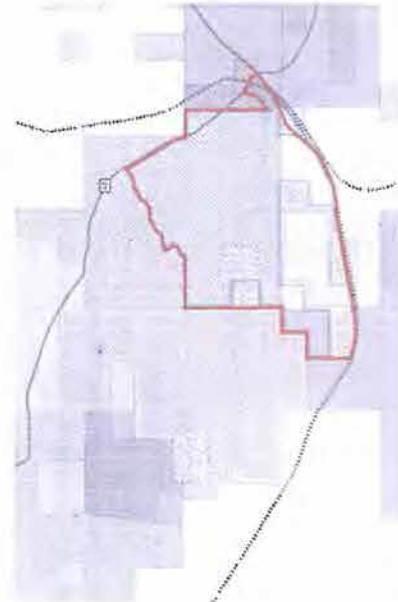
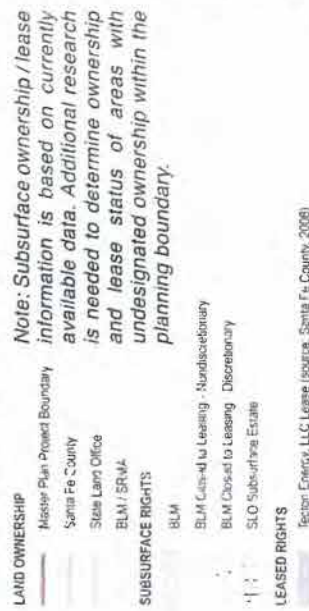
Schools

The Thornton Ranch Open Space site lies within the Santa Fe Public Schools district and is serviced by El Dorado Community School for grades K-8 (approx. 12 miles away) and the Turquoise Trail Charter School for pre K-6 (approx. 15 miles away). Santa Fe High School is located 23 miles north of the site for grades 9-12.

NATURAL RESOURCES

The Galisteo Basin has historically been a location rich in natural resources, whether for livestock grazing or mining. Regionally there have been a variety of mining operations, including for turquoise, gold, silver, lead, zinc, uranium, coal and iron ore. No mining or mineral extraction operations have occurred on the Thornton Ranch Open Space site. Of recent concern, however, is oil and gas exploration in the area which has raised awareness by local inhabitants about the protection of natural and cultural resources from potential petroleum hydrocarbon extraction.

Figure 2-8: Subsurface Mineral Rights



THORNTON RANCH OPEN SPACE MASTER PLAN

Mineral Rights

Surface rights within the Thornton Ranch Open Space planning area are controlled by the land owner. Subsurface mineral rights within the Thornton Ranch Open Space property are dominantly controlled by the federal government (see Figure 2-8). Within the subsurface estate administered by Federal agencies, mineral rights govern the rights to leasable, salable, and locatable minerals (see definitions this page).

Within the site boundaries protected by the GBASPA, all mineral extraction (leaseable, salable, and locatable) is prohibited (Taos RMP, BLM 2012). On BLM Burnt Corn SRMA lands (allotments 917 + 926) only leasable mineral extraction is prohibited. On State Trust lands, the state owns the mineral rights and administers leases for mineral extraction. Santa Fe County does not own subsurface rights, but controls surface access. According to Ordinance No. 2001-1 (Rules and Regulations for County Parks, Trails, and Open Space Areas), the unauthorized removal of any natural or man-made object from open space areas is prohibited.

Subsurface mineral right ownership for ca. 350 acres within the TROS planning area is unknown (not controlled by Federal or State agencies) and should be researched. County data (2008, Santa Fe County) indicates that 126 acres of subsurface mineral rights on the property within TROS are leased to Tecton Energy LLC.

Leasable minerals include oil and gas, oil shale, geothermal resources, coal, among others.

Salable minerals are common varieties of minerals and building materials such as sand, stone, gravel, pumice, clay, rock, and petrified wood.

Locatable minerals are typically mined and include gold, silver, copper, gemstones, among other minerals.

Mineral Assessment

In order to identify the potential for mineral extraction on the TROS, a locatable mineral assessment was conducted on the property for Santa Fe County in 2015. This mineral assessment concluded that *"the probability of extraction or removal of minerals by any surface mining method or drilling method...is so remote as to be negligible"* (RT Hicks Consultants, 2015). A liquid or gaseous petroleum hydrocarbon evaluation was not conducted for this property.

While mining for metals and minerals exists in areas 8-12 miles away, similar subsurface layers with these resources either do not exist below this site or are too deep for mining. The mineral favorability rating, or potential for a favorable geologic environment for mineral occurrence, as documented by RGIS.com of TROS is low.

While no salable mineral assessment was conducted for TROS, geologic maps indicate the presence of several varieties of salable minerals within the site boundary. Extraction of salable minerals is regulated by the SLDC (Section 10.19 and Chapter 11.10).

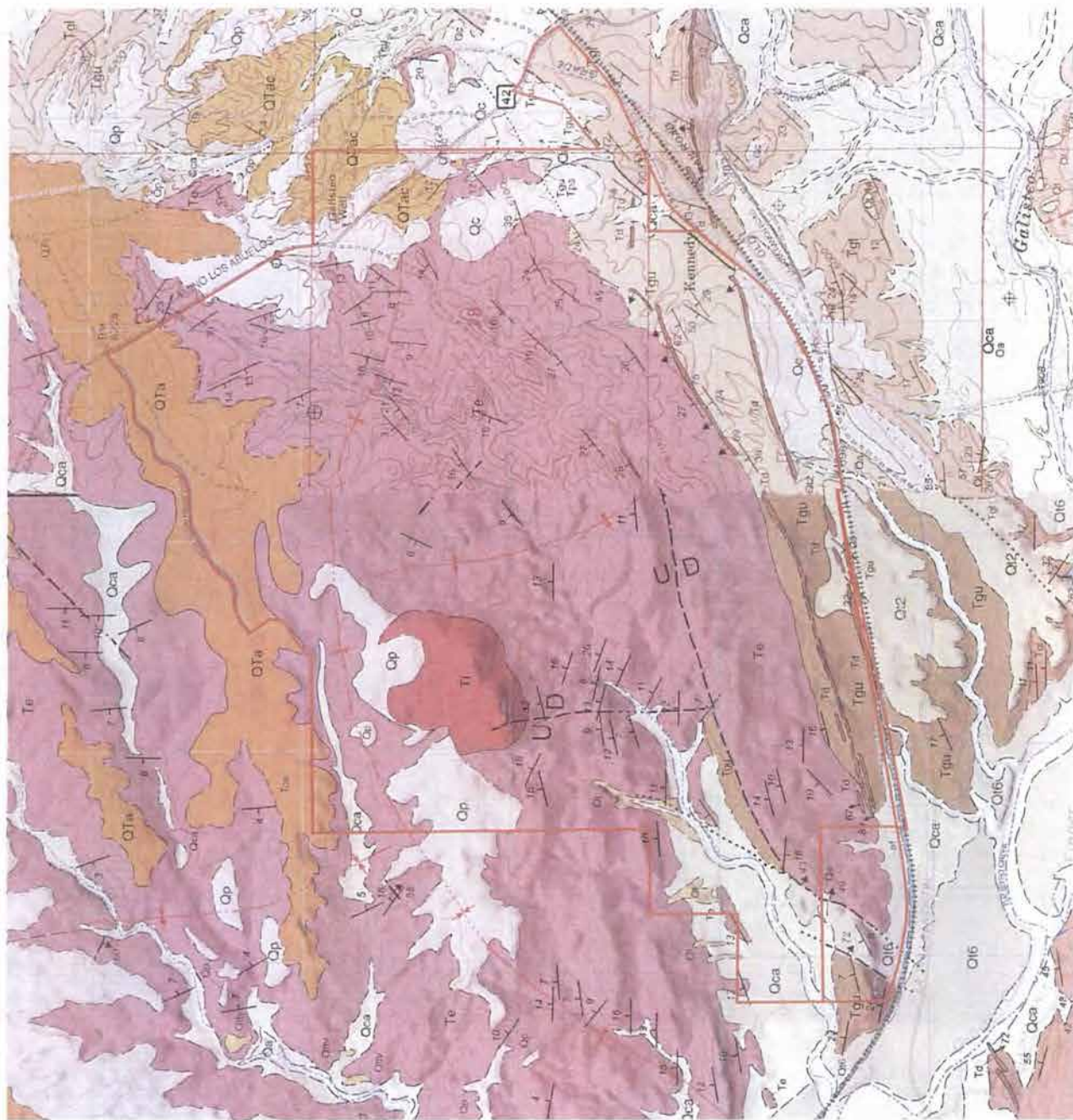
Grazing and Rangeland

The Taos Recreational Management Plan makes the BLM Burnt Corn SRMA lands and GBASPA sites unavailable to grazing (Taos RMP, BLM 2012). Santa Fe County lands within the Thornton Ranch Open Space site are also closed to grazing. With the new business lease arrangement between Santa Fe County on State Trust lands executed in 2017, grazing is not a permitted use on the SLO parcel.

Figure 2-9: Geological Map



Source Data - see appendix



Attributes

24

VIEWS

The Thornton Ranch Open Space site's central location within the Galisteo Basin and within the larger array of adjacent mountains, combined with its series of elevated landforms, afford spectacular 360° views across the basin floor to the surrounding mountain ranges. From this vantage point, the site's position within the cultural and natural landscape becomes clear.

The highest point on the Thornton Ranch Open Space land is in the northwest part of the site at 6,338 MSL and the lowest, at 5,870 MSL. Viewshed corridors should be kept intact to preserve this area's scenic identity, and support the area's qualities in attracting tourism.

Image 2-14: View northeast to the Sangre de Cristo Mountains



Image 2-15: View west to the Ortiz Mountains



Image 2-16: View south to Cerro Pelon

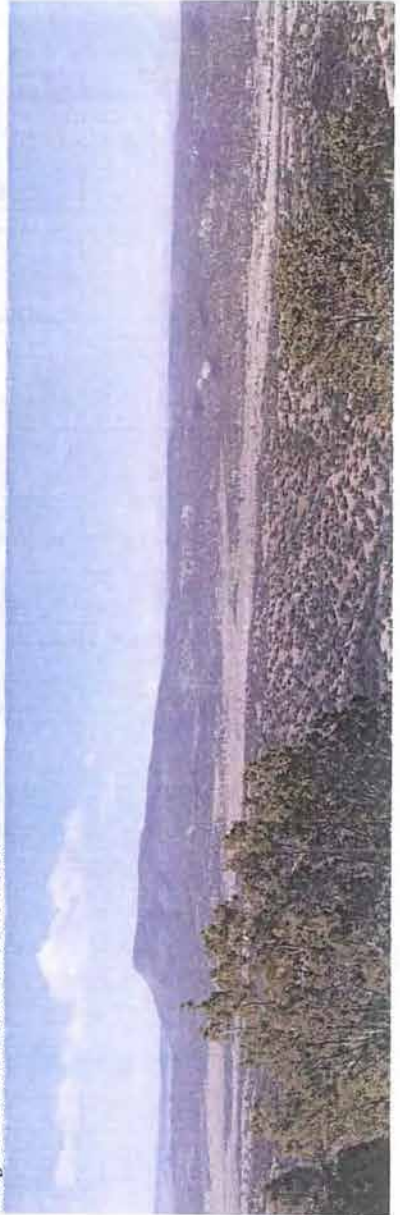


Figure 2-10: Views Map - Surrounding Mountain Ranges



Image 2-17: Milky Way visible within the Galisteo Basin (photo: Peter Lipscomb)



NIGHT SKIES

The Thornton Ranch Open Space site's central location affords 360° views to mountain ranges across the horizon, evoking an understanding of the dome of the night sky. Sparse development and low adjacent light levels still allow high visibility of night skies.

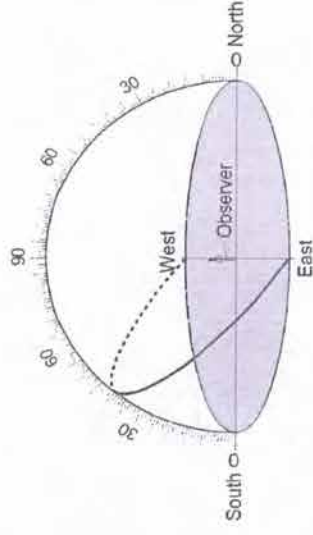
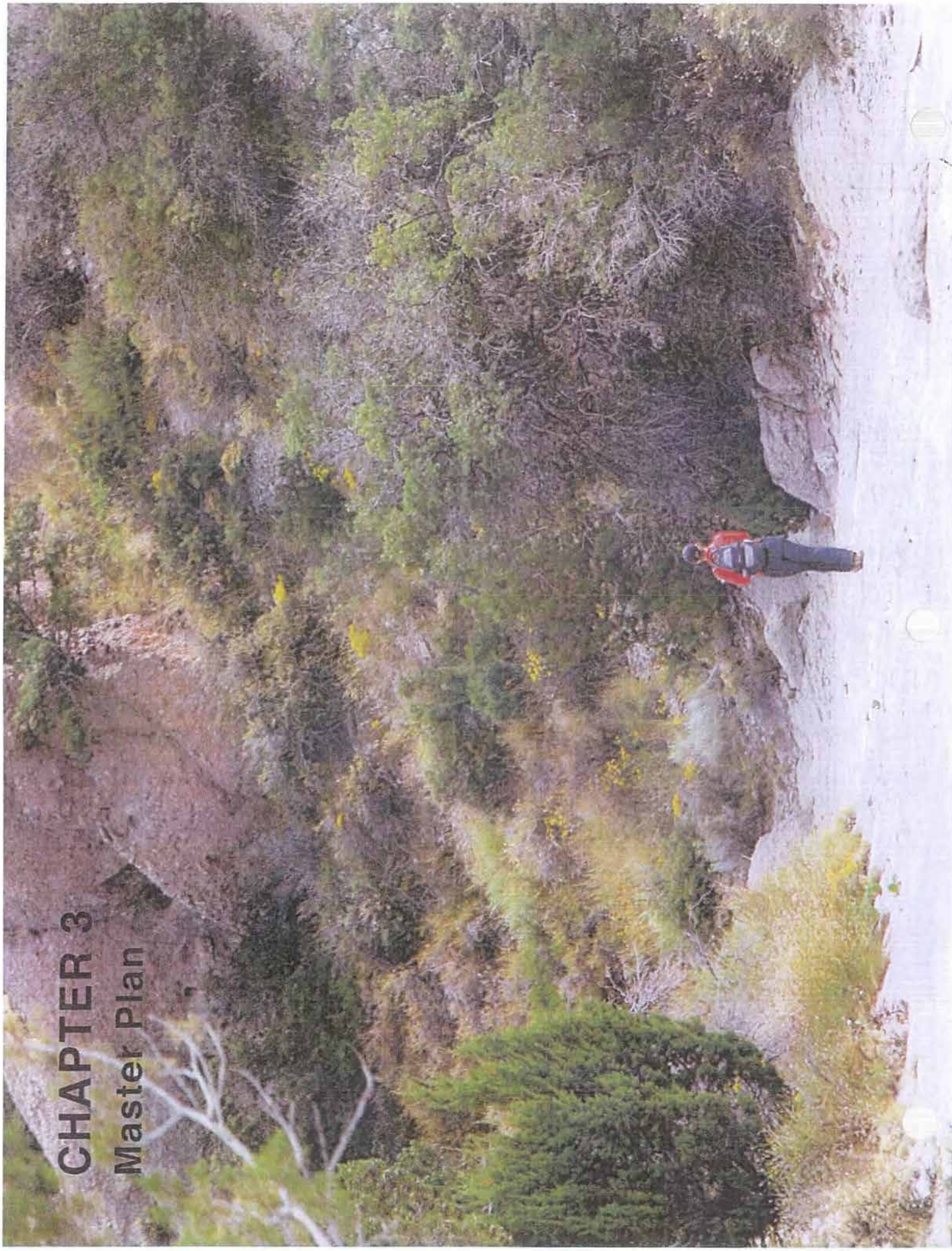


Figure 2-11: Light Pollution Map (www.lightpollutionmap.info, July 2016) with Thornton Ranch Open Space and Galisteo Creek Watershed



CHAPTER 3

Master Plan



SFC RECORDED 11/01/2017



Master Plan

The Thornton Ranch Open Space Master Plan offers a vision and guiding framework to safeguard this public open space property while providing opportunities for recreational trails use. The Plan is intended to guide the development of a trail network that offers a unique and enriching recreational and educational experience. It balances public access with the preservation and conservation of significant cultural resources. It can be implemented in phases, depending on funding availability and priorities set by the County.



THE VISION

Within the culturally significant landscape of the Galisteo Basin, the Thornton Ranch Open Space offers a destination for outdoor recreation and education within a scenic natural and cultural resource. The large-scale site provides an inspiring setting for the health and wellbeing of a broad constituency of users - as an area that can collectively serve as a cultural heritage center, wildlife habitat and linkage area, open space preserve, and recreation area.

Vision

The Thornton Ranch Open Space will become a recreation destination that supports the health and well-being of our people in balance with a respect for the land, our cultural heritage, and the environment.

GUIDING PRINCIPLES

PRESERVE

Preserve environmental and cultural resources for future generations.

- Avoid sensitive cultural and archaeological resources and continue regular site monitoring to preserve existing assets.
- Mitigate impacts to historical sites through careful design and educational interpretation.
- Restore, maintain, and enhance the native ecology.
- Outline materials, design standards, and construction practices that touch the land lightly, blend with the existing site, and limit disturbance.

CONNECT

Connect the land, people, history, and ecology.

- Link to off-site roads and regional recreational trails so the site becomes part of a larger network.
- Provide a diversity of user experiences for people of all skills and ages to recreate and experience nature.
- Accommodate a range of low-impact enjoyable recreation on foot, bike, or horseback.
- Educate visitors about the wealth of history, culture, ecology, and geology of the site through interpretive materials.
- Establish and instill trail users with a strong sense of stewardship and personal responsibility for the land.
- Enable wildlife to traverse the site and its borders and benefit from the natural resources.
- Involve individuals and entities with direct ties to the land in the design and construction process, so construction occurs thoughtfully and respectfully.

TRAILS MASTER PLAN

The Thornton Ranch Open Space Master Plan outlines the components of a publicly accessible trail system for recreation, education, and open space preservation. To enhance the trail experience for all recreational trail users, the master plan proposes both internal trail improvements and external connections to the trail system from future regional trails.

The Master Plan emerged with thoughtful input and participation of representatives from local tribes, trail user groups, local community members, and special interest groups. Of particular importance to American Indian tribes, only a limited area of this site will be open for use by hikers / trail runners, mountain bikers, equestrians, artists, archaeologists, and scientists / ecologists. 16+ miles of constructed trails provide entry into a stunning landscape that preserves over 99% of the site to allow the natural wildlife and ecology to flourish.

New trailheads with short access roads are placed at strategic locations to connect to the trails. All trails are intended to include some measure of interpretive information as an opportunity to educate the users of the trails of the historical and natural significance of the land within the Galisteo Basin.

Paramount to the success and use of the trail system will be the implementation of a signage and wayfinding system which will allow users to orient themselves, learn of the trail system, and plan their routes.

As the Master Plan is adopted and improvements are made according to the plan, the Thornton Ranch Open Space will be recognized as one of many gems the residents of Santa Fe County have at their doorstep for wilderness trail recreation and open space preservation.

USER EXPERIENCE

The Thornton Ranch Open Space Master Plan provides a framework for a broad range of user experiences: from enjoying trails in a stunning setting, to learning about the evolution of human inhabitation in the Galisteo Basin, to taking part in guided tours on special topics. The goal is for visitors to access the site's amenities, respect the site, and have a safe, engaging, and enjoyable experience.

Recreational Trails

The Thornton Ranch Open Space trail system offers an array of recreational trails for different users of varying abilities. Trails are designed to provide a recreational experience for users including hikers, trail runners, mountain bikers, and equestrians. Trails are organized into four types: Regional Trail, Multi-Use Trail, Accessible Trail, and Backcountry Trail. A majority of the trails are beginner and intermediate level trails. Each trail will be designed, constructed, and maintained to meet standards outlined in Chapter 4 (see *Trails*, p. 48).

Hikers / Trail Runners / Snow-shoers / XC Skiers
Hikers in the Thornton Ranch Open Space will be able to access 16+ miles of trails from the primary trailhead and at two locations along the Regional Trail. Hiking routes provide recreation options of varied length that range from easy to moderate difficulty and suit users of all ages and adventure levels. Routes are designed on varied terrain to highlight natural features, landscape typologies (eg. meadow, pinon forest, arroyos), history, and spectacular views of the surrounding mountain ranges.

Mobility Challenged

Individuals who are mobility challenged are able to access 1.5 miles of trails from the primary trailhead. This trail is intended for individuals with sight or mobility issues, families with children in strollers, or for those who have little time and would like an introduction to the Open Space property.

Mountain Bikers

Mountain bikers will have access to 16+ miles of trails from the primary trailhead and at two locations along the Regional Trail. Proposed trails connecting to the Regional Trail will allow mountain bikers the opportunity to bike into the trail system from future regional trails, and other locations within Santa Fe County.

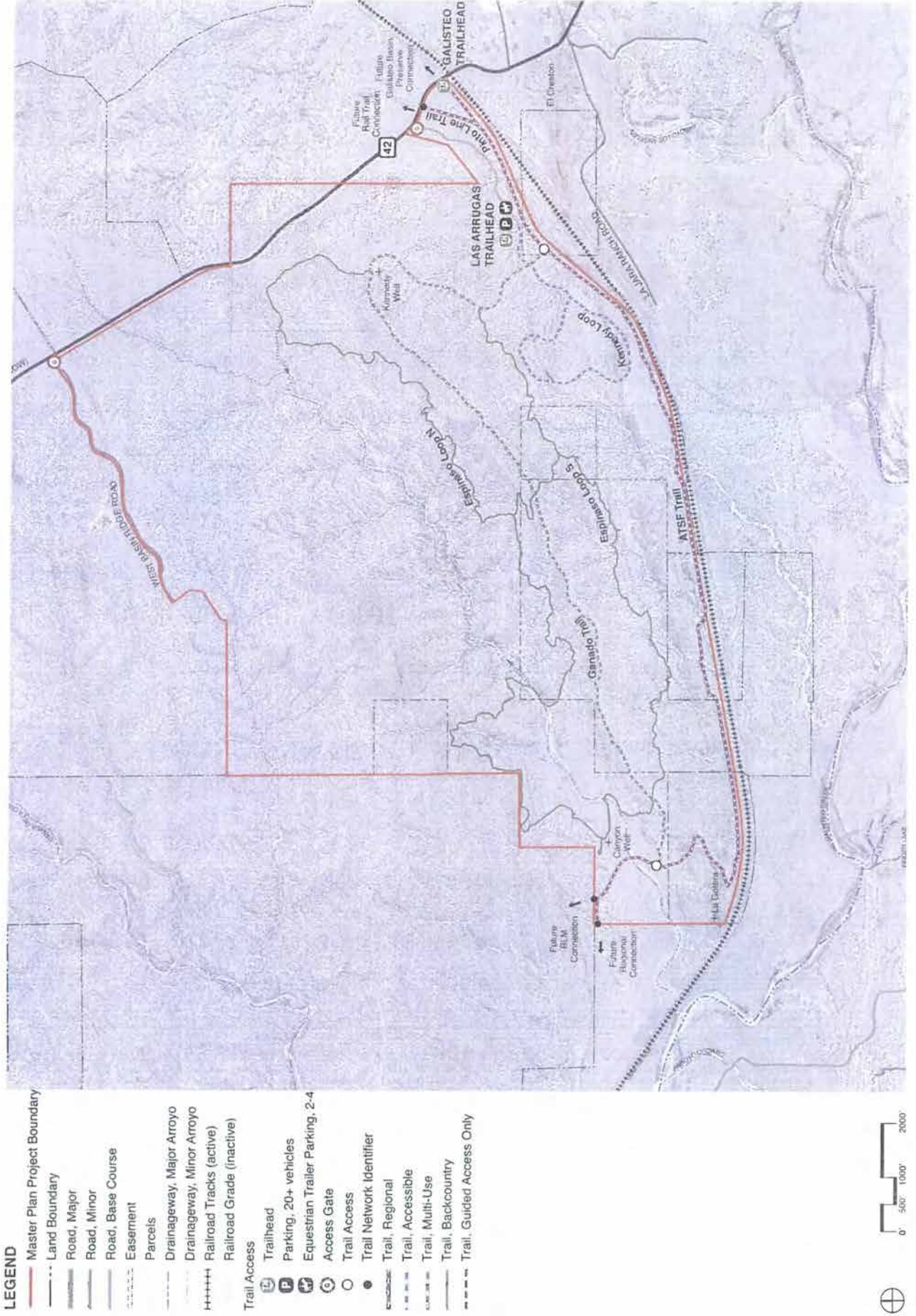
Equestrians

Equestrians will be able to access 16+ miles of trails at two locations along the Regional Trail and park a limited number of trailers at the main trailhead. Once connector trails are in place, equestrians can access the Regional Trail from area stables or park their trailers in off-site locations and ride to the Thornton Ranch Open Space trails. Existing historic windmill structures / water tanks along the trails will be refurbished to serve as watering locations for horses and wildlife.

Motorized Vehicles

Motorized vehicles are not permitted on trails or within the open space. Motor vehicle site access is limited to designated access roads and trailhead parking areas. Only in emergency and maintenance situations will limited motorized access be permissible.

Figure 3-1: Trails Master Plan



Rules of Use

The Thornton Ranch Open Space will specific rules that establish allowed users and how they can and cannot interact with the open space. The intent is to allow respectful recreational trail use by a broad spectrum of non-motorized users, but also to establish guidelines to preserve the wildlife habitat, cultural landscape, and sensitive features for future generations.

The following guidelines are general rules of use to which each trail user should adhere. A full list of rules can be found in *Chapter 4: Master Plan Implementation*.

- Trail users must respect trail signage and only follow trails that are designated for their particular trail use.
- Trail users must stay on the trail and yield to other users.
- Trail users must walk / ride trails at their own risk.
- Motorized recreation vehicles are not allowed on the trails or within the open space.
- Dogs are not allowed on the trails or within the open space.
- Leave No Trace: all trash and foreign material should be removed and disposed of properly.
- Collection or removal of materials from the site are not permitted.
- No camping
- No firearms
- Trails / Trailhead open from dawn to dusk

ELEMENTS OF THE PLAN

Trails and trail access comprise the main elements of the master plan. The plan proposes the strategic siting of these elements and limits their extent in order to provide satisfying recreational areas for all trail users as well as to sustain quality natural environments for existing wildlife. These improvements are outlined in Chapter 4 (see *Design Standards, p. 44*).

Access to the Trails

Trail access in the Thornton Ranch Open Space Master Plan consists of trailheads, regional trail access points, and internal trail system access points.

Trailheads serve as important junctures or "transfer points" between public roads, trails, parking, and access areas to the trail network. As the user's first impression of the trail system, the trailhead should provide necessary information where needed, be physically attractive and inviting to use. The proper location, design, and collection of amenities can help orient the trail user to provide a safe and pleasurable recreational experience.

The Master Plan identifies two types of trailheads: primary trailheads with trail access, larger parking areas (up to 40 spaces), horse trailer parking (up to 4 spaces), and enhanced amenities; and secondary trailheads with trail access, parking (up to 20 spaces), and basic amenities. Once off-site regional trail connections are made, equestrians will be able to park horse trailers in off-site equestrian trailheads and access the property on horseback along regional trails.

Primary Trailhead

One primary trailhead will serve as the access point for the majority of trail users. The thoughtful siting, sequencing, design, and detailing of this trailhead will help transition visitors from their vehicle and prepare them to enter a sensitive cultural landscape that commands their interest and respect.

- Parking / trailer parking area is located in low-lying terrain to reduce the visibility of vehicles from within the open space area.
- Parking is nestled within existing vegetation to mask its visibility and provide a sense of enclosure; a perimeter fence designates its limits.
- Site amenities may include restroom facilities, seating, shade structure(s), or basic signage sited between the parking area and trail.
- A winding, processional trail leads from the parking area to the trailhead.

Threshold

While each location where trail users can enter the Thornton Ranch Open Space trail system is considered a threshold, the one located west of the primary trailhead is envisioned to welcome a majority of visitors and will receive special attention.

Here the visitor is introduced to the site and welcomed with informational signage and incredible views of the surrounding landscape. Information is presented in variety of media to broaden the extent of the information, including, print, sound, web access. An amphitheater / gathering area is tucked into the natural terrain to provide seating for up to 50 people and serve as a location for informal talks and educational events.

Figure 3-2: Las Arrugas Trailhead - Conceptual Layout

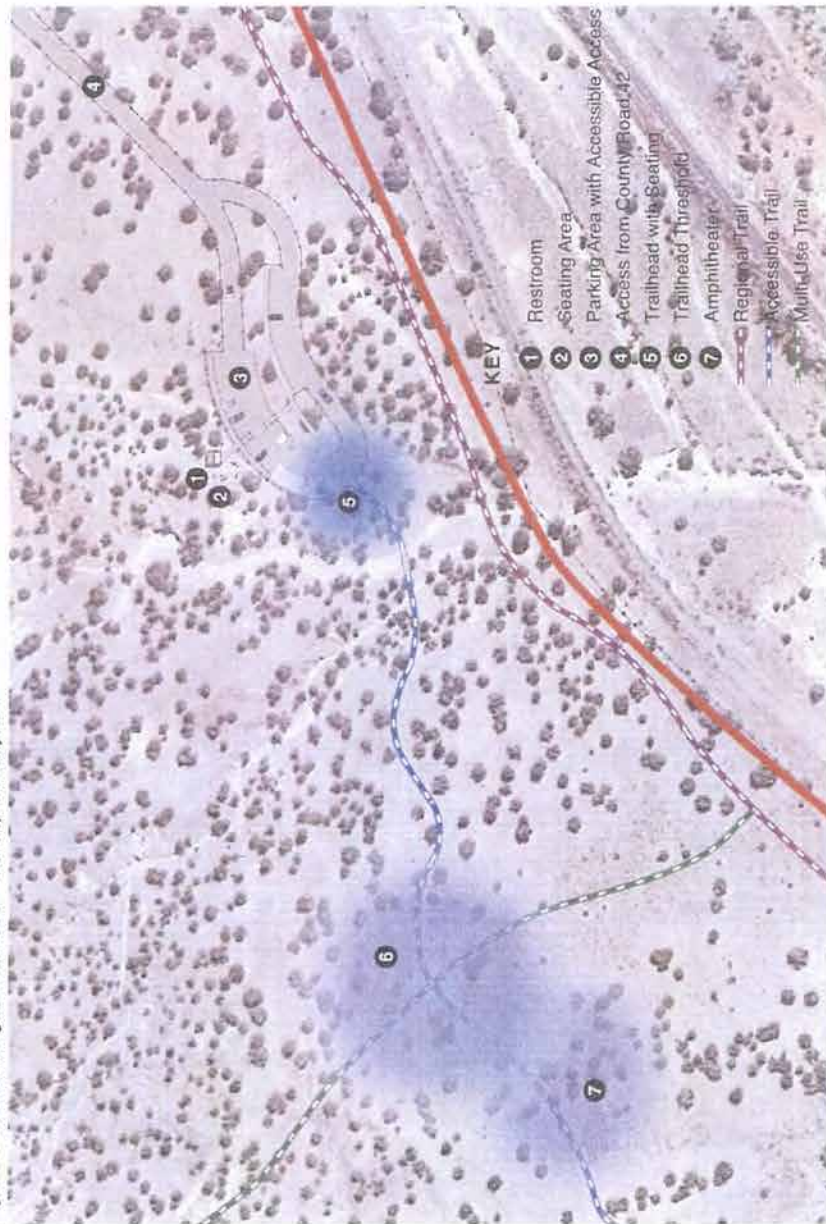
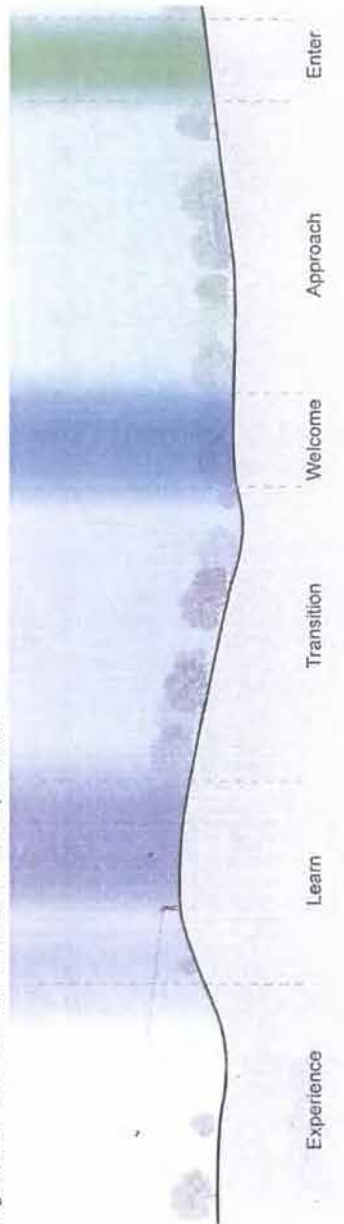


Figure 3-3: Trailhead and Threshold - concept section



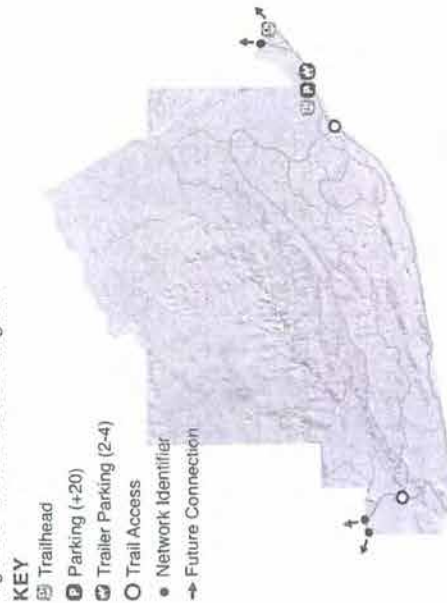
Secondary Trailhead

One secondary trailhead is located near a major access road and will provide parking for up to 20 cars and basic amenities (environmental signage, trail access). The secondary trailhead will be fenced and gated.

Trail Access

Trail access points allow trail users (hikers, mountain bikers, equestrians) to enter the Thornton Ranch Open Space trail system in a number of locations. They are located along the perimeter of the property at locations where the regional trail extends beyond the site boundary and also at junctions between the regional trail and the internal trail system. These trail access points will be controlled by gates or other measures in order to prevent motorized users from entering the trail system.

Figure 3-4: Trail Access Diagram



Trail Types

The Thornton Ranch Open Space trail system is comprised of four primary trail types: Regional, Multi-Use, Accessible, and Backcountry. Each trail has specific characteristics (alignment, width, surface treatment, view distance, clearance) and designated allowed trail users. While additional trail users not indicated are allowed on trails, such as trail runners, snow-shoers, cross country skiers, no motorized vehicles are allowed on the trails, except in emergency and maintenance situations.

The Thornton Ranch Open Space internal trail system connects to the regional trail in two locations. It is envisioned that trail users will access the regional trail from on-site trailheads as well as from regional connections.

Access to non-designated routes for guided tours are permitted only with permission by the land manager.

Regional Trail

3.90 miles, 150 ft. elevation change

The Regional Trail will be a major thoroughway along the southern edge of the site parallel with the NMRX railway. Once connected to future regional recreational trails to the west and the east, it will provide access to Thornton Ranch Open Space internal trails and serve as part of a long distance trail for runners, bike riders and equestrians. It is a non-motorized trail with a soft surface that is 4-8 feet wide (at full build-out). Prior to connecting with adjacent regional trails, it will follow Multi-Use Trail standards.

Multi-Use Trail

3.25 miles, 280 ft. elevation change

The Multi-Use Trail will be a centrally located internal trail that provides a connection to the internal trail system from two locations from the Regional Trail for hikers, mountain bikers, and equestrians. Much of its alignment follows an existing old 2-track ranch road. It is a non-motorized trail with a soft surface that is 5-6 feet wide in existing sections and 12" - 24" wide in new sections and traverses valleys and ridge lines.

THORNTON RANCH OPEN SPACE MASTER PLAN

Figure 3-5: Trail Etiquette



SHARE THE TRAIL:

The Thornton Ranch Open Space will adopt the National Forest's "Share the Trail" policy, which asks bikers to yield to both hikers and equestrians and hikers to yield to equestrians.

Figure 3-6: Regional Trail Layout, Section, and Allowed Users

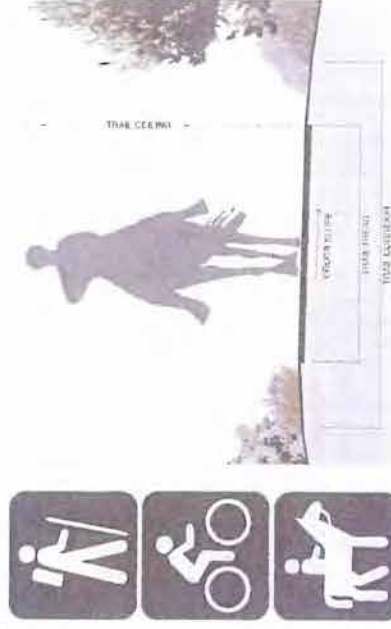
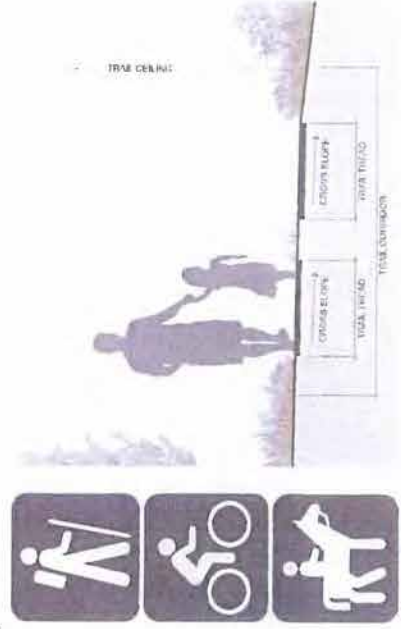


Figure 3-7: Multi-Use Trail Layout, Section, and Allowed Users



Accessible Trail

1.5 miles, 55 ft. elevation change

The Accessible Trail will offer access to a limited area of the site and some of the property's archaeological features on a gently sloped accessible path. Families can accompany children in strollers, people in wheelchairs, sight and accessibility challenged individuals along this trail. It is a non-motorized trail with direct access from the trailhead with a compacted surface that is 5-6 feet wide. A parallel 18" wide soft-surface trail provides a location for equestrian access.

Figure 3-8: Accessible Trail Layout, Section, and Allowed Users



Backcountry Trail

7.0 miles, 290 ft. elevation change

The Backcountry Trail will be an internal trail loop north and south of the central dominant ridge line. This trail is a narrow, single track trail that will weave in and out of minor drainages and foothills and provide a fun experience for hikers, trail runners, bike riders, and equestrians. It traverses a diverse range of ecologies. It is a 12" - 18" wide trail built of compacted dirt.

Figure 3-9: Backcountry Trail Layout, Section, and Allowed Users



Guided Trail - out of system

Unmarked or lightly marked trails to see specific features or areas of the site will be located off of trailheads or established trails. These access points will not be marked and can only be accessed by joining a scheduled guided tour. As an undeveloped trail, users are expected to wear proper gear and be comfortable walking on unstable terrain.

Figure 3-10: Guided Trail Section and Allowed Users



Education

The Thornton Ranch Open Space Master Plan outlines a strategy for enriching the visitor experience through education, interpretation, and guided exploration. Interpretive themes and messages will align with those presented in the Galisteo Basin Interpretive Plan.

The goal is for visitors to understand, appreciate and learn to respect the intrinsic qualities of this place so they are inspired to take personal responsibility for the care and preservation of these highly significant resources. (*Goal 4, Thornton Ranch Open Space Management Plan*).

Trail layouts have been designed to expose the breadth of educational topics available for interpretation while preserving the vast majority of the site. In certain locations, trail routes encroach on designated historic archaeological sites in a deliberate way to reduce impacts to the site while providing opportunities for education.

EDUCATIONAL THEMES

With evidence of human occupation in the Galisteo Basin that spans centuries and a geological history that extends well before then, there are many stories to tell about this landscape and how people interacted with it and with each other.

Educational opportunities can range from more passive to active: from site-specific interpretive signage, to self-guided tours, to ranger / specialist talks, to guided tours, and to specially programmed events. Some points of interest that could serve as interpretive opportunities include the railroad, ranching, and natural features that highlight particular geological or ecological environments (see *Figure 3-11: Points of Interest Diagram*).

Railroad

Along the southern edge of the site, the existing active railway serves as a reminder of the role this infrastructure served to transform the west. The now abandoned rail bed of the NM Central illustrates how temporal some of these lines were. The Kennedy station and remnants of the town site are still visible today.

Ranching

For years a working cattle ranch, there are many remnants of ranching within the property. Walls of old homesteads and temporary dwellings mark locations for those tending herds; windmills and ranch roads illustrate the infrastructure needed for working ranches.

Geology / Ecology

Many distinct locations exist to view and recount the stories of geology and ecology. In particular, the site's central drainageway shows evidence of multiple geological formations and ecological typologies.

EDUCATIONAL PROGRAMS

The Master Plan enables programmed activities to occur on the Thornton Ranch Open Space site that align with the core objectives of preservation and connecting people to the land.

Programs could be developed for the study and interpretation of topics including:

- stargazing / night sky preservation
- dryland restoration
- geology
- ecology
- wildlife counts + vegetation / monitoring
- history
- water
- impacts of ranching
- land use / land tenure

Activities which do not support the objectives of the plan are not recommended within the open space area. Unless special permission is granted, the following uses are prohibited:

- sporting events (eg. races) - on internal trails
- camping
- movies (film production and/or projection)

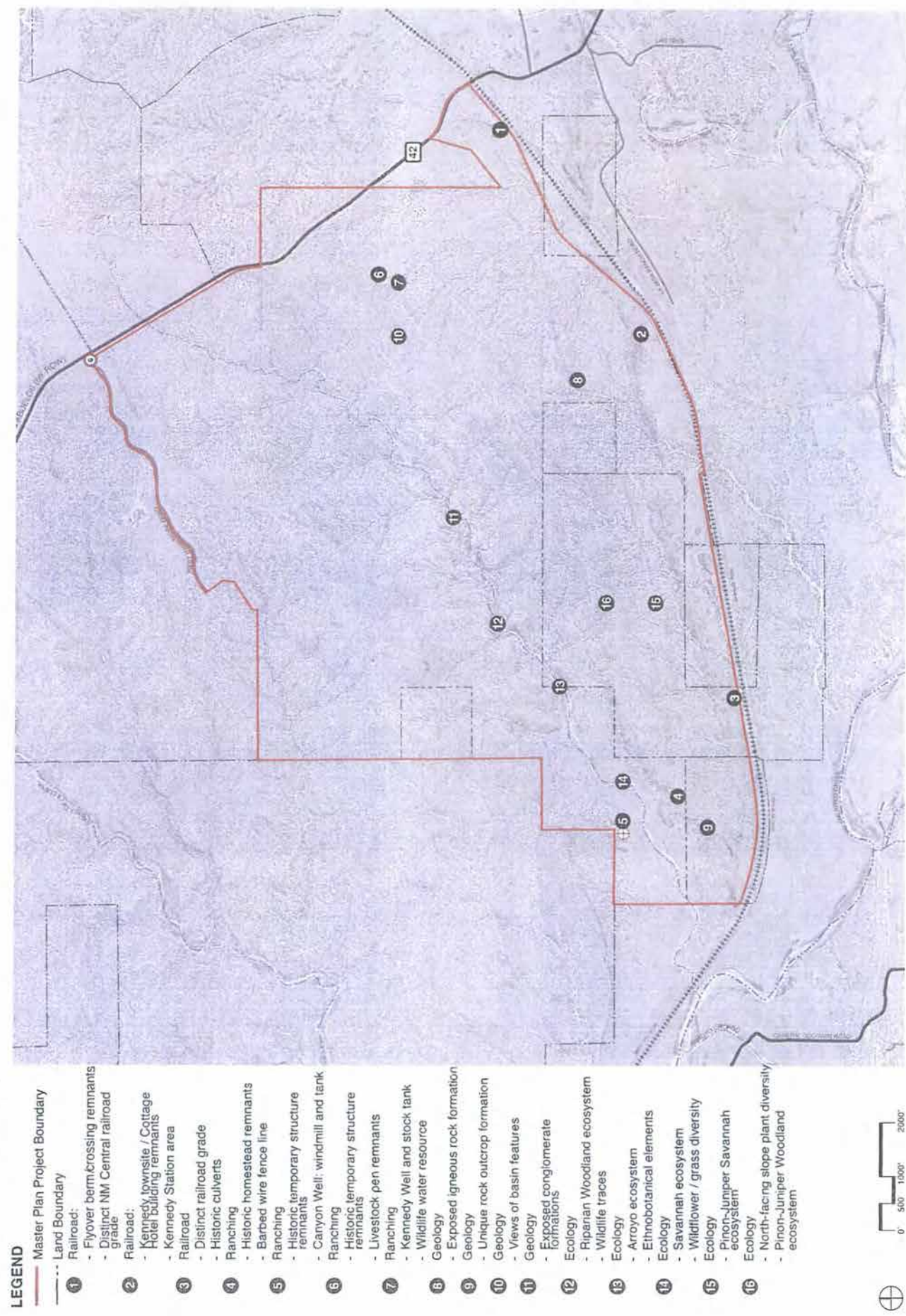
Guided Hikes

Designated experts or docents may conduct tours within the open space area both on and off-trail to provide more in-depth educational information on various topics. Off-trail guided hikes will be located on unmarked or discreetly marked trails.

Research

Research topics and site-specific art projects will be allowed with permission, especially as they relate to the goals of preserving and educating people about this cultural landscape. (*See management plan guidelines for research projects.*)

Figure 3-11: Points of Interest Diagram



Interpretation

Historic windmills, stone structures, and other visible artifacts are some of the features that can be explained with interpretive signage to evoke the different eras of this cultural landscape.

Signage should be informative, yet subtle, not overshadowing the setting but allowing visitors to relate to issues and challenges of times past and present.

Trail alignments within archaeological sites are intended to provide good overviews of sites and the surrounding context to enrich the breadth of interpretation while minimizing site disturbance. Respect for maintaining sites in their current state will be encouraged through defined trail limits and signage.

Image 3-1: Trail Access and Interpretive Signage at a Historic Site (Conceptual Montage)



Ecological Monitoring / Restoration

Recreational use will impact soils, flora, and fauna.

As part of a preservation initiative, a baseline assessment of existing ecological systems and wildlife patterns would serve as a benchmark for monitoring change and managing the property for wildlife habitat / connectivity. Areas that harbor invasive or non-native plant species will be restored to a re-disturbance state to promote a balanced ecosystem. Similarly, eroded and degraded soils will be restored and stabilized to optimize cover and productivity.

Watering troughs and tanks will be repaired and modified to make them more wildlife friendly.

Protecting seeps from human access will retain their status as important refuge areas for wildlife.

Restoration and monitoring initiatives will be conducted with small groups on a limited basis to restrict further disturbance of the property.

Image 3-2: Ecological Survey Documentation (Conceptual Montage)



History

Visible features in the landscape can be used to relay historical information about the land's natural resources, how it was used, what effect climate has had, and how it has changed over time. With evidence of human use across the landscape, many opportunities exist to tell the stories of this place from a range of perspectives.

The trail network provides access to some of these features and views of others. A critical location for revealing the broader history and context of the site is at the trailhead threshold, where interpretation will be provided at a central viewing platform.

Guided tours will enable more in-depth conversations on specific aspects of area features and history.

Resource Protection

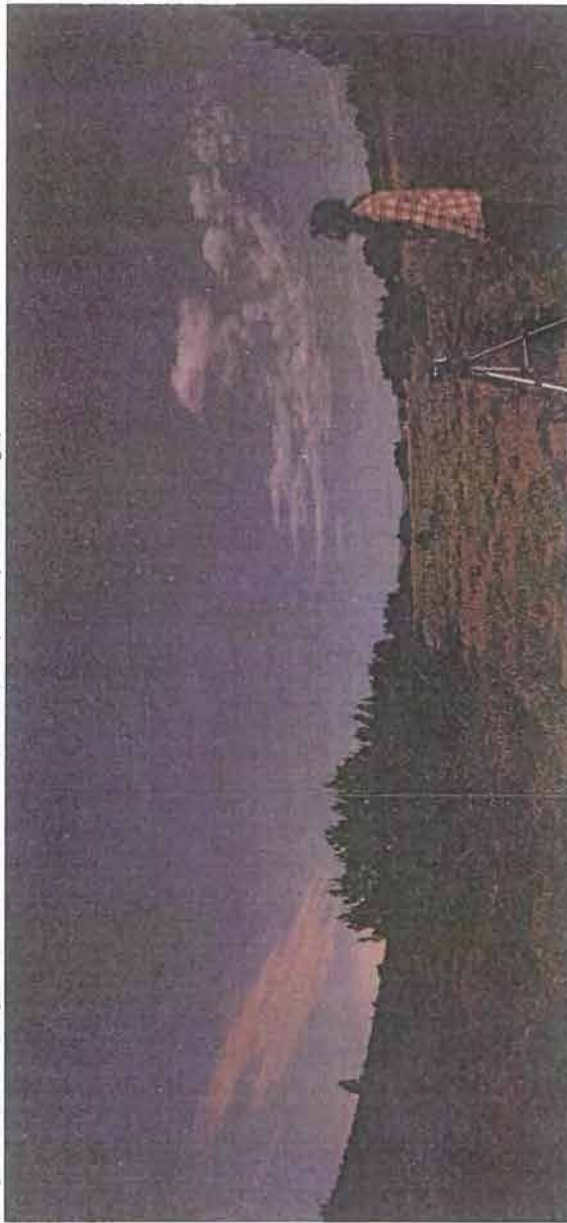
Natural resources on the Thornton Ranch Open Space and within the Galisteo Basin are in danger of being impacted by encroaching development. Protective measures to preserve certain resources have been and continue to be enforced for sensitive areas within the Thornton Ranch Open Space. Additional management measures are needed to preserve night skies, wildlife habitat / corridors, viewsheds, and other cultural and archaeological sites.

Limited infrastructure will be provided as part of the plan to protect resources. A central gathering area near the trailhead provides for ranger talks and night sky viewing.

Image 3-3: Kennedy Well Watering Hole and Interpretive Signage (Conceptual Montage)



Image 3-4: Star Gazing / International Dark Skies Protection (Conceptual Montage)



Preservation

The Thornton Ranch Open Space serves as an opportunity for modeling preservation-minded practices in keeping with other preservation-focused initiatives in the Galisteo Basin. This focus will help ensure the land retains its cultural, ecological, and wildlife-habitat function while preserving its use for the enjoyment of future generations.

The first step in resource protection is conducting a detailed ecological assessment of existing conditions to establish a baseline, much like the Cultural Resource Inventory accomplishments for archaeological sites. Based on this assessment, Santa Fe County will develop a natural resource restoration and management plan for ongoing landscape stewardship.

Archaeological / Cultural Resource Preservation

The Thornton Ranch Open Space Master Plan limits site access, avoids archaeological and cultural resource sites, and dictates the mitigation of impacted archaeological sites. These measures help preserve the cultural landscape and significant archaeological resources on the Thornton Ranch Open Space.

Image 3-5: Mourning Dove



Image 3-6: Mule Deer



RESOURCE PROTECTION

Resource protection in the Thornton Ranch Open Space begins with preservation and includes enhancing wildlife habitat and facilitating animal movement. Declining or sensitive species within key habitat areas include the mourning dove (*Zenaidura macroura*) and mule deer (*Odocoileus hemionus*).

Measures to restrict disturbance to wildlife habitats and culturally sensitive areas include the following use restrictions:

- no dogs
- stay on designated trails
- no hunting / shooting
- off-trail use only with special permit

Measures to protect wildlife habitat and movement include:

- wildlife-friendly fencing
- animal-friendly watering tanks
- trail closures during breeding seasons

A majority of the site is Pinon-Juniper / Grama Woodland and Savannah (NVC). However, two small locations of Cottonwood / Willow Woodland (NVC) exist in the central drainageway where groundwater is closer to the surface and should be protected since it is a relatively rare biotic community in an arid setting.

Image 3-7: Riparian Woodland



RESTORATION

Aided by the ceasing of ranching operations on the property around 2000 and recent years with adequate rainfall, native plant regeneration, and rehabilitation has occurred naturally.

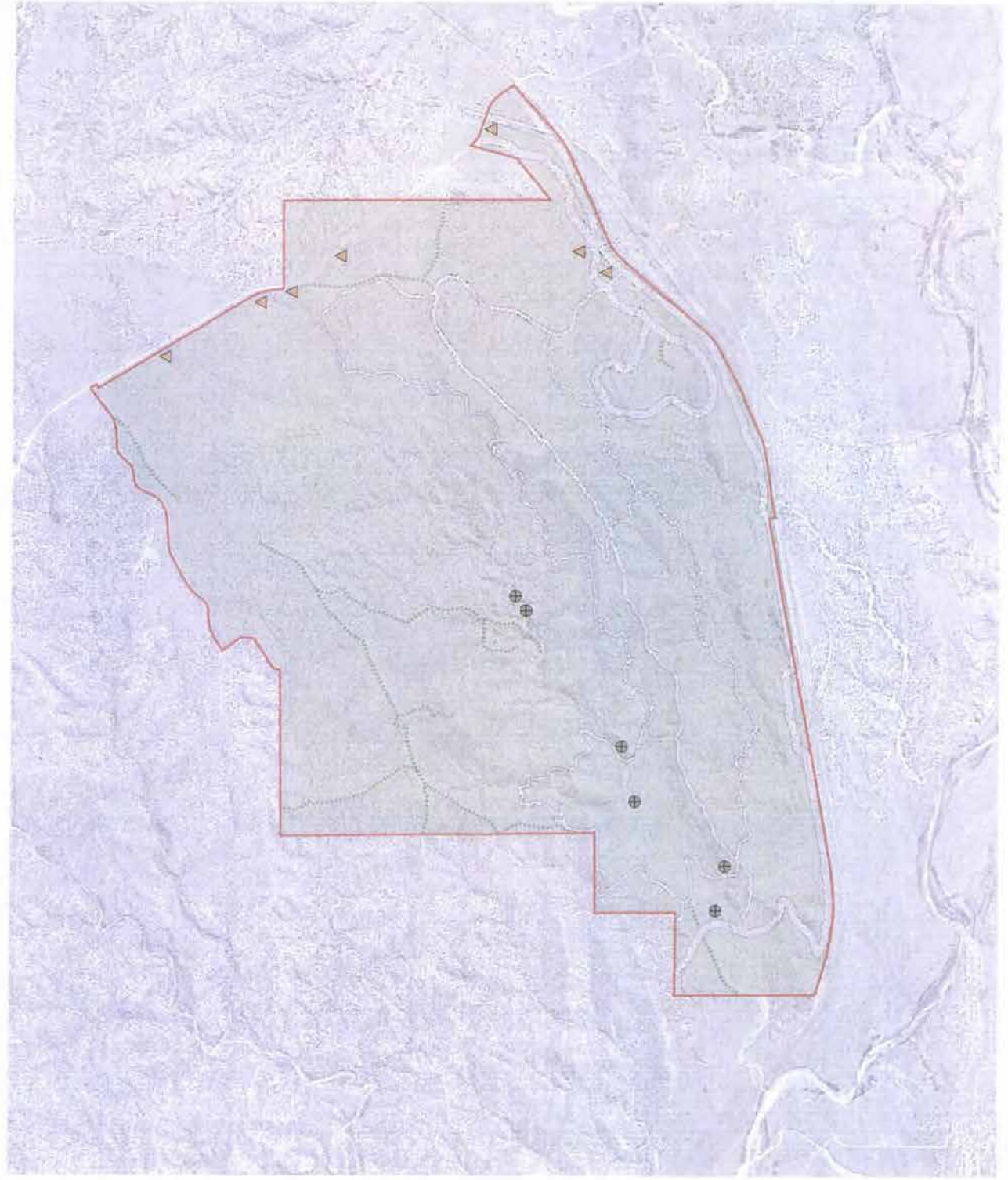
Overall, the property has relatively undisturbed soils. This, combined with little rainfall contributes to a landscape inhabited dominantly by native species.

In a few locations, however, Class C noxious weeds exist (Cheatgrass, Russian Olive, Siberian Elm). Implementing the following measures to manage these non-native species would help reestablish native plant communities:

- remove invasive species (Russian Olive) within the riparian woodland areas;
- remove Siberian Elm trees along west drainageway;
- document, remove, and monitor Cheatgrass and evidence of other invasive weeds along drainageways entering the site off of CR 42;
- revegetate non-system ranch road sections and degraded areas;
- monitor new trailhead / parking area construction, equestrian trails, and associated drainageways as new vectors for noxious weeds;
- and monitor internal trails for new weed vectors.

Image 3-8: Pinon / Juniper Savannah



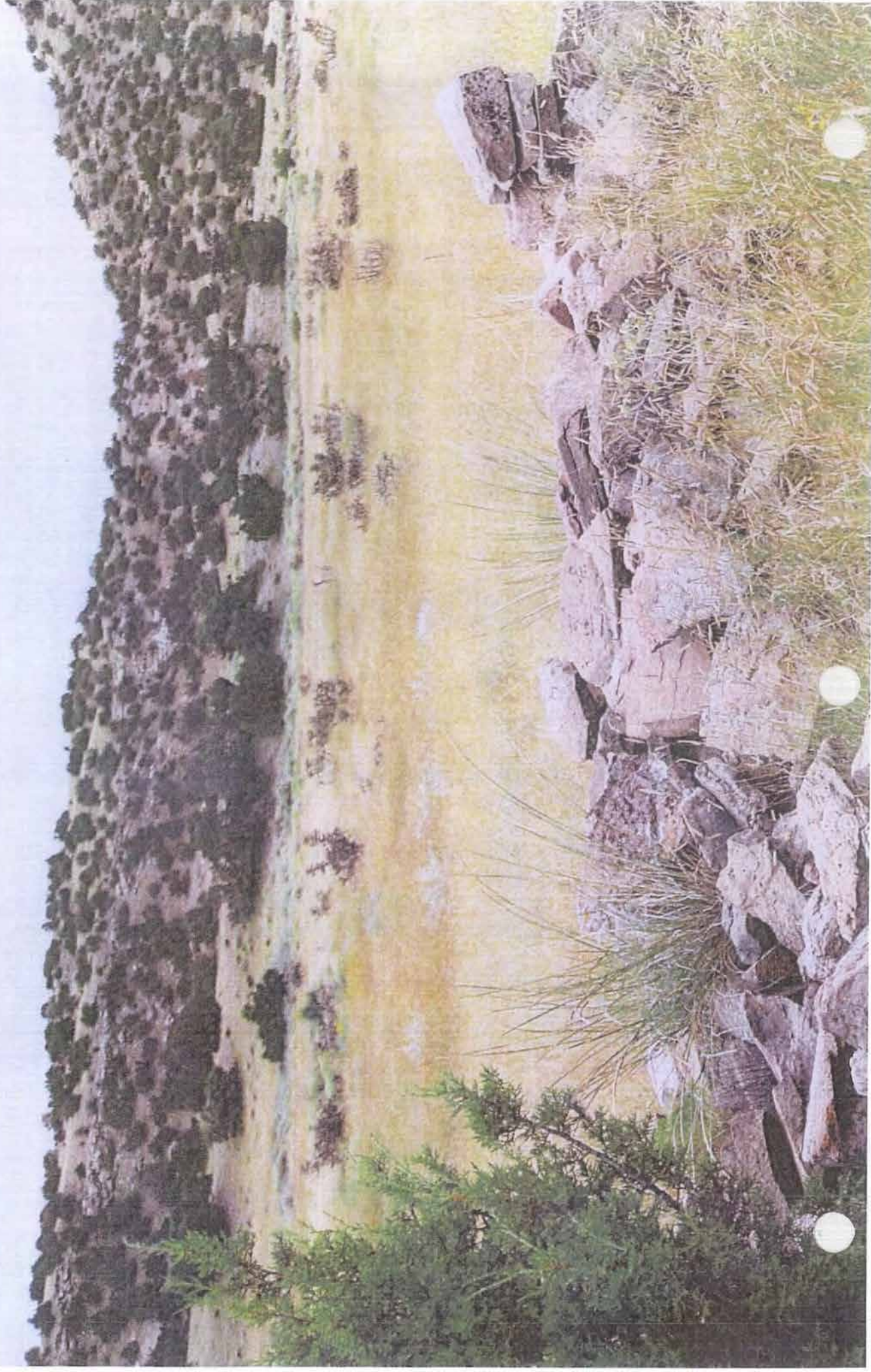


- LEGEND**
- Master Plan Project Boundary
 - Land Boundary
 - Trail Alignment Corridor
 - Preservation Area, Guided Access Only
 - Road Restoration Area
 - Invasive Species Restoration Area
 - Invasive Species Ecological Monitoring

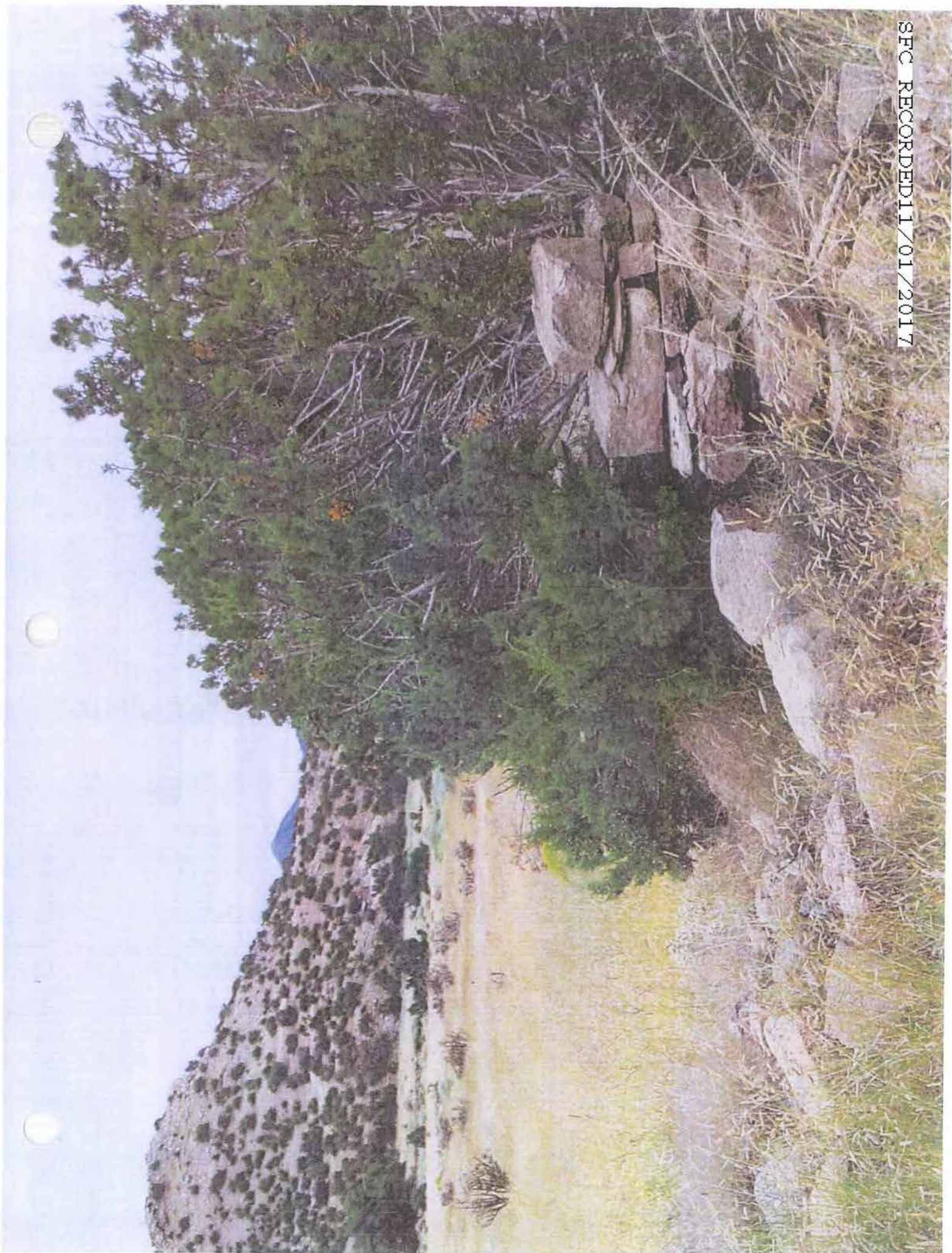
Figure 3-12: Preservation / Restoration Diagram

CHAPTER 4

Master Plan Implementation



SFC RECORDED 11/01/2017



Implementation

As the Thornton Ranch Open Space is opened to public access as set forth in this Master Plan document, a series of projects have been identified and prioritized. The projects outlined in *Figure 4-1, Implementation Projects List* and *Figure 4-2 Implementation Projects Map* represent the major projects recommended to be completed by Santa Fe County in order to realize the plan.

Projects are listed according to the following categories: access control, master plan, signage, restoration, and connections. Within each category, priority projects are generally listed at the top. These projects stand out in part because they help establish safe access to the property and align with project goals of preservation and restoration.

Projects identified for implementation list associated cost estimates and are subject to adjustment as projects, approvals, and construction timelines are finalized.

Depending on the exact location of the project improvement on County, BLM, or state trust lands, approval processes, construction procedures, and construction timelines will vary.

Figure 4-1: Implementation Projects List

IMPLEMENTATION PROJECTS

No.	Project Type	Project	Jurisdiction
			SF County BLM SLO
ACCESS CONTROL			
1	Fencing	Perimeter Fencing + Access Control Secure perimeter of site along east property line (new fence installation + fence repairs), install no trespassing signage.	X
RESTORATION			
1	Restoration	Restoration Invasive plant removal / restoration Existing ranch road segment reclamation Windmill restoration / new water tank installation Erosion Control Soil stabilization and improvement Drainage improvements	X X X
MASTER PLAN			
1	Trailhead	Las Arugas Trailhead (primary/trailhead) New ca. 0.5 mi access road and trailhead parking (40 vehicles, 2-4 horse trailers) for access to trails. The new trailhead will have a perimeter fence, signage, trail access, restroom, and site amenities. The new entry gateway will have a monument sign, access drive, and gate. This trailhead will be installed with a smaller parking capacity (20-25 vehicles, 2 horse trailers) and expanded as warranted.	X
2	Threshold	Site Orientation / Education Area New threshold / education area west of primary trailhead to educate visitors about the site, the history, and access.	X
3	Trailhead	Galisteo Trailhead (secondary trailhead) New trailhead northwest of CR 42 / NMRX railway with parking area for up to 20 cars, trail access, signage, and site amenities.	X
4	Trail	ATSF Trail (Regional Trail) New ca. 3.75 mi connector regional trail along south property boundary. This trail will be initially installed as a hand-packed 18"-24" wide trail. When off-site regional trail connections are made, this trail will be upgraded to a 4-8' wide crusher fines surface trail and a .25 mile extension will be made to connect to regional multi-use off-site trails to the west.	X X X
5	Trail	Kennedy Loop (Accessible Trail) New ca. 1.5 mi accessible trail loop with parallel equestrian path internal to site originating from the new trailhead with 1 historic site.	X
6	Trail	Garados Trail (Multi-Use Trail) Existing / new ca. 3.5 mi connector trail (2.25 mi existing / 1.25 mi new) between regional trail and existing ranch road with 2 historic sites.	X X X
7	Trail	Espinazo Loop (Backcountry Trail) New ca. 8.00 mi single track trail with 2 historic sites.	X X X
SIGNAGE			
1	Signage	Orientation / Regulatory Signage Fabricate and install wayfinding signage for the Thornton Ranch Open Space area. This includes orientation and regulatory signage as proposed in the draft signage master plan. The family of signs includes trailhead kiosks, trailhead signs, internal regulatory signs, internal orientation signs, and internal trail markers.	X X X
2	Signage	Interpretive Signage Interpretive signs at major trailheads, historic sites, nature areas, and vantage points will provide information on the native ecology, geology, history of the site, etc.	X X X
CONNECTIONS			
1	Trail	Regional Trail - northeast connection (NM Central) New ca. 0.25 mi segment on/along NM Central rail berm connecting to off-site regional trail along NM Central.	X
2	Trail	Regional Trail - northwest connection (BLM) New ca. 0.30 mi segment to BLM property connecting to off-site regional trail within Burnt Corn SRMA.	X X
FUTURE TRAIL PROJECTS - OFF-SITE			
1	Trail	Regional Trail - BLM Galisteo Basin - Cerillos Hills / Burnt Corn SRMA New regional trail on BLM Burnt Corn SRMA to connect north to CR42 and west to future connection to Cerillos	
2	Trail	Regional Trail - NM Central (Pinto Line) New regional trail on/along NM Central rail grade north to Rancho Viejo with future connection to Santa Fe Rail Trail	
3	Trail	Regional Trail - ATSF New regional trail parallel with ATSF (NMRX) rail line northeast with future connection to Lamy and Santa Fe Rail Trail	

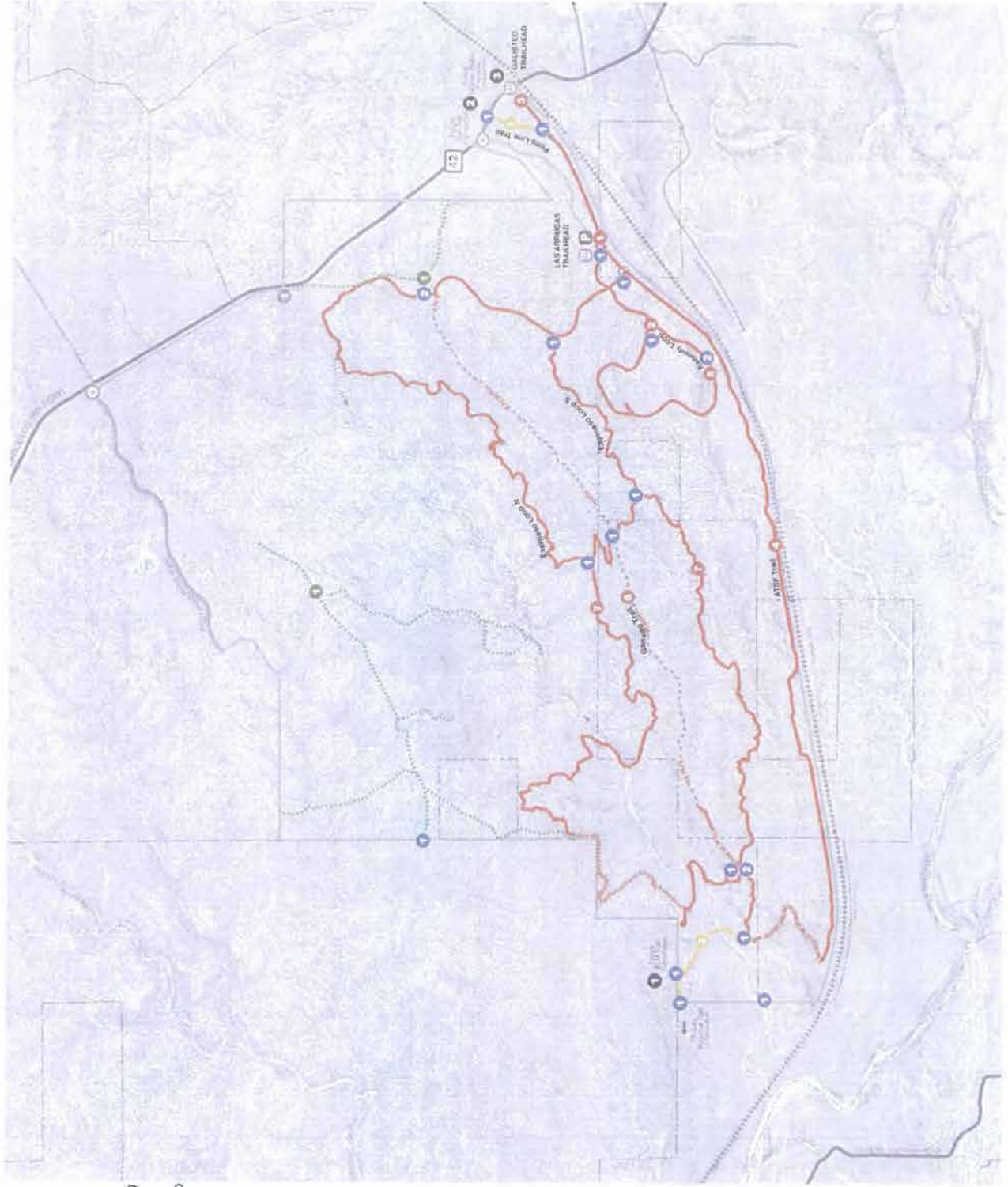


Figure 4-2: Implementation Projects Map

- LEGEND**
- Master Plan Project Boundary
 - Land Boundary
 - Road, Major
 - Road, Minor
 - Proposed Improvements (See "Projects List")
 - Road, Proposed Restoration
 - Trail, Proposed Realignment/Rehab
 - Trail, Proposed New Segment
 - Proposed Projects (See "Projects List")
 - Access Control Projects
 - Restoration Projects
 - Master Plan Projects
 - Trail Signage Projects
 - Trail Connection Projects
 - Off-site Future Trail Projects



IMPLEMENTATION PROCESS

Projects will be implemented under the direction and administration of County staff. In all cases, applicable codes and procedures shall be followed regarding environmental clearance, design (see *Design Standards*, p. 45), approvals, and construction.

New projects completed as part of the Trails Master Plan will need to follow all County, State, and Federal guidelines for archaeological review and clearance prior to construction. Review and approval processes for improvements may differ between County, BLM, and State lands.

Gradual Implementation

It is assumed that as funding is allocated for project implementation in the Thornton Ranch Open Space, improvements will be gradually implemented. The plan recommends full implementation of some measures and gradual implementation of others (see *Figure 4-1, Implementation Projects*). All phases must address site and user safety and security comprehensively prior to opening access of that phase to the public.

CHANGES TO THE PLAN

The Thornton Ranch Master Plan document guides the design and implementation of improvements in the planning area. This plan has emerged with conscientious input from representatives of area tribes, agencies, user groups, neighbors, community members, interested individuals, and staff. In the event changes are proposed to the plan after adoption by the Board of County Commissioners, a process for review and approval of changes is required.

For minor changes, approvals can be granted at an administrative level. For major changes affecting site program or operations, review and approvals should be conducted in coordination with the land manager(s), area tribal representatives, agency representatives (if applicable), and county staff. Major changes would require BCC approval.

Some of the following conditions could arise that would constitute minor changes to the plan:

- changes in site management triggered by resource protection, species or habitat protection
- adjustments in trail access locations along perimeter access points in response to final off-site trail alignments
- additional signage and/or educational materials on site

Some of the following conditions could arise that would constitute major changes to the plan:

- increased regular site visitation that exceeds the capacity of the provided infrastructure and triggers a reevaluation of site infrastructure, visitation protocol, etc.
- a determination that the on-site presence of staff (eg. ranger) and a location to house staff is necessary

Trail Construction - Cultural Resource Review
While the Master Plan outlines a recreational trail plan for the site that follows the above guidelines, we recognize that this approach is based upon mapped sites and may not fully address culturally sensitive viewsheds or unmapped features. In this case, we propose a construction review process that enables tribal input in order to make adjustments to proposed trail alignments.

The process for finalizing trail alignments is envisioned as follows:

- mark / flag proposed trail alignment in the field,
- allow an agreed-upon window of time for tribal review (ca. 45 days),
- collect comments / realignment suggestions,
- mark / flag adjusted alignment in field,
- complete regulatory approvals as required,
- begin construction (tribal representative / qualified archaeological consultant present as required),
- minimize disturbance to areas outside the construction zone, and
- restore / reseed disturbed areas.

CONSTRUCTION GUIDELINES

In the spirit of preserving cultural and natural resources on the property, construction projects to implement the Thornton Ranch Open Space Master Plan shall preserve existing conditions and minimize site disturbance to the greatest extent possible.

Construction internal to the property shall be performed with a minimum disturbance to the existing site. Materials should be transported by hand, mule, or wheelbarrow to the greatest extent possible; no motorized vehicle access is permitted, except with express approval.

Construction bid documents shall outline project-specific information and rules regarding site access, vehicle restrictions, limits of disturbance, revegetation, construction review processes, and field adjustments. Strict adherence will be required. Non-compliance will result in fines or other measures as determined by Santa Fe County.

Vegetation

Native vegetation along all natural open space trails shall be preserved to the greatest extent possible to protect the aesthetic quality of the trail. Clearing of vegetation for trails, especially along embankments, should be minimized.

Locally appropriate soil and water conservation techniques and/or plantings to stimulate native plant growth should be used for stabilization and restoration of all disturbed areas to prevent erosion or for screening purposes. Construction techniques and trail routing techniques that preserve vegetation should be used to minimize visual intrusion.

Landscape + Revegetation

- Topsoil removed from the parking area and vehicular spaces should be stockpiled and used for restoration and revegetation of cuts, fills and site disturbance.
- Clear limits of construction should be staked and fenced to minimize disturbance to existing vegetation.
- Areas surrounding the trailhead and parking area disturbed during construction should be restored with native vegetation. (*see Revegetation at right*)
- All disturbed areas should be covered with slash from thinned trees or with coarse wood chip mulch or compost to prevent wind and water erosion during and after construction to facilitate soil development.

Tree Trimming - Clearing Limits

It is important for all trail building and maintenance crews to properly trim branches and vegetation out of the trail corridor. Saw branches and brush back to the trunk or base of the tree or plant rather than cutting too deep into the tree; or the opposite, cutting limbs only to attain the clearance limit. If a tree requires excessive pruning to accommodate the trail corridor, it may need to be removed. (USDA FS Standards)

Revegetation

Revegetating and restoring areas disturbed during construction or areas not utilized by trail users serves the important function of stabilizing erosion-prone soils, providing greater wildlife habitat areas, and minimizing the loss of valuable top soil.

Revegetation projects should occur during the rainy season and prime growing season (July 1 - September 15) to take advantage of natural rainfall. Proper soil preparation and application of mulch, soil amendments, and hydromulch with reseeded is important to the overall success of revegetation. To ensure greater success with revegetation, maximum side slopes of disturbed areas should be less than 3:1 slope. Areas with slopes steeper than 3:1 should utilize natural jute netting over the hydroseeding or drill seeding / hydromulch to help with embankment stabilization.

Best management practices should be used to ensure the successful dryland restoration of the native vegetation. Areas undergoing reseeding and/or revegetation should have signs to inform the public of the process.

Design Standards

The Thornton Ranch Open Space Master Plan Design Standards are intended to ensure that construction of plan elements results in a distinct recreational destination that harmonizes with existing natural features, is executed to minimize site disturbance, and is constructed sustainably to reduce maintenance demands. Design standards are specified for all trails, trailheads, and amenities of the Thornton Ranch Open Space so that the quality of the recreation and open space area can be sustained.

Standards for proper design and sound construction will ensure that improvements withstand the wear of time, weather, and trail users. Master Plan improvements implemented with these standards will also provide trail users better interface with the trail system to foster an appreciation for the trails, understand proper interaction with other users, and recognize the importance of preservation of the natural environment.

The following Design Standards outline requirements and best practices particular to special conditions of the Thornton Ranch Open Space. This information is intended to serve as a basis for which improvements to the trail system and open space areas are made. Reference documents and/or standards are cited to serve as guidelines where items are not covered in these standards and should be used in conjunction with information included in these standards. These standards include:

- AASHTO (for regional trails)
- ADAAG American Disabilities Act Accessibility Guidelines (for accessible facilities)
- PROWAG Public Rights of Way Accessibility Guidelines (for accessible trails / facilities)
- Santa Fe County, Sustainable Land Development Code
- USDA Forest Service, Standard Trail Plans and Specifications
- IMBA (International Mountain Bicycling Association), *Trail Solutions*

All new construction should follow local, state, and national applicable codes.

PLACEMAKING AND MATERIALS

The proposed material palette for designed elements within the Thornton Ranch Open Space evokes the geology, industrial history, and natural materiality of the Galisteo Basin. In the spirit of preserving the quality of this place, the construction materials are natural materials that harmonize with the site.

Expressed in both vernacular and contemporary ways, the master plan seeks to use this material palette to link the constructed elements of the open space into a cohesive design language. The material expression and detailing clearly distinguish new construction from historic and natural site elements.

Weathering steel, weathered zinc finished metals and concrete evoke a connection back to the railroad and the site's ranching heritage.

The use of site-harvested juniper, and locally sourced gravels will also draw on local vernacular for many trail and trailhead related site elements.

Stone features and detail elements communicate the geology and permanence of the Galisteo Basin, especially at the major entrances and thresholds within the park.

Figure 4-3: Materials Palette



ROADS

Access Roads

Limited new roads link existing area roads to designated new trailheads and set the stage for how visitors engage with the Thornton Ranch Open Space. Roadway layout and design should lead the visitor from the public roadway, introduce them to the setting, and set the tone for the County's approach to this natural resource.

Standards

The following standards should be utilized when designing and detailing access roads:

- Mark the vehicular main entry at local roadways with monument signs, basic visitor information, and gates to explicitly announce the entry (see signage standards).
- Meander the road alignment to follow grades, preserve existing stands of vegetation, and slow the approach.
- Surface the road with basecourse material that matches the color of existing site soils.
- Grade the roadway and adjacent swales to manage stormwater runoff and facilitate site drainage, provide culverts with rock headwalls, if necessary.
- Fence (or other access control) off the access road to prevent off-road access to the open space, while conveying the sense of the vast open space area.
- Road width shall be the minimum allowable width and shall conform to Santa Fe County standards for layout and construction, including fire access.

TRAILHEADS

Trailheads

Trailheads serve as important junctures or "transfer points" between public roads, trails, parking, and access areas to the trail network. As the user's first impression of the trail system, the trailhead should provide necessary information, be physically attractive, and inviting to use.

Their proper location, design, and collection of amenities can help orient the trail user to provide a safe and pleasurable recreational experience.

Trailhead and parking locations as indicated on the Master Plan are general and should be refined as more detailed design occurs. Each trailhead, parking area, and associated amenities should be designed specific to site conditions.

Standards

The following standards should be utilized when designing trailhead areas:

- Tie the trail and vehicular space together.
- Anchor the transfer point and trailhead area to the site using natural vegetation or features.
- Use gateway effects at the transfer point and beyond.
- Provide trail information for users.
- Make the trailhead area safe and accessible for users.

Resources

"Trails Design and Management Handbook"
Pitkin County Open Space and Trails, 1994.
2009 International Fire Code: Appendix D: Fire Apparatus Access Roads, Figure D103.1: Dead-end Fire Apparatus Access Road Turnaround
Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds, FHA, 2007.

Trailhead Parking Areas

Trailhead parking areas have three transition zones that should be considered to ensure a smooth and pleasant transition from road to trail: between the main road and parking entry area, where you park and exit the car, and at the entry point to the trail system.

Siting and Layout

- Parking lot locations should be sited on flatter sites and be configured to meet suggested parking counts with a minimum of impact to the site and disturbance to existing vegetation.
- Parking area layouts should be rational and customized to each site. Utilize curved edges whenever possible and appropriate.
- Parking areas should follow the existing grades of the land as much as possible. Stormwater runoff should be managed toward centrally located or perimeter vegetated swales and away from trails.
- Parking spaces and parking lot circulation should be organized in a logical and space-saving way.
- Parking spaces should be located to permit safe, unobstructed access to the trail gates and entry points. Wheelstops or natural barriers can be used to designate pedestrian areas from vehicular or parking areas. Spaces should not block access to trails located at the trailhead.
- A user information area should be included along the pathway adjacent to the trail access gate. Trailhead amenities and signage can be located in this area.

Visibility

- All trailheads should be marked and clearly visible from a distance.
- Where possible, trail kiosks or signs at the trail entrance should be visible from the road. Where this is not feasible, a monument sign for motorists should be placed at the entrance to the trailhead access road.
- The trail entrance, or transfer point, should be highly visible and utilize natural anchor points and gateway effects to attract users.

Materials

- Parking area surface should be gravel or base course to match the color of existing soils in non-accessible areas.
- Wheelstops can be colored concrete, kiln-dried wood timber, or railroad ties.
- Bollards, boulders, or other natural elements such as vegetation can be used to delimit circulation zones or serve as anchoring devices.

Amenities

- Trailhead amenities should be tailored for the users of the particular trailhead. At a minimum, each trailhead should have a trash receptacle and signage.
- Recycling receptacles should be provided at all trailheads with parking.

Emergency Access

- Roadways and trailhead parking / turnaround locations shall be designed per Santa Fe County code at least 20 ft. wide.
- Access to the trails with 4- or 6-wheel/ATV vehicles must be accommodated to extract injured persons from remote locations. Locked side gates at trail entry locations is an acceptable option for providing emergency access.
- At dead-end access roads with parking lots, parking lot areas should comply with the 96' diameter cul-de-sac design in *Appendix D of the 2009 International Fire Code, Figure D103.1 "Dead-end Fire Apparatus Access Road Turnaround"*. This will require a 96 foot diameter turning area within the parking area.

Fencing + Gates

- Trail user access should be controlled through perimeter fences and gates to access the trail system.
- Fencing and gate layout in parking areas should be designed with safety in mind to prevent short-cutting and direct users to the transfer point. (see *Fencing + Access Control, p. 52*).

Trail Entry Points

Trail entry points are locations where a main trail meets a road, continues beyond the property boundary, or connects to the internal trail system.

- The transfer point should be easily visible from the road or major trail intersection. Signs should be placed along the road warning drivers of upcoming trailheads and/or at grade crossings.
- The transfer point should have good sight lines along the road or major trail in each direction.
- The level of development should fit the context of the surrounding area.
- Fence sections or vertical elements can be used to direct users and draw attention to the trailhead, or transfer point.
- A user information area or wayfinding signage should be included in the layout to direct and inform trail users.
- Gate access should follow standards outlined in *Fencing + Access Control, p. 52*. Gate type, location and setback should conform to the users and type of trail.

TRAILS

The proposed trail typologies of the Thornton Ranch Open Space system are based on intended users' needs, educational opportunities, and site specific conditions. Each trail type shall meet the guidelines as outlined in this document. New trail construction and existing trail maintenance shall conform to these guidelines to ensure that the quality of the trail system is sustained.

Intent

The trail layout and design standards in this document identify techniques to design and construct a sustainable trail system that is intended to minimize maintenance needs, reduce ecological impact, provide positive user experience, and promote safety. Through proper layout and construction, trails can shed water and be more resistant to the destructive impacts of precipitation, freeze/thaw, and frequent or improper trail use. The following standards and guidelines are designated based on a trail's expected user type, user volume, and area drainage patterns.

Standards

New trail construction and realignments should consider existing topography, natural features, cultural resource avoidance, user type, recreational experience, skill level, and sustainable trail construction in the layout and execution of the trails.

When laying out recreational trails, the following standards shall be used:

- USDA (US Department of Agriculture) Forest Service *Standard Trail Plans and Specifications*,
- IMBA (International Mountain Bicycling Association), *Trail Solutions*, "The Principles of Sustainable Trails", and "Trail Construction"
- *Natural Surface Trails by Design*, Troy Scott Parker, Natureshape LLC

For accessible multi-use trails, in addition to the national accessibility standards, the following standards shall be used:

- AASHTO (American Association of State Highway and Transportation Officials), *Bike Guide*

Trail Components

Intersections

Trail intersections should be clearly marked (see *Environmental Signage*, p. 56), have adequate lines of sight, and be designed for continuous flow. To clarify designated routes and minimize trail migration, techniques should be utilized such as: installation of edging material (stones, branches, etc), surface clearing of trail route, and revegetation of non-trail areas.

Arroyo / Drainage Crossings

Trails that cross arroyos and drainages should be designed for minimal impact to arroyo banks. It is assumed that internal trails will not have constructed crossings and will descend into sandy arroyo bottoms. At access points with these crossings, warning signs should caution trail users of variable trail conditions ahead.

At intersections between the regional multi-use trail and major drainageways, bridges can be installed, particularly in locations where the trail utilizes the historic rail bed. In these locations, wood timber trestle structures or crossing beds of retired railroad cars may be used to evoke traditional railroad structures. Bridge designs will vary depending on the length and height of the crossing and on the type and amount of trail use. Bridge designs should meet accessibility requirements, if applicable, and be easily passable by horses. On open space trails, a simple wooden bridge may be used. Professional assistance should be sought to design and install bridge and culvert crossings.

On accessible trails, paved low water crossings should be designed for ease of use and minimal impact on the flow of stormwater. Exposed aggregate colored concrete should be used to match the adjacent surface material and blend into the landscape.

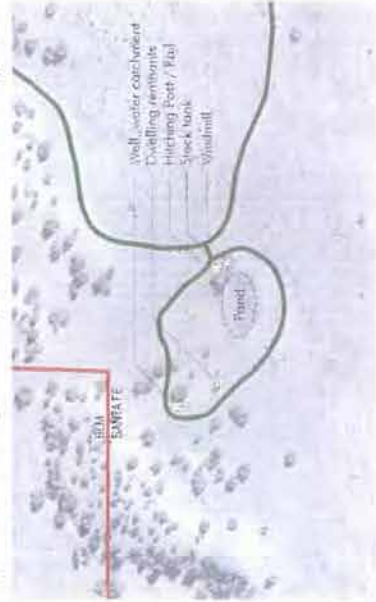
Materials

Materials used for construction of trails, trail elements and adjacent site restoration should be natural, locally sourced materials that approximate the colors of site materials to the greatest extent possible (see *Materials Palette*, p. 45). Imported materials should be kept to a minimum in order to retain the natural wilderness area. Imported materials for erosion control should be used sparingly and should be biodegradable.

Image 4-1: Accessible Low-water Crossing



Figure 4-4: Trail Layout Example at a Historic Ranching Site



Trails Near Archaeological Sites

In general, trails and other construction within the Thornton Ranch Open Space will avoid archaeological sites and, if possible, views of archaeological sites to preserve documented cultural resources. However, in some cases features are highly visible. These features have vertical components (windmill, ruin, etc.) that are still visible in the landscape and are difficult to hide. For the most part, these sites have a dominantly historic component. In lieu of attracting unwarranted visitation, it is recommended to encroach on these sites and mitigate the effects.

Standards

- Avoid sensitive features.
- Orient the public away from and out of the viewshed of sensitive features.
- Remove mention of sensitive feature names from maps and literature.
- Place informational signs at major access points to notify users about general rules of access and fines for non-compliance (include information on non-collection, leaving artifacts in place).
- Introduce visitors to the site, and review general rules through an orientation talk given by a ranger or volunteer.

Guidelines

- Provide interpretive information to educate visitors about the feature, its historical context, and how things have changed.
- Design interpretive signage to provide information, but not detract from the view and overall experience of the site.
- Identify clearly defined walking paths with edging material / barrier (rock edge, rock curb, low wall, signage, etc.) to distinguish paths from site features.
- Locate paths within view of feature and surrounding landscape but out of reach of features.
- Restore / reseed unused visible paths / ranch roads not designated as part of the trail system to limit off-trail exploration.
- Utilize boardwalks or grade-separated paths to clarify the distinction between current access and past use and to protect sensitive cultural sites, ecologies, and wet areas.
- Warn visitors of the effects of picking up or removing artifacts from the feature (in an effort to encourage respect).
- Provide designated seating adjacent to path to prevent visitors from sitting on features.
- Provide hitching rails a short distance from features for equestrians to tie their horses and approach on foot.
- Repair feature components (eg. windmills) so they operate and can be used to help tell the story.
- Install new features to facilitate access that clearly indicates the construction is new, yet is a component of a historic site (eg. railroad trestle for trail access).

Regional Trail

The Regional Trail is a wide, primary trail connecting to regional recreation areas and trail systems. Road crossings along this trail type should be avoided or minimized to allow the user a vehicle-free trail experience.

- Standards**
- Tread Surface: Hard, packed, crusher fines surface; free of large cobbles; occasional short bridges or paved at-grade drainage crossings.
 - Features: Above-grade and at-grade drainage crossings.
 - Trail Tread (width): 4 - 8 feet
 - Trail Corridor (clearing width): 12 - 14 feet
 - Trail Ceiling (clearing height): 10 - 14 feet
 - Cross Slope: 2-5% maximum
 - Percent Grade: 5% max (where possible)
 - Turning Radii: 50 feet (where possible)
 - Sight Distance: 100 feet

**Note: Initial trail buildout to follow Multi-Use Trail standards. Once regional connections are made, the above standards shall be implemented.*

Accessible Trail

The Accessible Trail is a designated loop that meets ADA accessibility requirements to the greatest extent possible and has a soft surface side path for equestrian use.

- Standards**
- Tread Surface: Hard, packed, stabilized surface, paved in some sections; paved low water drainage crossings.
 - Features: At-grade accessible arroyo crossings.
 - Trail Tread (width): 5 - 6 feet
 - side path (width): 18 inches
 - Trail Corridor (clearing width): 12 - 14 feet
 - Trail Ceiling (clearing height): 10 - 14 feet
 - Cross Slope: 2% maximum
 - Percent Grade: 5% max (where possible)
 - Turning Radii: 10 feet minimum
 - Sight Distance: 50 feet

Users Permitted



Figure 4-5: Regional Trail Section

Users Permitted

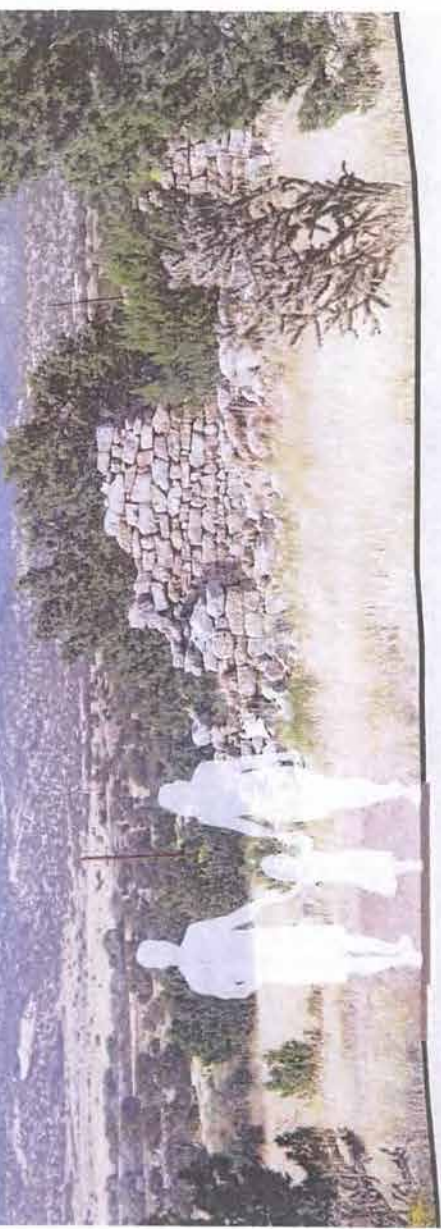


Figure 4-6: Accessible Trail Section

Multi-Use Trail

The Multi-Use Trail type provides the easiest, widest trails within the trail system. These trails have a wide clearing distance between vegetation and gentler grade changes, allowing ample sight lines and passing space. Overall, these trail characteristics provide the safest trail routes for all trail users.

Standards

Tread Surface: Hard, packed, stable dirt; free of large cobbles with occasional drainage crossings with sandy bottoms.

- | | |
|---|---|
| Trail Tread (width): | 5 - 6 feet (existing)
18 - 30 inches (new) |
| Trail Corridor (clearing width): | 6 - 12 feet |
| Trail Ceiling (clearing height): | 8 - 10 feet |
| Cross Slope: | 2-5% maximum |
| Percent Grade: | 5% or less (avg); 10% (max) |
| Turning Radii: | 10 feet (min) |
| Sight Distance: | 100 feet |



Figure 4-7: Multi-Use Trail Section

Backcountry Trail (single-track)

The Backcountry Trail type provides more difficult trail segments off the wider multi-use trails. These trails have multiple elevation changes, denser vegetation, and tighter switchbacks.

Standards

Tread Surface: Hard, packed, mostly stable dirt; occasional loose rocks, drainage crossings with sandy bottoms.

- | | |
|---|---|
| Trail Tread (width): | 12 - 18 inches |
| Trail Corridor (clearing width): | 4 - 6 feet |
| Trail Ceiling (clearing height): | 8 - 10 feet |
| Cross Slope: | 5% - 10% |
| Percent Grade: | 5% - 15% (max) |
| Turning Radii: | 4 - 5 feet |
| Sight Distance: | 15 feet, typ.; varies
(depending on density of vegetation) |

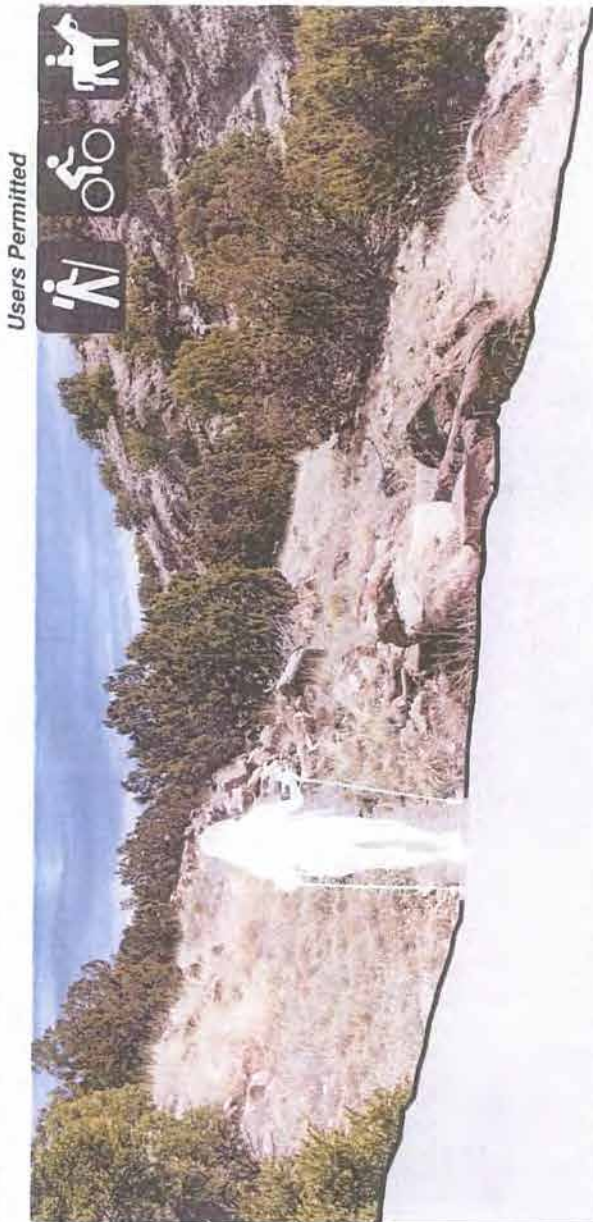


Figure 4-8: Backcountry Trail Section

FENCING + ACCESS CONTROL

The Thornton Ranch Open Space Master Plan calls for perimeter access control to regulate types of users entering the trail system and safeguard users and the property itself. Access control includes fencing or other barriers combined with logically placed points of entry designed to permit access by users of the trail system and prevent unauthorized access.

Just as fencing and access control is intended to regulate unauthorized access, it also should allow wildlife mobility. Fencing and barriers should be placed selectively to minimize habitat fragmentation and connect contiguous areas of open space. Riparian corridors are especially recognized locations for wildlife vegetative cover and animal movement.

At trailheads and trail access points, fencing and gates will frame a formal gateway, or entry, into the trail. Access gate type and location will be dictated by the type of trail and trail users that are allowed access at those locations. Typical trail access points will prevent OHV and motorized vehicle access. Where maintenance and emergency vehicles require access, locked gates can be installed adjacent to or a short distance from designated trail access points.

Image 4-2: Ranch Fence (existing traditional fence)



Materials

Intent

In keeping with the rural aesthetic of the Thornton Ranch Open Space, all access control materials shall be constructed of natural, durable materials that blend in with the landscape and can withstand the local climate with minimal maintenance.

Standards

- Fence materials shall be weathered steel, wood, or a combination thereof.
- Gate materials shall be weathered steel, wood, or a combination thereof to complement adjacent fence types and materials.
- Access control barriers shall be of natural materials such as boulders or steel posts.

Fencing

Intent

The primary objective of fencing the Thornton Ranch Open Space property is to secure the perimeter to prevent illegal access, overnight campers, and unregulated motorized vehicular use. Fencing should still permit large and small migrating animals to pass through the area.

Fencing or perimeter access control measures should also allow water to flow freely within drainageways without holding up debris.

Standards

Designated perimeter areas shall be fenced with a five-strand barbless wire fence or ranch fence. In order to allow wildlife crossing, the fencing should maintain the following requirements:

- Bottom wire/bar should be at least 16" above the ground.
- Top wire/bar should be 40" above the ground or lower.
- Top two wires should be at least 12" apart.
- Reference: "Fencing with Wildlife in Mind"

Guidelines

- At large arroyos where designated trail access points are located, fencing should terminate along the embankment of the arroyo and trails should be accessed following standards set in *Barriers*, p. 53. At large arroyos that are not access points, appropriate access control measures should be implemented to prevent unauthorized motorized access into the site.
- At small drainageways that are not designated access points, the water gap areas may be spanned with fences using either large rocks supported by heavy gauge wire or line posts as anchor points.

Image 4-3: Fence across Drainageway w/ suspended wood barrier



Barriers

Barriers help prevent unwarranted access along drainageways, trails, thresholds, and other locations where less obtrusive but effective access control is needed. In locations where major drainageways extend beyond the site boundary, and fencing is impractical, a combination of grade control structures, arroyo bottom barriers, and selective fencing may be better suited to prevent unlawful vehicular access. In locations where trail users need reminders to stay on trails or where trails are located in proximity to sensitive areas, barriers can be placed to define the limits of the trail and guide users.

Intent

Along the property boundary at arroyo beds it is important to use a barrier that will not limit stormwater or wildlife movement yet prevents vehicular access.

Standards

Boulders, drop structures, or other approved elements may be used to prevent vehicular traffic from accessing the open space area through arroyo corridors. Boulders, if used, should follow the following specifications:

- Spacing between boulders and fenceline: 36" max.
- Height of boulder: between 16" and 30"
- Width of boulder: at least 24"
- Drop structures to be designed to accommodate projected flows

Electronic surveillance may be used selectively along the property perimeter to monitor illicit entry. Surveillance systems must be discreetly sized and located out of view, powered by battery or solar panels (not hard wired), and linked to a centralized notification system.

Non-Motorized Trail Access Openings / Gates

Gates or fence openings shall be selected and sited to permit easy entry for allowed users and prevent entry by unlawful users of the trail or area. Gates and opening types have been identified for selected trail types. Other opening types not identified shall be reviewed by County staff prior to installation.

Multi-Use Trail Access

Intent

Multi-use trails are intended for all non-motorized users and their equipment. Access gates to these trails will serve to control motorized vehicles from entering the site, but must allow access for trail users of various sizes, including hikers, people in wheelchairs, strollers, bikers with their mountain bikes, and equestrians with their horses.

Standards

All trailheads and trail access points with entry into regional trails and multi-use trails shall have a 32" wide clear opening to allow equestrian passage as well as wheelchair accessibility (see Image 4-4).

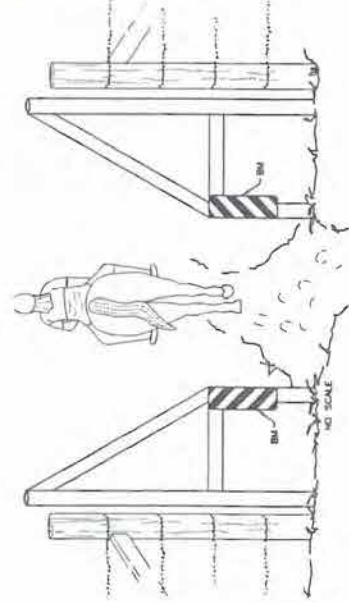


Image 4-4: Multi-Use Trail Access - Horse/Wheelchair Accessible

Backcountry Trail Access

Intent

Backcountry trail access gates or openings, if needed, should effectively restrict ATV access into the trail system, but should allow comfortable passage of hikers, mountain bikers, and equestrians with their horses through the entry-point. Mountain bikers may need to dismount before going through backcountry trail access gates.

Standards

Trail access shall be 'V' style gates with a bottom style or log 12" maximum above finish trail grade (see Image 4-5: *Backcountry Trail Access Opening*). Clear opening at the base shall be no wider than 24".

Image 4-5: Backcountry Trail Access Opening



OPEN SPACE AMENITIES

The primary objective regarding selection of site furnishings and amenities within the Thornton Ranch Open Space is to provide an enjoyable user experience while maintaining a cohesive and consistent aesthetic throughout the open space area.

Selections should be guided by durability and minimal maintenance and should be made of natural, recycled materials that can be locally sourced or fabricated, where possible. Simple materials such as steel, wood, stone, and concrete as identified in the *Figure 4-3, Materials Palette* resonate well with the site's existing features. Site furnishings, once selected, should be used as the standard for all similar type furnishings.

Restroom

A permanent one-room (unisex) restroom facility should be installed and clad in materials that harmonize with other site amenities and constructed elements. Design style should be simple and unobtrusive to reduce its visual impact and utilize the same exterior cladding materials as other structures and site elements. Restroom facilities should be sited next to trail access points at major trailhead / parking areas and nestled within existing vegetation.

- Restrooms should be either a waterless with an underground vault or a composting-type facility.
- Restroom siting to be located discreetly at trailhead and to consider access for both users and for maintenance.
- Doors to be self-locking on a timer.
- Restroom amenities to be vandal-resistant and low maintenance.

Storage / Office

If needed to facilitate the management of the property, a storage area or small office for a site ranger can be attached to and integrated with the restroom building. Any utilities needed for the operation of the restroom and adjacent facility shall be hidden from view and integrated with the building or surrounding landscape. Building operations shall emphasize sustainability and use renewable resources where possible.

Shade Structures / Shelters

Shade structures and shelters shall be custom fabricated in metal or heavy timber (or a combination thereof), simple in form, and located in high use areas. Design style and material shall be similar for each structure.

Educational Area

An educational threshold will capture the attention and imagination of visitors and trail users to orient them to the facility and introduce them to the many facets of the property. This transitional space will reveal the fragility of the place and help instill respect for the land and its treatment.

- Installations should address a broad range of audiences using different media.
- A multitude of senses should be engaged (sound, visual, tactile) in order to be engaging and transformative.
- The area should be a place of transition where the visitor actively passes through it and can interact with it.
- An artist or multiple artists should be involved in the design of this area.

Art

The Santa Fe region is recognized internationally as a creative arts community with a rich history of art fundamental to its culture. This legacy should be reflected in the educational public spaces of the Thornton Ranch Open Space. Artwork will be encouraged to be provocative, visually beautiful, intellectually stimulating, and respectful of the environment.

- Public art should relate to its physical / cultural context and contribute to the concept of education.
- All public visible art work and its placement must be reviewed and approved by the land manager to ensure it is in keeping with the overall image of the Thornton Ranch Open Space and does not interfere with the goals and purpose of the project.
- Temporary installations (eg. 6 months) could become permanent with approval.

Seating

In deference to the sacred nature of the site, seating shall be limited and will be located only in designated interpretive sites, educational areas, and at major trailhead locations. Seating may also be sited internal to the open space area, at key lookout points of major trail intersections.

- Locate seating in shaded areas when possible.
- Install seating adjacent to trail surfaces, provide access to the seating area, and allow clearance between the trail and seating to avoid conflicts.
- Seating to be made of stone boulders or other materials as outlined in the materials palette.
- Seating for larger audiences to be configured in amphitheater-style and nestled into the existing terrain.

Trash Receptacles / Recycling Receptacles

Trash receptacles and recycling receptacles shall be placed at all primary trailheads, secondary trailheads, and parking areas in order to maintain a clean and tidy trail system and open space area.

- Receptacles shall be freestanding, a minimum of 32 gallon size, wildlife proof, and of steel construction.
- Secure receptacles to the ground in open areas.
- Provide internal plastic liners to facilitate trash collection.
- Receptacles shall be of the same style and in a neutral color to harmonize with other site furnishings.

Access Control Barrier

Bollards or other barriers shall be used to prevent vehicular access into the trail system.

- Bollards shall be 6" diameter weathered steel posts with flat tops and reflective markings visible from all sides.
- Barriers can be made of large boulders, rocks, or other approved materials.
- Space bollards or other barrier with min. 32" and max. 44" clear opening.
- Bollards / barriers should be able to withstand minor vehicle impacts.
- Provide removable bollards or lockable side access gates where emergency or maintenance vehicle access may be needed.

Lighting

To keep the Thornton Ranch Open Space area as an open space preserve that adheres to international dark skies, lighting will not be provided as a site amenity. Where lighting is deemed necessary for security or other reasons, light fixtures and poles should be simple, durable, complement other site furnishings, and utilize renewable energy (such as solar). In all cases, lighting shall meet Dark Skies code requirements.

Amenities Not Included in Plan

Certain amenities found in typical recreation areas are not being considered for the Thornton Ranch Open Space in order to retain the area as an open space preserve. These include:

- Picnic tables
- Dog waste receptacles
- Lighting
- Drinking water / water fountains

Image 4-6: Animal Proof - Trash / Recycling Receptacle

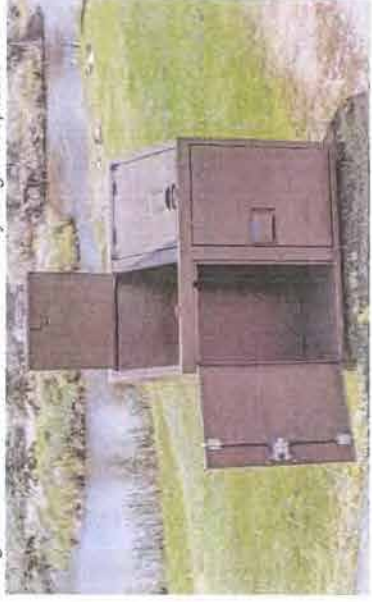


Image 4-7: Trailhead with amenities, fencing, and boulders



ENVIRONMENTAL SIGNAGE

Proper signage and wayfinding is key to an enjoyable, enriching, and safe recreational experience. In the Thornton Ranch Open Space, the signage program will consist of regulatory signs, directional, wayfinding, and interpretive signs.

Included in this section is a schematic signage program for internal directional and wayfinding signage for recreational users to navigate the open space area. All other signs, such as required regulatory and traffic signs will be selected and installed according to applicable codes.

Sign designs should conform to the Santa Fe County signage plan and complement any signage design standards in place for adjacent properties (BLM, etc.).

An interpretive sign program will be developed for the Thornton Ranch Open Space in coordination with the master plan and the Galisteo Basin Interpretive Plan.

Wayfinding Signage Master Plan

The signage plan for the Thornton Ranch Open Space introduces a family of signs that will be placed throughout the trail system to help users interface with the recreational trail system. The signage system is intended to orient users, establish rules of use, provide panels with additional information, and assist with orientation for emergency responders.

The sign hierarchy includes a gateway monument sign, trailhead kiosks at all major trailheads, secondary trailhead signs at minor trailheads/access points, and trail markers at internal junctions and along trails. Regulatory signs will inform users of rules, regulations, or best practices for trail use.

All signs within the Thornton Ranch Open Space should be designed and placed with consideration to surrounding materials, resource preservation, circulation patterns, lines of sight, and other factors that affect the legibility, use, and experience of the place.

Brand

A distinctive logo or brand identity for the Thornton Ranch Open Space system should be developed and adopted, and used to identify the Thornton Ranch Open Space.

Roadway Directional Signs

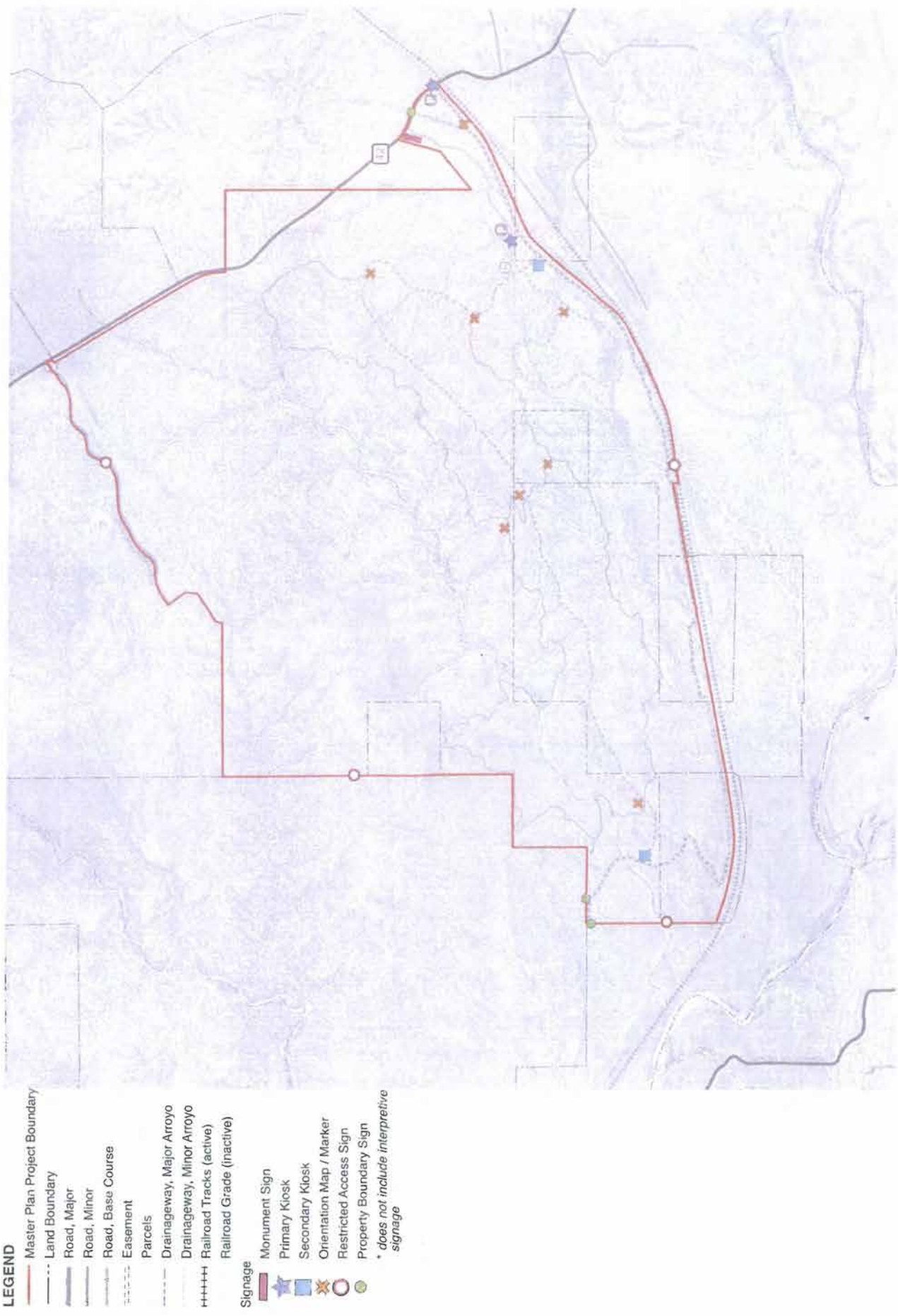
Directional signs for the Thornton Ranch Open Space will indicate directions to the facility and also to nearby destinations or support facilities. Directional signs should be placed on approaches to the trail along roadways within the adjacent community and at major connection points, to direct people to the Thornton Ranch Open Space. Directional sign design should utilize the Thornton Ranch Open Space logo and brand identity and meet the applicable signage standards within that jurisdiction (eg. MUTCD).

Intersections and Crossings

The Thornton Ranch Open Space system is intended to provide safe routes separate from roadways. However, the trails abut CR 42 on the east edge of the property. Path approaches to these crossings should be signed with Stop or Yield signs to minimize conflicts with vehicles. Crossing signs should be placed in advance of path crossings along the roadway to alert motorists. If needed, traffic control devices on roadways should be used to slow down traffic in the vicinity of crossings.

In general, all signs should be located two to four feet from the edge of the trail or paved surface, and have a minimum vertical clearance of 8.5 feet when located above the path surface and be a minimum of four feet above the path surface when located on the side of the path. All signs should be oriented so as to not confuse trail users.

Figure 4-9: Environmental Signage Master Plan



The family of signs for Thornton Ranch Open Space is meant to be easily legible, durable, and complement the natural surroundings. The expression of the sign mounting as well as the detailing of the Thornton Ranch Open Space brand identity and wayfinding should reference the unique history and materials of the site in a way that creates an experience for visitors and connects them to the place.

The following sign family illustrates the recommended informational content to be included in each sign type, and does not illustrate a final design.

Monument Sign

Gateway sign indicating arrival to the site at the main entry off of CR 42. This sign sets the tone for the materials and character of the facility. The entry monument sign and sign base should be integrated with the entry gate(s) and adjacent fencing and consider vehicular access and turnaround.

The entry sign should be properly scaled for the landscape so it is clearly visible but does not interfere with the expansive views of the property. Information will be provided on ownership, partner agencies, opening hours, and contact information.



Figure 4-10: Monument Sign Example

Primary Kiosk - Trailhead

Orientation, regulatory, best practices, and informational maps in an expandable kiosk format at major trailhead locations. Space will be provided for the community to post information for trail users.

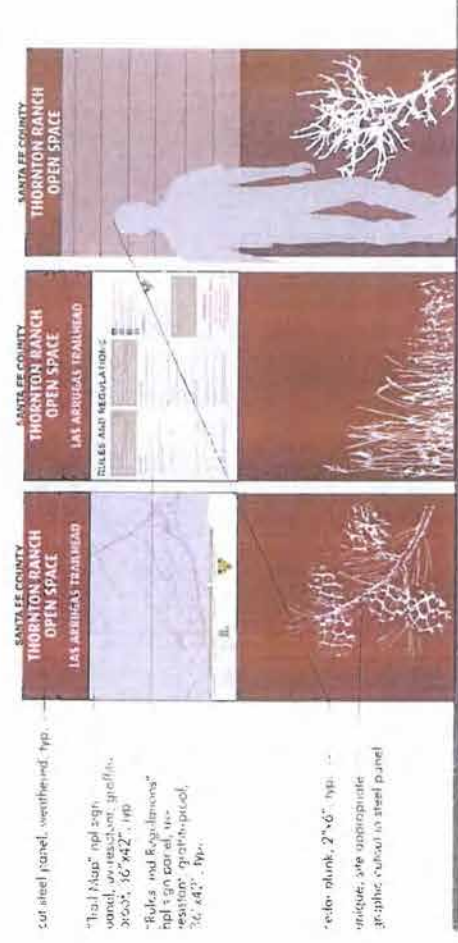


Figure 4-11: Primary Kiosk Example

Secondary Kiosk

Orientation and regulatory map series at secondary entry points to the trail system, typically from off-site trails or open space areas.

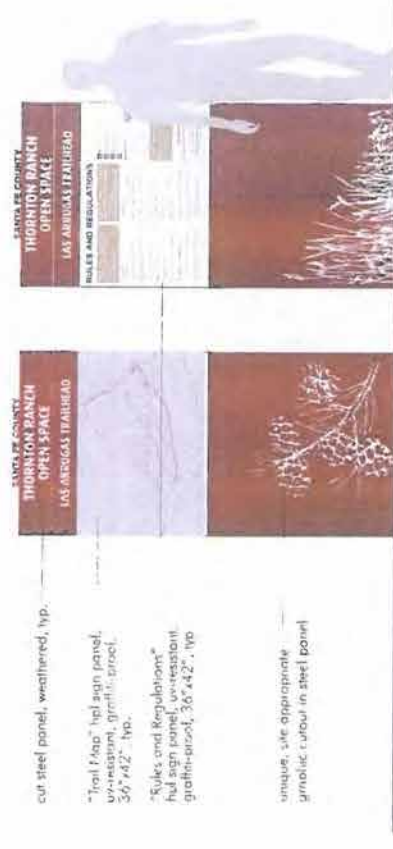


Figure 4-12: Secondary Kiosk Example

Orientation Map / Interpretive Panel

Orientation map / interpretive sign (reduced size) series at trail intersections.

Interpretive sign panels may be integrated with existing features (eg. windmills, stock tanks, etc.) and other signs where feasible.



Figure 4-13: Orientation Map / Interpretive Panel Example

Trail Marker

Trail marker sign series at trail intersections to designate trail name and direction. Trails are named for ease of wayfinding.



Figure 4-14: Trail Marker Example

Regulatory Sign

Regulatory sign series at edges of property, entrances to technical trails/areas, etc.



Figure 4-15: Regulatory Sign Example

Maintenance and Operations

The maintenance and operation of the Thornton Ranch Open Space will be guided by the Thornton Ranch Open Space Management Plan, a separate document that accompanies this plan. The Thornton Ranch Open Space has been designated by Santa Fe County as a preserve. Accordingly, the best management practices adopted by the County for preserves will ultimately determine how the property will be managed.

The following information provides an overview of some of these best practices to help ensure goals outlined in the management plan are met.

Providing a thorough ongoing maintenance program will benefit the basic physical, aesthetic, and environmental qualities of the facility, and result in many other benefits:

- A high standard of maintenance is an effective way of helping advertise and promote the facility as a local and regional recreational resource.
- The psychological effects of good maintenance can be a deterrent to vandalism, litter, and encroachments.
- Good maintenance is necessary to preserve positive public relations between adjacent land owners and between public agencies.
- Good maintenance can help make enforcement of regulations more efficient. Local clubs, interest groups, and neighbors will take pride in the facility and will be more apt to assist in its protection.
- A proactive maintenance policy will help improve safety.
- Regular, routine maintenance on a year-round basis will prolong the life of the facility.

MAINTENANCE AND OPERATIONS

Identifying the appropriate strategy for management, maintenance and site operations is a critical component to a well-planned open space and trail system. A program that addresses maintenance and operations will encourage the use of the facilities and deter problems such as vandalism, littering, trespass, and unauthorized trail use.

Such programs require the right level of staffing and realistic funding allocations. It is anticipated that the maintenance and management arrangement for the Thornton Ranch Open Space will involve a combination of agency staff, partnerships between agencies, tribal involvement / oversight, and support from organized, ongoing volunteer groups.

Basic management and maintenance-related design objectives for open space facilities include:

- Provide a suitable design to support intended uses, minimize conflicts and impacts, and maximize safety, while accommodating access for maintenance and emergency purposes.
- Provide durable vandal and weather resistant design and materials appropriate to the setting that minimize maintenance needs.
- Provide adequate fencing, gates, stiles, signage and other access control to the trail routes to clarify rules of use, minimize conflicts between users and impacts on adjacent land uses.
- Provide adequate informational, traffic control, regulatory, and wayfinding signage.
- Provide clear site monitoring, reporting, and restoration guidelines to manage open space areas and cultural resources.

PERSONNEL

Staffing the Thornton Ranch Open Space with the proper personnel and clarifying job descriptions can help ensure the smooth operation of the facility and protect resources.

Some tasks required to ensure the proper operation of the facility and protection of resources include:

- Administration: includes establishing rules, administering special permits / events, performing inspections, managing changes to open space operations, updating management plans, coordinating with citizen involvement groups, and tracking visitation
 - Maintenance: includes routine facility / preventative / corrective maintenance, cleanup of restrooms, picking up and hauling garbage, and caring for landscape areas
 - Protection: includes basic law enforcement, public contact and visitor services, administering first aid, coordinating emergency procedures, and facility protection
 - Resource management: resource protection, monitoring, reporting, and management
- Some additional tasks to set apart the Thornton Ranch Open Space facility and promote its more unique attributes include:
- Visitor services: includes interpretation, organizing and administering park programs, public communication (written, electronic)
 - Cultural services: includes coordinating / administering temporary art installations, interpretive information rotation / updates, advertising and marketing
 - Environmental services: environmental monitoring and documentation; environmental interpretation

RULES OF USE

In order for the vision of the Thornton Ranch Open Space Master Plan to be realized, all users of the trails and open space area must be responsible for using the area respectfully, so their own enjoyment of the natural area does not hinder another's enjoyment of the same space.

The following guidelines are key rules of use to which each trail user should adhere:

- Open Space Hours: dawn to dusk, no parking after dark.
- Do not dump or litter; remove all trash.
- Trail users must respect trail signage and stay on designated trails for their particular trail use. No backcountry access.
- Trail users must stay on the trail and yield to other users.
- No ATVs or motorized vehicles are allowed on the trails or within the open space area.
- Dogs are not allowed within the open space and internal trail system.
- Equestrian riders and mountain bikers must be responsible to determine if trail conditions are appropriate for riding; if trail conditions are too wet, the trail tread may be degraded.
- Do not remove or destroy any objects.
- No camping or ground fires.
- No firearms, weapons or fireworks allowed.
- No alcoholic beverages on premises.

Figure 4-16: Trail Etiquette



SHARE THE TRAIL:
The Thornton Ranch Open Space will adopt the National Forest's "Share the Trail" policy, which asks bikers to yield to both hikers and equestrians and hikers to yield to equestrians.

GENERAL AND DAILY USE

In addition to recreational use by permitted users, the Thornton Ranch Open Space is managed by Santa Fe County and has several different land owners, an array of land leases, and diverse security needs.

Recreational Use

Daily access to the trails will be supported through trailheads and perimeter trail access locations. The trails and trailheads will be open to the public daily from dawn to dusk according to Santa Fe County Open Space and Trails Regulations.

No motorized vehicles, with the exceptions of open space maintenance and emergency vehicles will be permitted within the Thornton Ranch Open Space area.

Emergency Use

At times there may be an emergency on the trails. In the case of an injury or accident, emergency responders will locate the injured person and identify an extraction plan.

Depending on the injury, responders may access the trails with a 4- or 6-wheel ATV and transport the person to emergency vehicles parked at trailhead locations. In extreme cases where injured persons cannot be transported over rough terrain, a helicopter will land in the nearest safe location as determined by emergency responders.

In the event of a wildland fire, emergency responders will access the site in a logical location to address the situation in the most expedient manner possible.

Maintenance Use

On a regular basis, the trails, trailheads, parking areas, and site fencing will be inspected, maintained, and at times repaired. The maintenance crew, site stewards, or trail stewards may need to access the site with appropriately sized trail maintenance equipment in order to bring supplies or tools to a specific location within the trails. These parties will be able to enter the site from designated restricted-access locations with permission from the land manager, who will be responsible for supervising vehicular access.

Internal Property Owners

Landowners interior to the Thornton Ranch Open Space with lease agreements with Santa Fe County will access their properties from existing gates to monitor their resources. These include the Bureau of Land Management (3 parcels) and New Mexico State Land Office (2 parcels). As Master Plan implementation moves forward, Santa Fe County will work toward a formal agreement for finalizing trail access, use, maintenance, and restoration efforts on leased land.

Tribal Use

In accordance with agreements to be finalized between Santa Fe County and local tribal entities, tribes will have access to Thornton Ranch Open Space lands.

Stewardship

VOLUNTEER INVOLVEMENT

Efforts will be made by the County to work with volunteer organizations and individuals to help implement some of the projects and assist with stewardship and maintenance. This serves a dual purpose: it builds community appreciation and support for the project, and supplements limited staff resources.

In order to sustain the vision of the Thornton Ranch Open Space Master Plan, the open space and trails must be monitored and cared for on a regular basis. Opportunities exist for Santa Fe County to work with dedicated local citizens, interested individuals and trail users in order to create a sustainable and cooperative management plan for the Thornton Ranch Open Space.

Santa Fe County has an active program that coordinates volunteers to assist with maintenance and rehabilitation projects. Led by a County staff member, Santa Fe County both organizes independent volunteer efforts or partners with local non-profit stewardship-minded entities that focus on stewardship and preservation of public open space areas.

Likewise, cultural resources must also be monitored and protected. Volunteers with SiteWatch, a program administered by the New Mexico Historic Preservation Division, are trained to assist land management agencies to protect New Mexico's cultural resources. The Santa Fe-Galisteo Basin / Pecos NHP chapter of SiteWatch organization visits sites within the Galisteo Basin to monitor and report on their condition. With training, these volunteers can also assist agency archaeologists to monitor maintenance and management activities.

Purpose of a Stewardship Plan

As population growth pressures increase the demands placed on public lands, and agency budgets are not able to keep pace with increased growth and human impacts, public land management agencies are becoming more reliant on trained volunteers to help fill a variety of important roles.

Open space and trail stewards can provide the labor and expertise needed to assist with trail maintenance and open space monitoring and restoration. Tasks may include:

- Trail monitoring
- Trail maintenance (clearing obstructions, clean up, replacing markers, repairs, etc.)
- Trail building
- Ecological restoration
- Invasive species / noxious weed management
- Environmental education / interpretation

Image 4-8: Volunteers performing Trail Maintenance



Many public land agencies are not prepared to manage volunteer projects or provide the necessary resources for project planning, design, and oversight. Through volunteer-based non-profit organizations, volunteer coordinators can successfully build local capacity and organize volunteers.

Volunteers provide extra eyes and ears for public land agencies. They may extend scientific understanding of the system or aid staff responsible for resource management decisions. They enhance visitors' experience, understanding, and appreciation of our lands and community. They help conserve the biodiversity of local ecosystems. Service organizations, schools, businesses, families and individuals can aid staff on short and long term projects including area clean-ups, trail and area maintenance and construction, facility work, habitat restoration and greening and educating the public. All of these help provide care and restoration of our lands.

It is critical that agencies approve volunteer efforts, monitor and facilitate volunteer participation on public lands.

To help ensure the long-term success and sustainability of the Thornton Ranch trails system and open space resources, the following actions are recommended for Santa Fe County:

1. Designate a "Land Manager" for trails / open space areas:

Over time, a diverse range of issues and needs will present themselves that need to be addressed regarding the maintenance and operation of trails and open space areas. These can include emergency issues, clean-up or repairs, promotional marketing, or new project coordination. To direct these efforts efficiently and effectively, the County should designate:

- a single point of contact for all preserve trails/open space area related issues as a member of the county staff (multi-disciplinary).
- require regular reporting as appropriate (COLTPAC, Public Safety, etc.).

2. Allocate funding for trails / open space area management, maintenance and operations:

While the proper design and construction of trail elements and facilities should minimize maintenance requirements, routine maintenance will be needed to retain a safe recreation area. Funding should be allocated as follows:

- recurring funding for management, maintenance, operations, small improvements
- typical rule of thumb \$1,200 / linear mile of trail per year (\$19,200 per year for proposed trails); costs should be monitored annually and adjusted

3. Adopt the Thornton Ranch Open Space Management Plan as a framework for managing the trail system, open space area, and cultural resources:

The Thornton Ranch Open Space Management Plan provides a framework and platform to manage the open space area:

- routine and remedial maintenance
- user safety and risk management
- enforcement of rules of use
- programming and event process
- marketing and promotion
- oversight and coordination with volunteer groups

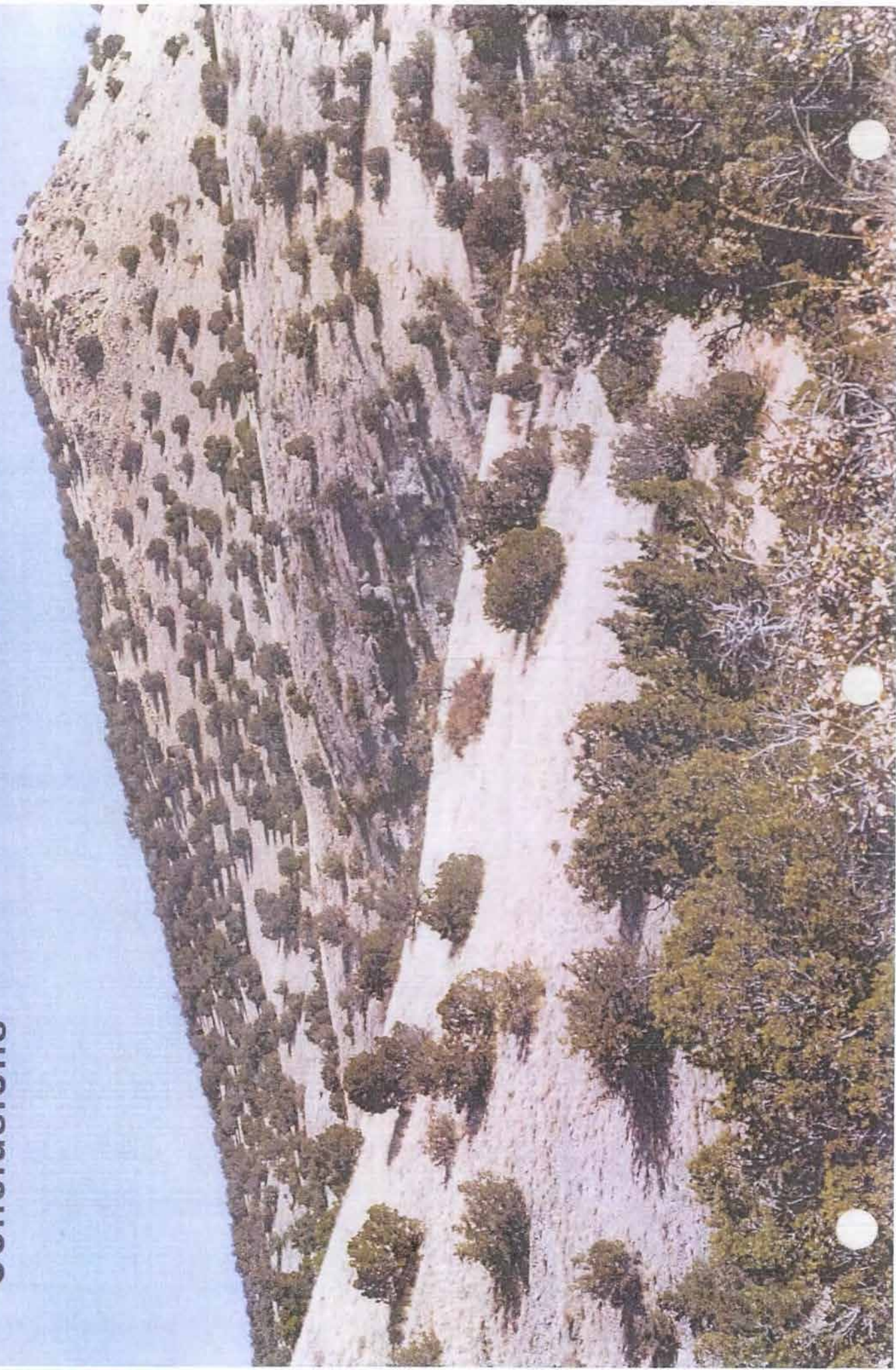
4. Develop guidelines for volunteer involvement:

To maximize the benefits of volunteer and community involvement, a clear and concise process should be outlined and implemented that fits the Santa Fe County community:

- outline process for identifying and implementing projects
- structure a volunteer protocol (eg. trail maintenance, cultural resource monitoring, ecological monitoring, fundraising)
- develop a checklist for maintenance of trails and trail amenities

CHAPTER 5

Conclusions



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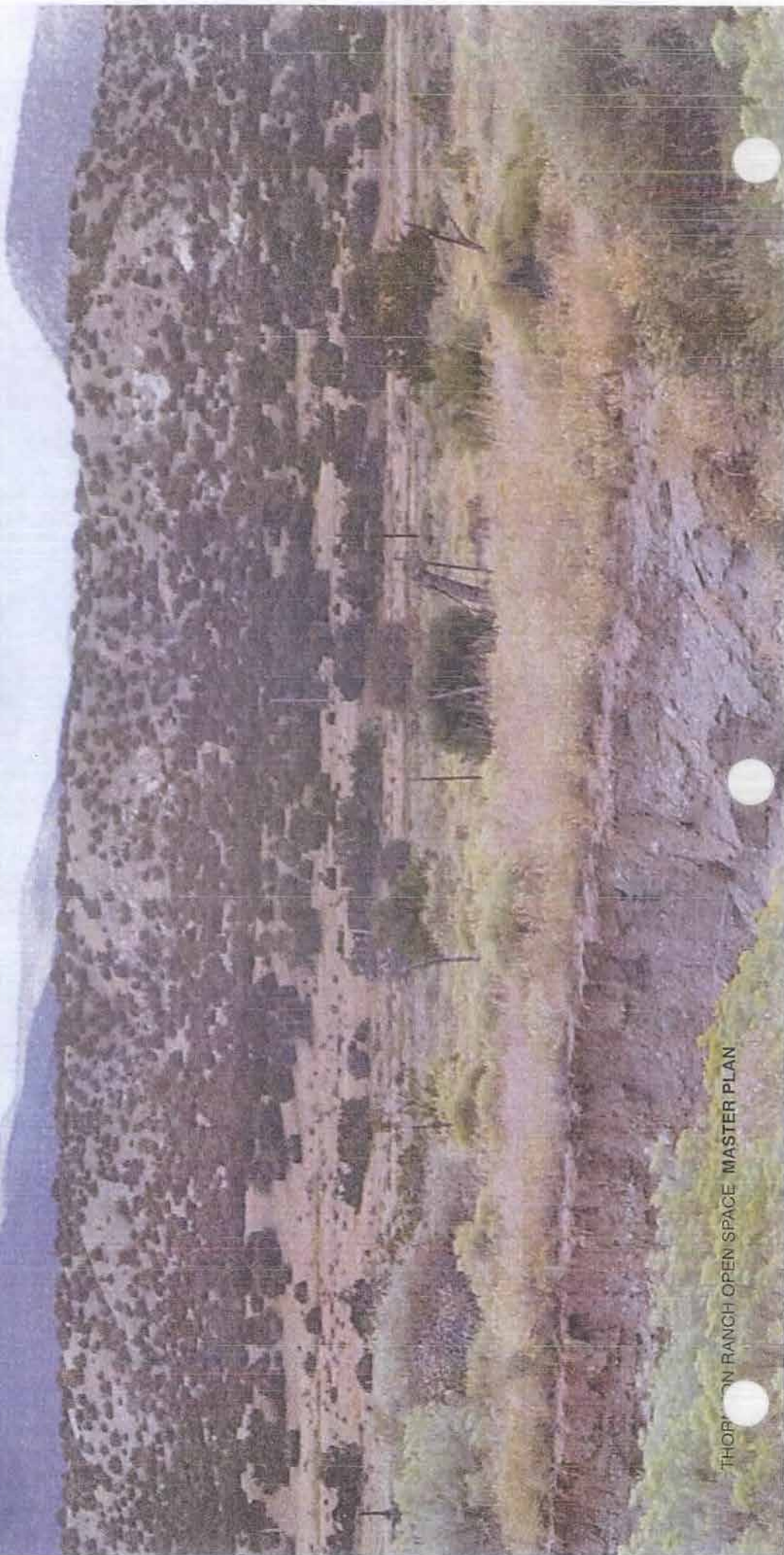


Conclusions

This master plan for the Thornton Ranch Open Space is aspirational in its approach and commitment and will require the collaboration of multiple public and private groups. The master plan document and its appendices present a vision for the open space to be implemented in phases over time as funding allows. This vision represents the input and expertise of many people who dedicated their time and efforts to this design process.

The goal of this master plan document is to provide a guide for Santa Fe County to allow public access to an open space preserve in a way that honors the past and safeguards the future of this significant cultural landscape.

The implementation of the Thornton Ranch Open Space Master Plan promotes a conscientious approach to preserving quintessential features of this landscape and helps raise awareness of the need for continued actions to conserve lands within the Galisteo Basin.



Recommendations

As a result of the planning process, the following series of recommendations are brought forth to help realize the goals and objectives of the Thornton Ranch Open Space Master Plan.

Land / Easement Acquisition

- Purchase inholdings to preserve a complete contiguous open space area and establish a buffer to residential development within close proximity to area resources.
- Purchase buffer properties to provide a larger buffer around the open space area to protect cultural resources.
- Purchase adjacent properties that serve as access points to control access into the site, provide an additional perimeter buffer to the open space, and enable regional trail connections.
- Coordinate re-alignment of existing railroad right of way fence on actual right of way property line in southwest corner of planning area to ensure unencumbered regional trail alignment and interpretation.
- Explore a land trade / purchase with State Land Office for State Trust lands within the project area.

Mineral Rights

- Conduct a title search for subsurface ownership and determine status of subsurface leases (if any) on lands where mineral rights are not owned by the federal or state government. Take steps towards removing mineral extraction on these lands to conserve subsurface resources in perpetuity.
- Work with BLM to remove permits for salable and locatable mineral extraction on Federal subsurface estate within TROS.

Off-site Trail Connections

- Secure regional scale trail connections north along the New Mexico Central Railway grade to connect through Rancho Viejo to Santa Fe.
- Work with the Galisteo Basin Preserve and private land owners to secure a regional trail connection east parallel with the NMRX Railway to connect to GBP trails and Lamy Junction.
- Explore regional trail connections from TROS west to Cerrillos.
- Continue planning efforts with BLM on Galisteo Basin - Cerrillos Hills / Burnt Corn SRMA to provide regional trail connections to the east and to the north to connect to County Road 42.

Additional Studies / Surveys

- Conduct NEPA EA including a biological survey on BLM sites. Survey to be conducted in June when the Galisteo Sand Verbena (class 3 series protected plant) is in bloom.
- Conduct a full survey of locations of invasive species and provide direction on species removal / restoration of native plant species.
- Conduct cultural resource inventory for additional BLM land in southwest corner and SLO corner along NMRX Railway.
- Prepare a baseline biological assessment of wildlife / wildlife movement, and ecological systems. Include recommendations for soil rehabilitation, habitat restoration, grassland restoration, invasive species removal, erosion control, and landscape-wide wildlife habitat / corridor protection measures.

Restoration / Preservation Efforts

- Restore the windmill at the southwest windmill site, build a functional equestrian and wildlife drinking area.
- Remove invasive trees from the area, largely located in drainageways; restore and monitor perimeter locations with invasive weeds.
- Reclaim and revegetate existing ranch roads not designated as trails.
- Install security cameras / sensors at major breach points into the Thornton Ranch Property through drainageways along the rail line.
- Notify NMRX of major breach points along the south property line where trespassers are entering the rail right of way.
- Submit the Thornton Ranch Open Space as a designated International Dark Sky Park or Reserve (as designated by the International Dark-Sky Association). Coordinate with other Galisteo Basin landowners to participate.
- Map significant corridors, landscapes, and viewsheds in need of preservation within the Galisteo Basin.
- Pursue opportunities to establish large land areas within the Galisteo Basin for conservation as part of the BLM Conservation Lands program.

Site Management

- Pursue an MOU with BLM so Santa Fe County can manage BLM inholdings within the open space area.
- Adopt site management and operations plans.
- Do not allow dogs within the TROS to allow for a user experience that instills respect and appreciation for cultural significance, natural qualities, and environmental integrity of the area.

Photography Credits

All photography by Design Office unless otherwise noted

Chapter 2 - Site Analysis

pg.19, bottom left..... www.galisteobasinpreserve.com
 pg.25, left..... Peter Lipscomb
 pg.25, right..... www.lightpollutionmap.info

Chapter 3 - Master Plan

pg.38, bottom far left..... www.wikipedia.org
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Chapter 4 - Master Plan Implementation

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Galisteo Basin Archaeological Sites Protection Act Site Assessment Project

Galisteo Community Plan - (2012, Santa Fe County)

Galisteo Basin Watershed Conservation Initiative

Taos Resource Management Plan - (2012, BLM)

The Village at Galisteo Basin Preserve Master Plan

Thornton Ranch Open Space Draft Management Plan

Santa Fe County Sustainable Land Development Code

Wildlife Studies for the Galisteo Watershed: Biota Information System of New Mexico (2007)

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Glossary

biological assessment - A scientific study or inventory of organisms to assess the condition of an ecological resource.

cultural landscape - Cultural properties that represent the combined works of nature and of man and a landscape which may be valued because of the religious, artistic or cultural associations of the natural element.

cultural resources - Physical evidence or place of past human activity: site, object, landscape, structure, or a site, structure, landscape, object or natural feature of significance to a group of people traditionally associated with it.

encumbrance - A right to, interest in, or legal liability on real property that does not prohibit passing title to the property but that diminishes its value.

exposed aggregate concrete - A concrete surface with the aggregate (fragments of stone) exposed, formed by applying a retarder to the surface before the concrete has set and subsequently removing the cement to the desired depth.

inholding - A tract of land under private ownership within a larger portion of land

interest group - A group of people with voluntary association that seeks to publicly promote advantages for its cause.

interpretive planning - The initial step in the planning and design process for informal learning-based institutions like museums, zoos, science centers, nature centers, botanical gardens, heritage sites, parks and other cultural facilities where interpretation is used to communicate messages, stories, information and experiences.

invasive species

A plant, fungus or animal species that is not native to a specific location (an introduced species), and which has a tendency to spread to a degree believed to cause damage to the environment, human economy or human health.

kiosk signage - A small to medium stand-alone sign that provides information about services.

locatable minerals - The General Mining Law of 1872, as amended, opened the public lands of the United States to mineral acquisition by the location and maintenance of mining claims. Mineral deposits subject to acquisition in this manner are generally referred to as "locatable minerals." Locatable minerals include both metallic minerals (gold, silver, lead, copper, zinc, nickel, etc.), nonmetallic minerals (fluorspar, mica, certain limestones and gypsum, tantalum, heavy minerals in placer form, and gemstones) and certain uncommon variety minerals.

master plan - To develop or improve (land, a community, a building complex, or the like) through a long-range plan that balances and harmonizes all elements.

management plan - The process of assessing an organization's goals and creating a realistic, detailed plan of action for meeting those goals. A management plan takes into consideration short and long-term strategies.

natural resources - Resources that exist without actions of humankind.

open space - A piece of land that is undeveloped (has no buildings or other built structures) and is accessible to the public.

outcropping - A visible exposure of bedrock or ancient superficial deposits on the surface of the Earth.

placemaking - A multi-faceted approach to the planning, design and management of public spaces. Placemaking capitalizes on local community's assets, inspiration, and potential with the intention of creating public spaces that promote people's health, happiness, and well being.

recreationists - Someone who engages in a recreation, especially an outdoor leisure activity.

regulatory signage - Traffic signs intended to instruct users on what they must or should do (or not do) under a given set of circumstances.

restoration, ecological - The return of a landscape, ecosystem, or other ecological entity to a predefined historical state; the practice of renewing and restoring degraded, damaged, or destroyed ecosystems and habitats in the environment by active human intervention.

salable minerals - In 1947, Congress passed an act allowing the disposal of sand, stone, gravel, and common clay through a contract of sale. In 1955, another act of congress removed common varieties of sand, gravel, stone, pumice, pumicite, and cinders from the 1872 mining law and placed them under the 1947 act. Since these mineral materials are available only by sales contract, they are termed "salable" minerals.

site amenities - Feature on a site that provide comfort, convenience, or pleasure (seating, drinking fountains, restrooms, etc.).

stakeholder - Refers to an individual, group, or organization who may affect or be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project.

sustainable trail - A trail that avoids sensitive ecological areas, provides a buffer to protect ecologically sensitive and hydrologic systems, follows best practices of stormwater management, limits tread erosion through design and construction, and follows topography to minimize erosion. Trails often follow areas already influenced by human activity to minimize impact.

viewshed - A geographical area that is visible from a location. It includes all surrounding points that are in line-of-sight with that location and excludes points that are beyond the horizon or obstructed by terrain and other features (e.g., buildings, trees). Conversely, it can also refer to area from which an object can be seen.

wayfinding signage - Signs or markers that encompass the ways in which people orient themselves in physical space and navigate from place to place.

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Appendix A

- A PROGRAMMING / PUBLIC PROCESS
 - Interest Group Meeting (Hikers) - Record
 - Interest Group Meeting (Bikers) - Record
 - Interest Group Meeting (Equestrians) - Record
 - Interest Group Meeting (Educators) - Record
 - Interest Group Meeting (Artists) - Record
 - Tribal Input Meeting 1 - Record
 - Tribal Input Meeting 2 - Record
 - Tribal Input Meeting 3 - Record
 - Public Input Meeting - Record



THORNTON RANCH MASTER PLAN

Focus Group 1: Hiker / Trail Runner

Objective: to collect further information and feedback for possible recreational activities on the environmental and culturally sensitive Thornton Ranch site within the greater context of Santa Fe County's Open Space offerings.

Venue: Thursday, December 11, 2014 9:00am - 10:30 am at the Galisteo Community Center
Format: Discussion
Supplies: Images of site, context map, analysis map, aerial map, relief map, soils map, geology map
Attendees: Jim Owens, Kathy Mastoras, Jim Westmoreland, Gretchen Grogan, Sue Molly, Margaret Alexander
(project team: Claudia Horn, Patrick Sinnott, Colleen Baker, Charlie O'Leary)

General Notes

Introductions

- Site introduction by Claudia Horn: context, ownership, Kennedy Line Railroad, cultural sites, environmental sensitivity, Petroglyph Hill Management Plan, distinct soils and distinct elevations. Erosion potential. Recreation will be un-motorized. 640 square miles, 2300 ac, apx. 2 miles by 2 miles
- Galisteo Preserve has 25 miles of trails and is regionally relevant.
- Preserve was part of Thornton Ranch originally, final phase still to acquire, including area 4000 AC parcel around rail grade.
- Representatives: Santa Fe Striders, Santa Fe Walkabout, Trails Alliance of Santa Fe, Galisteo Basin Preserve / Commonweal.

Connections

- Rail line was only used for a short time. Rail grade could be used as a potential future trail from Moriarty to Santa Fe Depot but access easements along line would need to be negotiated with landowners.
- Santa Fe Striders would love long distance trails and connections would be superb. A big loop would be a draw.
- 50' BNSF access easement is held by Preserve so that potential connection could be linked. Preserve would like to add trails to the west and south in the future.
- Preserve would like to link trails to El Dorado and to the Rail Trail.
- Important to include connection planning in the master plan.
- Massive loop would be great for biking but shorter routes via Eldorado would be more appealing for runners.
- Runners prefer 15 mile long loops. Average weekend runs are 7-13 miles. There are a few people training for marathons that would train at intervals of 26 miles or less. Marathon users like the rail trail because it is flat, but it is usually an out and back.
- Outlining large loops are great. Interconnected systems like the Preserve are ok but would like longer loops instead of doing a bunch of little loops to get miles in.
- There are a handful of people doing 50 mile runs.
- Loops are much more desirable than out and back.
- Potentially, car swap from each direction works ok for point to point. Key element is that out and back is less ideal.
- Would be nice to consider how this works for larger recreation instead of just a small 3 mile hike.
- Ideal to preserve a site access connection to easement along BNSF to the North.
- County is potentially looking at trail connection from Cerrillos area to Galisteo area.

Seasonal Use

- More likely to use site in the winter if it is 10 degrees warmer than Santa Fe.
- Generally runners / hikers use the mountains in the summer, less likely to travel to Galisteo then.
- Preserve is used more often in the winter. Earlier sunset hours are an issue.
- Extreme sun and wind exposure is a turn off.

Santa Fe Walkabout / Santa Fe Mountain Adventures

- Currently groups do tours in the forest.
- Interested in using site and gaining a permit if needed.
- Would offer hiking or biking in Galisteo Basin in winter months.
- Estimate family size or 4-6 people. Usually 2-4 people. Look for half a day experience. Very few would do a 10 15 mile hike.
- Length of hike can make it more difficult / less accessible to large population. Challenging elevation is relative because many people come from sea level and are greatly impacted.

Running

- Ideal scenario is apx. 8 miles. With a perimeter loop and a trail through the center you can minimize overlap and do a figure 8.
- Runners are ok in the arroyo. Way finding is an option. Keep in mind that it may be used by people or equestrians no matter if it is planned as a route or not.

Hiking / Trails

- Arroyo Hondo trails are well planned trails.
- LTT vertical trails have erosion problems.
- Flat trails are a problem because it causes incising, then people transition out of ruts onto a new side route. Need to avoid cupping on any trails on site.
- Important to follow contour when designing trails.
- Important to pay particular attention to location and layout of trails to avoid sensitive landscape and prevent erosion.
- Team will follow similar process of Arroyo Hondo: County worked with Cynthia Lovely.
- Team is confident that varied terrain creates opportunities to avoid sensitive areas.
- Soil protection will be a challenge.
- Make trails sustainable because it is likely that it will not get a lot of maintenance.
- Keep in mind that horsemen do not necessarily respect boundaries and would use the arroyo whether or not it is planned for them to use.

Wildlife

- Dogs would need to be leashed – County code? Leashed or under control.
- Wildlife uses arroyos and is a challenge when opening arroyos to recreation traffic.

Cultural sites

- Hiking and running is social and would like to see sites opened for viewing. Layers of history is very interesting.
- Interpretive signage, visiting sites, would be a tremendous draw.
- These cultural sites are very sensitive and difficult to visit. It is not like La Cienega and it is difficult are to manage.
- Perhaps a one-way route could be an option vs. guided tours.
- May want change name of Petroglyph Hill.
- Utilize "Beware of Snakes" signs to keep people on paths.
- Having access to a sample site may protect large site and create interest for guided tours.
- Trailhead signage outlining protection is essential.

Supplementary amenities

- Keep windmills, they are intriguing.
- Restrooms and picnic tables are nice but not essential for runners. Runners are used to sites that do not have these.
- Composting toilet may be helpful if an option.
- Signage: Dale Ball and LTT signage are the great. Some of the best out there. It is important for people that haven't been on site.



- Ojito Trails (mountain bike west of Albuquerque) – Trail signage has been disfigured, something to keep in mind. Rustic, old looking signs harder to disfigure and fit within the old west style. Cairns may be an option.
- People tend to follow logical trails or trail markers that don't need to be manufactured.

Trails

- Jim- Galisteo Basin Preserve is too much of a network. Running prefers less of a network so they don't have to stop. Usually map out longer loop and do that. Some network connectivity is beneficial.
- Remember that 30' on both sides of trail reduces wildlife habitat.
- Less network will help preserve wildlife habitat.
- Dogs have a distinct impact at the detriment of wildlife
- Include a cap on the trail network in the master plan so that future trails can't create an overly networked system.
- Foundations would be interesting to stop and look at.
- Understood that trails will navigate around cultural sites. Survey in progress.
- Recreationists generally look for longer perimeter loop even in a networked system like LTT. Difference with LTT/ DB is that it is close to town so you might use it often. In that case it is nice to have a network so that you have alternatives once you create a primary long route. A destination like Thornton may not need a network if it is more of a destination with specific sites to visit.

Timeline

- Still need to fund second phase then would need to fund construction. Earliest open 2016. Likely 2018. Unsure if County would ask for Bonds in 2015. Grants could be an option. Capital improvements funds could be an option.

END OF NOTES

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THORNTON RANCH MASTER PLAN

Focus Group 2: Mountain Biker

Objective: to collect further information and feedback for possible recreational activities on the environmental and culturally sensitive Thornton Ranch site within the greater context of Santa Fe County's Open Space offerings.

Venue: Thursday, December 11, 2014 11:00am - 12:30 pm at the Galisteo Community Center
 Format: Discussion
 Supplies: Images of site, context map, analysis map, aerial map, relief map, soils map, geology map
 Attendees: Claudia Horn, Patrick Sinnott, Colleen Baker, Brent Bonwell, Bob Ward (REI), Henry Laneman (Fat Tire Society), Julia Belt (Commonweal)

General Notes

Introduction

- Size 2300 ac compared to 1500 ac LTT, context, project master plan, protect cultural resources, and environmental resources. Non-motorized uses only.
- Personal introductions

Archaeology

- Federally protected location, currently undergoing investigation to inform management plan.
- Petroglyph Hill will likely be guided tours only. Team is to investigate recreational uses.

Regional Connectivity

- 30 minutes radius includes trails that contribute to IMBA certification.
- Members of GUTS sees this as a nexus of regional trail connectivity to the north, Preserve and County land to the west in Cerrillos Hills.
- Smaller potential as stand alone trail system because bicyclists would prefer longer rides.
- County land near the gold mine Placer Peak could be connected via this site. SFCT holds a conservation easement at Placer Peak but SF County trail on Placer Peak is not ideal. It will be realigned in the future but will not be a bicycle trail.
- Important to preserve a wildlife corridor and preserving as trail systems can help with this.
- Fitting a trail system within the bigger picture is important to bicyclists in Santa Fe.
- There is a lot of public land (BLM) to the west that can help with connectivity.
- Any trails on this site should have logical connections to perimeter for future regional connections.
- South of site is less intriguing for a connection but there is open space south that could allow people to connect to Moriarty via rail line.
- Petroglyph Hill is likely guided tours only. Team will investigate recreational uses.
- Colleen: Ball Ranch is a large piece of property that has potential for purchase.
- COLTPAC advised purchasing the Ananda Valley and Easement in anticipation of connection and visitor meeting location.

Biking Trails

- Visitors would not only be people from Santa Fe. Would likely get a lot of people from area.
- There are a few 50 -100 mile bike events that are held in area including "Gravel Grinders. There is an interest in large connected routes and loops.
- On site: anticipate 10 miles minimum. 15 miles is okay. 20 miles is good to make the site a standalone destination.
- La Tierra torture is a 10 mile loop.



- Rock formations and terrain with elevation changes help make trails more difficult trail. It would be nice to experience a trail system in the area that is different then what is available in the Galisteo Basin Preserve (rolling terrain and grassland with some elevation).
- Recommend technical trails. Important to utilize varied terrain.
- IMBA recommends multiple loops from trailhead.
- You can go specifically to rock areas to create varied terrain. Technical trails should be located further away from trailhead because more advanced riders will get farther out onto the trails. Have multiple spots along a single trail that are technical, not just a continuous "technical trail".
- Anything too steep is not great because they are unsustainable trails.
- Longer loops are desirable. Perimeter trail would be great. Envision no conflict with hike/bike.
- Limited small banking is nice on downhills.
- Bikers do not need over engineered trails. Less touch is often better. Handwork is preferred. Utilize motorcycles to define route then crews to touch work. Minimal machine work.
- Expert labor can half volunteer labor time. REI has trail building grants.
- Loose ground can be worked with moisture to solidify a trail.
- Single track trails for hike/bike provides minimal impact when done correctly. Consult sustainable trail builder.
- Galisteo Preserve trail building example: 2 days to flag route, 2 days to correspond with archaeologist, 3 days of clearing, 2 days of riding it in, 1 bonus day to finish up = 4 miles. Process could be sped up if worked more closely with archaeologist at layout.
- Fat Tire Society would be happy to help lay out sustainable trails.
- IMBA offers consulting layout at \$500/day.
- Difference between bike and hike = hike usually aligned via shortest route. Biking alignments are more stretched out and flowing, bike alignments will usually have sweeping curves.
- Vista spots and points of interest are great for supplementing a shorter trail system to make it a destination.
- Named trails are preferred to numbering. Petroglyph or Native vocabulary could be naming conventions. Utilize cultural resources as inspiration when appropriate.
- It is easy to limit people's interaction with sensitive sites and garner respect by having trailhead 1-2 miles from destination.
- Need to have some connection to the uniqueness of the site.
- Important to keep people off when muddy. Winter use is a challenge during freeze thaw because water doesn't percolate and mud remains. It is bad time to ride anything on trails because it will cause damage. Seasonal closures exist in mountains during spring conditions. It wouldn't be far-fetched to close trail system during certain times.
- Bikers like to ride at night occasionally. Potential to limit access in the evening to protect site.

Equestrian Conflict

- You cannot make a sustainable trail with horse traffic. Due to low soil stability.
- Horse community tends not to fix trails.
- Hooves cut soil instead of packing. Causes cupping trails in flat, meadow areas.
- Equestrians like to ride side by side.
- Usage together is not as much of a conflict. But horses are a detriment to trails.
- Fall line trails and banks don't hold up with horse traffic.
- Could use arroyos or existing roads as horse traffic.
- Generally people slow down when they see horse traffic.
- Recommend some designated bike/hike only.
- Horse trails are not often maintained. Soil literally erodes away.
- Recommend giving them a separate trail and understand that it is not going to be a sustainable trail.
- Some equestrians find arroyos difficult to walk on.
- Equestrians need 4-5 feet with a 10 ft. corridor. Trail width is quite different compared to hiker/biker.



Amenities

- Transitioning between local amenities to a regional destination suggests that a facility would be nice, especially for tourists. It would be nice to have toilets on site.
- A weekly maintenance contract could benefit the under-staffed County.
- Picnic areas are not really used. Prefer rocks to sit on out on trail at vista or destination or such. Less developed sitting areas using materials that exist on site function very well.
- A shaded area near the parking lot might be helpful, but is not a high priority. It may be useful to incorporate a shaded structure with a new trailhead / parking area and information kiosk.

Beginner Mountain Bikers

- Long drive is a bit of a barrier for entry-level bikers. It may be too long of a drive to pack up the family.
- The Galisteo Basin Preserve has good entry-level trails.
- Cultural points of interest as a destination could be enough of a reason for a group of entry-level bikers to visit but the question is whether they would hike instead of trying to travel the distance with a lot of bikes.

Misc

- Drones could be a problem in public spaces in the future.
- Plan to develop Preserve trails south in the future, creating a system up to 50 miles long.
- Positioning Thornton as a unique bike destination is dependent on access to cultural landscape. Perhaps have a portion of the site that could be visited. Thornton is less appealing if it is solely another set of trail mileage.

END OF NOTES

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THORNTON RANCH MASTER PLAN

Focus Group 3: Equestrians

Objective: to collect further information and feedback for possible recreational activities on the environmental and culturally sensitive Thornton Ranch site within the greater context of Santa Fe County's Open Space offerings.

Venue: Thursday, December 11, 2014 1:00pm - 2:30 pm at the Galisteo Community Center
Format: Discussion
Supplies: Images of site, context map, analysis map, aerial map, relief map, soils map, geology map
Attendees: Claudia Horn, Patrick Sinnott, Colleen Baker, Charlie O'Leary, Erin Ortigoza, Maria Lohmann

General Notes

Introduction

- Site is environmentally and culturally sensitive and consists of a nationally recognized site for which a management plan is being developed.
- County purchased land in 2001 and subsequently more afterward. GBASPA helped define cultural resource significance and protection.
- The timeline implementation is contingent on funding. The County envisions multiple years.
- Gerald (original COLTPAC member and trail rider council, Northern NM Horseman Association)

Connectivity and Scale of Use

- Connectivity to larger context for trail use is an appealing concept because it is a rarity in the area although it was a large part of the past.
- Most of the site as (apx. 2600 acres) could be covered on horseback in 1 hour or .5 hours going fast.
- Example: 8 miles (1.5 hours) from Applewhite house to Petroglyph Hill
- Endurance riding (trot) allows riders to cover 30 miles in 4.5 hours.
- A casual rider could do a 8 mile loop in 2 hours.
- Equestrians prefer a loop back to a trailer. They enjoy seeing new county the entire way.
- Integration with any route along the railroad track provides another dimension of interest and appealing length.
- Santa Fe Conservation Trust would like to work with property owners along the Kennedy line to create easements along abandoned railroad grade.
- The Flywheel Ranch is a 5000 acre site along the Kennedy line that would need to be negotiated, it will soon become part of the Galisteo Basin Preserve
- It might be beneficial to create a Rails to Trails organization in Santa Fe to garner support.
- Coordinating public transportation to drop people off for hiking would be nice for hikers, but unnecessary for equestrians.

Trail Recommendations / Comments

- Colleen: the site will be open to public use with conservation. Team will distinguish some level of access.
- Arroyos are loose and hot. Equestrians prefer not having to go in Arroyo, but can go if necessary.
- Horses are generally not accustomed to loose sand. Therefore, visiting riders could be injured while riding in the arroyo.
- Riding in arroyos should only be for in short distances (3miles).
- Equestrians prefer a couple loops allowing riders to extend distances. Please preserve access for future off-site trail tie-ins.
- Too much signage on landscape takes away from experience but education is key component of this project.
- Consider not having distinguished trails and have open riding where horses can navigate around trees. Trails are a bit boring for horses. Perhaps old cattle trails could work. Open range riding would be a nice possibility.
- The site is an ideal place for winter riding.



- Horses don't go side by side. They follow a path behind each other naturally. 18" wide is plenty. 24" or more among trees is fine.
- Distance: 8-20 miles would be a sufficient distance to make the site worthwhile destination. Gallisteo Preserve pretty short but used by equestrians.
- Utilize cultural resource stops as interpretive destinations.
- Equestrians need hitching posts so that they could walk to petroglyphs
- Open riding is easier on the land then having deliberate trails. Open riding would need to include a knowledge areas that cannot be ridden. Zones or pods could be designated to identify areas to avoid.
- If open riding is not an option, residents of Galisteo would be happy to have trails in the area.
- Trails are preferred for faster riding so that you can avoid holes.
- Open riding is generally scary for people because they feel it is detrimental to the land. Some open riding can stimulate grass growth much in the same way limited cattle grazing can help the landscape.
- Apx.10% of equestrians would ride open range. Long lines of sight lend are appealing to open riding. A sense of exploration is nice and the entire area wouldn't need to be open riding.
- Horses do not like rocky terrain or slick rock.
- Riders like vistas and destinations. In this way equestrians are similar to hikers instead of bikers.
- Any barbed wire fences would need to be removed. Equestrians happy to help take up fences and pack them out.

Regional Context

- Endurance riding: Caja del Oro is the only formalized endurance trail. People come from California to ride in Caja Del Rio. This could be part of economic development because it a potential draw as Santa Fe destination.
- NATRAK (endurance riding with obstacles) is an example of an event that could contribute to the local economy. Events include 30-75 people riding over 20 miles each day (plus non-riding family members). Horses would be kept with trailer and/or corralled.
- The local area is set up to support horse traffic because it is already populated with vet and tack/feed amenities. This part of the County has a rich equestrian heritage.
- Regional connectivity to this site is very important.
- Equine heritage is very rich all the way back to Conquistadors. Cultural context includes horse trails from all over leading to the plaza.

Amenities

- A restroom would be very helpful. Sad that significant funding must go to maintenance of restrooms.
- Trailer parking is essential and it must be very large.
- A corral would be nice at trailhead in the case of an emergency. 12'x12' is the minimum size.
- Caja Del Rio is an excellent example of a trailhead designed for equestrians. It is also local.
- Open riding could be a permitted activity on certain days. Administering costs could be difficult if the County does not have the infrastructure in place.
- A day fee is an acceptable option. Cerrillos hills has \$5 trailer fee. Please include all activities if a day fee is instated.
- A guest book or registration documenting visitors and use would be helpful.
- Include equestrians in development of additional rules to go with trailhead sign. For example, stop downhill of horse, don't hide, talk loudly.
- Archaeology sites are known in the area and there is potential for damage.

Alternative Activities

- "Fox Hunt" – chasing coyote with hounds.
- Shooting (not a popular comment)
- A horseback guided trip of cultural sites would be wonderful.
- Caja del Rio is used for search and rescue practice. It would be helpful to have an off trail area for this activity.
- Poker ride on open landscape is a fun event.



- GPS locations could show pods of arch sites and then you go from place to place. This would create less signage and is a similar activity to geocaching.

Misc

- It would be nice to get an oral history from Gene, or Barbara or older brother in El Dorado because they may know about ruins and trails and connectivity on the Thornton Ranch.
- Water availability on site could be a challenge.
- A horse concession could be opened by a private enterprise. County needs to figure out options and permitting scenarios.
- Sees a lot of unhealthy division between hikers/bikers/equestrians. Equestrian group recommends involving all groups together, especially in trail building/maintenance workgroups.
-
- Economic development should not be overlooked. Consider equine resources that can help stimulate the rural landscape and create rural jobs in small communities. The type of person that wants to drive to Santa Fe to ride is going to be culturally and environmentally sensitive to preservation because they embrace old ways.
- Rural economic resources can be localized, such as feed and boarding.
- Please consider open space planning as a dovetail to equine/rural economic development for region.

END OF NOTES

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THORNTON RANCH MASTER PLAN

Focus Group: Ecologists / Educators

Objective: to collect further information and feedback for possible recreational activities on the environmental and culturally sensitive Thornton Ranch site within the greater context of Santa Fe County's Open Space offerings.

Venue: Friday, December 12, 2014 9:00am - 10:30 am at the Galisteo Community Center
 Format: Discussion
 Supplies: Images of site, context map, analysis map, aerial map, relief map, soils map, geology map
 Attendees: Sigmund Silber, Kim Sorvig, Barbara Fix, Mark Watson
 Project Team: Claudia Horn, Patrick Sinnott, Charlie O'Leary, Jan Willem-Jansens
 SF County Staff: Colleen Baker, Erin Ortigoza, Maria Lohmann,

General Notes

Introductions / Project Overview

- Kim Sorvig (educator at UNM), Mark Watson (habitat specialist), Barbara Fix (Native Plants Society).
- Site introduction: context and ownership, cultural resource inventory and management plan. Prominent landforms. Historical and environmental sensitivity. Inventory primarily on cultural resources.
- Goal: allow for access while maintaining preservation. Soliciting ideas for ecological sensitivity and educational opportunities.

Ecology

- A plant survey has not been done. A few invasive species in lower reaches of arroyo and roadside ditches.
- Site has not been grazed in last 10-15 years. It does not appear overgrazed. Thornton family took cattle off land in 1998 apx. Grasses appear tall but not full coverage.
- Kirk and Jan Willem did a plant survey to the area west of site in 2003 and grasses were considered patchy.
- Channelized soil wash is an issue. County road 42 paving impacts runoff onto adjacent arroyos. In areas downstream there are 8"-10' of channel incising.
- Invasive species use borrow ditches as avenue for spreading.
- Important to look at storm water management and runoff impact on drainages.
- A demonstration project with the Soil and Water Conservation District could show erosion issues on site.
- Construction and roadsides are biggest area of invasive transmission.
- Loss of native vegetation impacts pollinators.
- Not mowing roadsides and managing them can help encourage native growth over invasive species.
- Pollutants coming off roads are an issue in general. County should look at mowing management along 42
- County road 42 was paved in 2005 or 2006.
- Arroyo incision is a constant problem in the area and will be impacted by summer storms.
- Petroglyph Hill is impacted by foot erosion with some water and wind erosion. Footpaths don't help.

Soil and Water Conservation Demonstration Potential

- Sig: education is organization's mission. Lately has been managing flood control dams and the organization would like to improve its capacity to educate the public. They are interested in seeing a demonstration developed but do not know what that would be.
- Galisteo Basin group has a project in San Marcos Pueblo that could be used as a starting point.
- Since we have control of arroyo it is critical to analyze and do something at the initial/critical point on site.
- There are many places along County Road 42 with soil loss. Landscape has been eroded down to sterile subsoil that doesn't grow plants and is very difficult to replenish.
- It may be good go beyond soil conservation and actively rehabilitate some of the soil. Soil restoration experimental component would be helpful. Volunteers or an organization could manage areas.



- Potential rehabilitation: higher upland restoration, stabilize head cuts, prune and spread juniper branches to capture and protect soil from wind erosion (Craig Allen in Bandalier, Earthworks demonstrated successes). Lop and scatter.
- Soil amendment humates could be a costly way to jumpstart new growth but is not a long term solution.
- Visitor's center and parking areas could be installed in already degraded landscapes so that it is easily monitored and irrigation from Center could be used to water degraded areas. Use runoffs to kick start growth in specifically managed area.
- A main concern when locating the visitor's center on an already degraded landscape is that the area would need to be identified in relationship to distance to road to compare tradeoff costs of rehabilitating the degraded area and potential impact of road length. Look at location and benefits of siteing construction in degraded areas vs. an ideal but pristine area.
- Investigate combining maintenance costs by making use of things like horse compost.
- It is very hard to regulate what horses are being fed to reduce invasive transmission in horse waste. Education would be most helpful.
- A soils analysis could be helpful for identifying healthy components and quantity of fertile soil on site.
- Erosion rates triple near roads, trails, and horse traffic. Advise creating an erosion rating for the site.
- Since we have control of arroyo it is a critical place to analyze and do something at the initial point.
- A head cut analysis is recommended: walk up arroyos and look for primary impacted areas.

Equestrian Use

- Open range would only be an option after an investigation of grassland health and inventory.
- Any cryptogenic soils need to be protected from any traffic.
- Consider open riding for future possibility after soil is rehabilitated to a certain level.
- Important to move free riding among different places in landscape from year to year if you do it. Some disturbance of the root mass by hoof action can be generally helpful if it is intermittent and in varied location. Kirk Gadzia has done this with horses in the past. A planned restorative activity during a certain time with a certain amount horses could be helpful. Need to break pattern of horses gathering or walking together or eating.
- Goal is to develop a complex management strategy not just a generally policy. Events could be a great way to have people to buy-in and could be helpful and could have wonderful PR. Help make it a place of interest but with subtle impact.

Funding

- Capital and operating funding comes from different places and is regulated differently so it is always a challenge to have sufficient maintenance funding. Finding operational funding for this project will be a challenge.
- Think of creative design ways to use capital design to set up maintenance for success. Could a "Friends" group be set up to carry funds for maintenance? Could a capital escrow fund contribute to this sort of account?
- Although this is a challenge, it is important to include the needs and potential problems with funding in the plan so that there is potential for it to be addressed.
- Goal for initial project is to have a self-sustaining management plan in place knowing funding will be a challenge.
- Demonstration projects, grants, volunteers, partnerships will be an essential direction.
- Use fees could be an option. It also takes money and man power to collect fees.

Wildlife

- The Gray Vireo could be nesting on site and is found in the area. It is not a federally listed endangered bird, but a bird of concern in the State. It would be great to have bird surveys during breeding season. Could be marketed to birders in winter. Grassland birds could be an appeal. The NM Game and Fish might have interest in having an ornithologist do small surveys during breeding times.
- Trails do not benefit birders. They prefer to bushwhack. It would be nice to have areas in grassland for birders to wander around and scare up birds.
- Audubon uses Galisteo Creek as a main viewing area due to a concentration of federally listed birds that are attractive for birders.

Misc

- It would be nice to have an inventory of County open space to understand that not every property has to fulfill every program. Understand how this site is positioned within the County context.
- It would be nice to have Kirk Gadzia come in and set up a baseline analysis of rangeland to understand how an rehabilitation could be initiated.
- NM Game and Fish has wildlife friendly fence guidelines to share. Trespass cattle and access to cultural sites would need to be managed anywhere fencing is not installed.
- Ecologists recommend taking down non-maintained old fences because they are a threat to wildlife.
- Wildlife corridors of any kind are important to map out, see Galisteo plan. Important to identify barriers.
- New Mexico Wildways has focused study and GIS mapping of wildlife pathways in Galisteo Basin. – Jan Willem is knowledgeable of the Ken Boykin habitat GIS study.
- Ken Mankey did a study through NM Game and Fish on cougar range in area.
- 5-6 miles Northeast site a winter bird study was completed, Jan Willem is familiar.
- Audubon does a Christmas bird inventory in Galisteo – Carol at Audubon is contact.
- CHAT: western statewide analysis tool identifies 1 mile hexagons or crucial wildlife habitat to help steer development away from conservation habitat in the west. It may be large scale but the information GIS tool may be helpful.
- New Mexico CHAT is available at New Mexico Heritage at UNM. They are hoping to fund a revised study via NM Game and Fish.
- Often GIS information is useful but be skeptical of analysis.
- Beware of BLM steam lining oil and gas processes and consider possibility of BLM using holdings for development.

END OF NOTES

The record herein is considered to be an accurate depiction of the discussion and/or decisions made during the meeting unless written clarification is received by **design office** within five (5) working days upon receipt of this meeting record.



THORNTON RANCH MASTER PLAN

Focus Group 4: Artists

Objective: to collect further information and feedback for possible recreational activities on the environmental and culturally sensitive Thornton Ranch site within the greater context of Santa Fe County's Open Space offerings.

Venue: Friday, December 12, 2014 11:00am - 12:30 am at the Galisteo Community Center

Format: Discussion

Supplies: Images of site, context map, analysis map

Attendees: Claudia Horn, Patrick Sinnott, Colleen Baker, Charlie O'Leary, Erin Ortigoza, Maria Lohmann, Catherine Harris, Lucy Lippard, Nick Merrick, Shawn Gilmore Merrick

General Notes

Introduction

- Site introduction: County has 1900 acres of ownership. Grazing leases bring it total site to 2300 acres. No grazing on lands since 1998. There is not a baseline on site. County may need to change leases to eliminate grazing and change to recreation lease.
- Lucy Lippard, lives in area. Nick Merrick + Shawn Gilmour –lives on 42, property just east of site.
- Cultural resources protection and access.
- Lucy: there are a lot of sheepherders petroglyphs – arguably graffiti but they could also be considered folk art. They may be located under rail line.
- Area is a bite of an open slate but motorized activities will not allowed.

Site Understanding

- A very quite village
- Galisteo are is quiet and quaint. There are renown residents but the population is very reserved. Generally residents enjoy the Galisteo Basin Preserve Trails. Group support linkage on the Kennedy Line and connections to Preserve Trails. There is a rough trail along RR.
- Locally, it is well known that Petroglyph Hill is a destination. "Lucero Hill, Ortiz Hill, Sacred Mountain." Are other names that Lucy Lippard suggests may have been used. The Spanish name may be relevant.
- There is a local knowledge of the area's cultural sites. In the past it was somewhat of an open site. The Thorntons did not mind trespass. Later more and more people entered so it was later closed access.

Landscape Interaction

- NM AOS does tours every once and a while as a fundraiser
- Photographers will go wherever they want in order to use available light and capture specific angles.
- There could be days when it is open access to specific photography or painting activities.
- It would be very difficult to manage permitting and personal interest definition.
- Perhaps there is a way to create a culture of care so that you have to cultivate a level of understanding through deep saturation/filtered edge of information. Education would provide a heightened level of respect for the environment before people would tromp around site. It is important to make it clear that the place is fragile and demands respect.
- It would be nice to work with artists to make that filter a bit less governmental.
- Camping is probably not an option on site.
- It would be nice to challenge artists to understand site from site-lines, cultural or ecological landscape point of view. A broader context of how this landscape is understood would be very interesting.
- Santa Fe Photography Workshop, for example, pays location fees to bring an instructor and group to a place to at dawn. Funding ideas could help operational shortcomings.
- Spaces that complement ecological and artistic support could have potential, such as residency.



design office .

1300 luisa street . santa fe new mexico 87505 . 505 / 983.1415

- Important to understand baseline rules for County Open Space. Management plan will have more specific site issues.
- Cultivate imagination of site through art and history or guided access.

Funding

- It would be nice to have a Friends of Open Space and Trails.
- Concern is that a non-profit could take on more of an identity then County intends. NM Department of Archaeological Studies has a successful Friends group of that could be a good model.
- The artist group happy to attend BCC meeting.

Access

- Creating an understanding of respect is important.
A singular, clear loop is essential to organizing people.
- Limit parking and entry points.
- Access: seasonal sensitivity could be a reason to close the site at certain times, for example, nesting or certain animals.
- Program: important to connect to regional context. It is important to identify how this site's program fits within the larger County offerings and does not try to do everything.
- It will be difficult to shut out access from General Goodwin road. Working with adjacent owner is essential otherwise there will still be unauthorized access from south end.
- The perceived boundary is the rail line.
- Generally people in the village want limited access to zero access to the site. They want a place that is protected and well taken care of. Once it becomes open to the public it is susceptible. Limited access could be via events or seasonal or otherwise.
- It will be a challenge to manage access / cultivate stewardship with property owners along West Basin Road.

Wildlife

- Cougars have been downtown in Galisteo.
- Bears and Cougars use arroyos.
- Coyotes make excellent sounds. A soundscape project would be fascinating.
- Making information like sound or wildlife camera available to the public would be a lure to artists.
- Acknowledging habitat protection would help encourage respect.

END OF NOTES

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Confidential

THORNTON RANCH OPEN SPACE MASTER PLAN

Meeting Summary

Public Meeting - Thursday, October 20, 2016

Purpose

A public involvement meeting for the Thornton Ranch Open Space Master Plan was held on Thursday, October 20, 2016 to present the draft plan and collect public input. A public question and answer session followed a project presentation by the design team. The draft master plan document will be available for a 30-day public review and comment period the month of November 2016.

Meeting Summary

The public meeting was held at the Galisteo Community Center on Thursday, October 20, 2016 between 5:30 and 7:00 pm. 49 individuals signed in at the meeting with an estimated 55 attending. Santa Fe County representatives included: Colleen Baker (Project Manager), Maria Lohmann (Sr. Planner - Open Space and Trails), Carol Branch (Volunteer Coordinator) and David Padilla (Open Space and Trails). There were two COLTPAC members in attendance. Members of the project team in attendance included Claudia Horn and Patrick Sinnott (Design Office), Sarah Noss and Melissa Houser (Santa Fe Conservation Trust).

The meeting began with an open house (ca. 30 minutes) where attendees could view the proposed trails master plan. Colleen Baker introduced members of the design team and Claudia Horn provided a project overview of the master plan process, timeline and improvements (ca. 30 minutes). The presentation was followed by a question and answer session (ca. 60 minutes). Project boards with basic project information (Master Plan, Context Map - Trails and Ownership, Trail Standards, Planning Context, and Site Analysis) were on display during the meeting (see attached).

Project background information presented at the meeting included explaining the four plans that will affect the 2,440-acre Thornton Ranch Open Space property, existing conditions / site analysis studies, site acquisition history, property ownership, interest group desires, planning process, project timeline, and the landscape's varied history. The site is an active sacred site for numerous Native American tribes who are concerned about preserving their cultural resources and cultivating respect for the land. The proposed plan focuses on highlighting some of the primary open space attributes / themes of railroad, ecology, ranching, and geology. This history and physical context, combined with input from interest groups, tribal representatives, agencies, and adjacent landowners / community representatives informed the proposed program and master plan.

The Thornton Ranch Open Space Master Plan proposes 4 miles of regional trail, 12 miles of internal trails, two trailheads, and multiple opportunities for interpretation and education. The project site is intended to be a preserve with no motorized vehicles, no dogs, and very limited site impact to protect cultural and ecologically sensitive areas. A major goal of the plan is to cultivate respect for the land as people enter the site to recreate. The project materials and trail naming are critical elements for reinforcing a sense of place relevant to the site's rich cultural history.

Public Comment Summary

Public comments were collected by documenting the question and answer session and collecting input from email correspondence.

Some of the primary concerns raised by those who gave comments were:

- desire to make the hiker/biker trails open to equestrians and include horse trailer parking at the main trailhead.
- comments about how trail users interact on trails and the need for education on trail etiquette.
- questions about the involvement and consideration of local tribal concerns.
- concerns about trail tread width, trail corridor width, and sight distances for the proposed trail types.
- interest in regional trails and off-site connections.

Meeting Advertisement

The meeting was advertised and communicated as follows:

14 days in advance (7.Oct.2016):

Email: Santa Fe County representatives, COLTPAC, GBASPA Working Group, Galisteo Community Association representatives, Native American representatives, agency representatives, interested individuals, focus group attendees, tribal meeting representatives and property neighbors adjacent to the project area.

Mail: Property owners within 200 ft of project planning boundary.

7 days in advance (14.Oct.2016):

Email: Santa Fe County representatives, COLTPAC, GBASPA Working Group, Galisteo Community Association representatives, Native American representatives, agency representatives, interested individuals, focus group attendees, tribal meeting representatives and property neighbors adjacent to the project area.

Website: Santa Fe County – public events calendar (http://www.santafecountynm.gov/events_calendar/2016/10)
Santa Fe County – project website
(http://www.santafecountynm.gov/open_space_and_trails_program/thornton_ranch)

1 days in advance (19.Oct.2016):

Email: Santa Fe County representatives, COLTPAC, GBASPA Working Group, Galisteo Community Association representatives, Native American representatives, agency representatives, interested individuals, focus group attendees, tribal meeting representatives and property neighbors adjacent to the project area.

Website: Santa Fe County – public events calendar (http://www.santafecountynm.gov/events_calendar/2016/10)
Santa Fe County – project website
(http://www.santafecountynm.gov/open_space_and_trails_program/thornton_ranch)

Question + Answer Session Record (from public meeting)

The regular (non-italicized) text is a record of comments and questions from the public. Italicized text is a record of responses from the design team. Please note that the following record is a summary of public comment and responses and is not transcribed verbatim.

After BCC what is the construction timeline?

- The project is a high priority for Santa Fe County and is a priority for funding. It is on the November ballot for bond funding for construction, additional impact studies, design, and critical land acquisitions. If voters approve the bond then over next 4 years the project will be implemented with trail construction anticipated complete in 4 years.

Any trails open to public now?

- Not at the moment. The site is closed.

The only new road will be the trailhead access road on the southeast?

- Yes, we are trying to restrict vehicular access, even for maintenance. That would be the only road. This is a non-motorized system. This is a preserve, no dogs would be allowed. This supports the idea of a preserve and open space and limits impacts to the site.

You said 16 miles of trails. The multi-use trail is how many miles?

- 3.75 for multi-use.

So bikes get an additional 7 miles and this is paid for by public funds? I understand you want a draft for approval by December, so changes will be made by December?

- Yes, we want to keep the footprint small, we are open to the equestrian discussion. Yes, changes will need to be made by December.

We need a hands-on, lets go look at this before then. Horses can go anywhere a bike can go. To exclude horses from anything is a personal choice. They leave a smaller track then a bike. A bike can leave a rut. Horses are wider but they can be on a piece of land for thousands of years. We understand that following one another can leave a mark. To set a precedent of not allowing horses on county land is wrong. There may be parts on cultural land that could be respected if it is a certain area. We can look at that. We don't want to hurt cultural resources if a horse goes sideways. We want to go out with you to show you we can easily walk the terrain here.

- I think we can sort it out tonight, through discussion and site visit isn't warranted.

I am a Santo Domingo tribal member. How would you define tribal consultation? What are you doing between now and then (December)? I would also like to invite you to a Pueblo meeting on Nov. 3rd at Santo Domingo. Have you approached the All Pueblo Council of Governors?

- Thanks for attending. We've actually reached out to tribes quite a bit. We sent out an initial announcement to tribes for consultation in December 2014. We followed up in July 2015 with a 2-day tribal input meeting. Then in November 2016 we had another 2-day tribal input meeting, followed by another one in March 2016. We've also had individual conversations with interested tribal members. We've been to visit some pueblos that weren't able to attend the scheduled input meetings. From those meetings they asked us to follow up with governors and the All Pueblo Council of Governors, who we've tried to contact. We've also recently invited tribal members to review the draft master plan. This is all being done in good faith prior to any required government-to-government consultation.

What about co-management? We are having issues at the Petroglyph National Monument. Our concern is that any access to Petroglyph Hill will cause damage.

- Co-management came up early in discussions with tribal representatives. It is one approach that we are investigating. In this plan, we are proposing trails that avoid cultural, except sites with recent ranching history and railroad features. We want to continue the conversation throughout design and development and management. We respect that it is a sacred site. You brought up with APCG? I need help getting a response from them. There is no access to Petroglyph Hill in the plan which was a point of APCG.

Co-management is an important point for us. If you want to push the project forward, you need government-to-government consultation before December.

- We have avoided access to Petroglyph Hill but provided access to the other areas of the property.

About the dogs, dogs have been part of ranching history forever, not sure why they are excluded. Parking at 42 will invite dogs into site anyway. If I heard correctly there are hiker/biker trails and equestrian trails with bikes, this can cause a problem. I'd like to see hiker equestrian trails.

- For dogs, they were involved with ranching but with a new trail system there will be more people in concentrated areas. Dogs can make hazardous waste. For wildlife and land conservation we want to keep this as a respectful preserve. This is part of the reason dogs are recommended to be excluded. There is a corridor of impact for wildlife alongside trails and it gets a lot wider when you introduce dogs.

This seems like an exciting time. We've had restricted access for 200 years. You can feel the ancient legacy of trails connected here. Even with the railroad there is a feeling of connection. This is rich and exciting. I appreciate the liberation and care and quality of analysis. All these issues of dogs and who can live with whom can be friction points. I spent time at the Galisteo Basin Preserve with trail builders and the consensus is that 18" is wide enough. I don't understand multi-use being wider. There should be no idea of conflict with uses. Horses can go in really steep areas. I would predict abrasiveness when you separate them. I haven't heard of problems with bikers and equestrians. Santa Fe has a trail legacy that should be enhanced and built upon. Don't build upon non-enforceable friction points of trail conflicts that don't need to be. For the last several centuries, there haven't been restrictions on types of users. Seems like the conflict idea between user groups has only come up over last 5 years of use. There are no conflicts in the Galisteo Basin Preserve. Part of that system has been segregated but people don't pay attention. It is appropriate to me culturally to be able to use trails. The first horses in American were in Santa Fe.

I'd like to reiterate. My understanding is that it is a multi-use standard. ride a lot at the Galisteo Basin Preserve. The trails you marked for horse trails on the plan are flat and boring. Equestrians are intrigued by experiencing the landscape and the terrain. As was stated, people won't abide by separation.

I want to point out design standards on the boards have some negative impacts. Due to width of tread you are excluding hand tools being use to build them. The impact is that trail builder will use equipment / blade for wide trails. Then you have to have more maintenance and more expensive installation with wider trails. Cut down the trail widths by 1'. To preserve landscape you want to have a narrow impact.

- Thank you

Gretchen Grogan (GBP): To clarify, we now have 28 miles of trails: 14 miles of multi-use and 14 miles of hiker/biker. We have had some confusion. The hike/bike trails were not built for horses. The horse people have respected that. There are some outliers but we haven't had any problem with mixed uses on the same trails. We don't have problems with hikers and equestrians. We had an event recently about how horses and bikes interact on a trail. Interaction can be worked out with conversation. If the terrain dictates, there should be hike/bike only. At the preserve we have both types and it has worked well. If you cut a trail wide, it will get narrow over time, but the disturbed soil is a place for invasive species to come in.

I hear both points. I think its over engineered. The width is too wide, except for the accessible trail. Width isn't an issue for bike / equestrians but can be a problem with sight lines or steep side slopes. You are going to save money and have better use if it is narrow. People like the narrow trails on DB and LTT. We've put in trails with blading and by hand with flagging and volunteer labor. Wider trails inflate cost and erosion. Urge you to go narrow with everything.

- *These are good points for us to look at. When we get into regional trail we may need to get wider to fulfill federal requirements. It may be we need to change the designation. Other trail sections started off as a two-track road.*

The multi-use trail along the rail, it goes along the rail line? Having horses go along active rail line can be an issue, it probably wouldn't be used all that much and is an expensive trail if its not getting a lot of use.

Will there be horse trailer access at parking area?

- *At the time, given the amount of trails, it didn't warrant a trailer trailhead. We heard from the equestrian focus group that people wanted longer trails and didn't need trailer parking.*

But if there are no trails connecting to it then we wouldn't be able to use it.

- *We hear you differently now. Trailers could be added to the main trailhead parking area.*

Maybe cut down on the amount of cars.

- *There needs to be a balance. We can look at it but trailer parking would probably be an extension.*

You need signage for trailers on how to park.

Many of us are here as equestrians and we don't want to get squeezed out by bikes. Riding along the railroad track does not interest me. We like the Galisteo Basin Preserve. We've had good experience crossing paths with bikers.

Is this trail going to be part of the GUTS system?

- *GUTS is a grassroots initiative to connect regional trails and are not designated trails. SF County is aware of this initiative to tie trails into larger plans. Thornton Ranch is a project that will inform this endeavor.*

Will there be any overnighting?

- *Due to site sensitivity no overnight stays are allowed.*

My husband may want to ride longer distance with pack horses. This requires a wider corridor that should be kept in mind for GUTS.

- *These trails might be connectors but these won't be GUTS trails.*

Anything that could be hike/bike/horse needs to have a narrow tread and wider corridor.

- *That sort of width could be accommodated on the old ranch road.*

The trail system in real life comes right up to BLM land? Would there be a gate?

- *We are working with them to understand access. The BLM allows access but does not facilitate access. We are working to facilitate access in collaboration with BLM on BLM land.*

BLM is under federal mandate so that you will soon not be allowed to ride anywhere on BLM without a trail.

What is the point of that? We want to be able to do stuff on public land.

- *That is not within this project's scope to answer.*

I work with the Forest Service and I represent equestrian endurance riding. I would like to second true multi-use. Don't cut off access to use. There needs to be a planned educational part that is very intentional. People don't know what to do to when they interact with a horse. Good education between users will be an important part.

- *Thank you, good point.*

Where the BLM land starts, you are saying there is no fence or gate? That regional trail would connect? It would be nice if equestrians could have access to the loop for varied riding. That is also why we need true multi-use.

- *There is a fence on BLM land. We are in conversation with them about continuing the regional trail in this area. Perhaps in the future there would be open access.*

- *Thank you for coming. We can enter additional comments into the record.*

Thank you I feel like you have listened.

Email Comments

October 21, 2016 at 4:15 pm from Patricia Hug

I'm guessing yesterday evening's meeting was a little different than previous meetings, especially since you had been led to believe no horse trailer parking was necessary at the trailhead. It certainly turned into a lively, though in certain cases, long-winded get-together!

Equestrians do believe our horses are safe to go anywhere a mountain bike is safe to go. Safe terrain is not so fragile that horses will tear up what bicycles will not. I understand bikers are fighting to have a place to ride, but equestrians are fighting to not lose their existing riding locations. False information is what keeps horses out of new trail projects and forces us out of old ones. Some cyclists don't want to have to exercise caution for others on the trail; check with emergency room intake and you'll probably find more bicycle injuries than horse related ones. Here at *Outside Magazine* we usually have someone on crutches or in a cast or brace, especially in the summer. The day of the Santa Fe Century bike ride in May (road bikes) I was injured getting on my horse on my own property (he moved, I fell and badly twisted my knee). In the emergency room ahead of me were four cyclists within that same hour. Accidents happen especially if we're not cautious as some bikers tend to be when they think no one else is on their trail. But users can all get along if they will be cordial and considerate to their fellow user.

Julia Belt brought up a good point about the bond issue – I know I won't vote for it if I'm gonna be excluded from using what I'm helping pay for. And as for paying, a group of eager horse riders could easily be assembled to create the tread for a new trail and would cheerfully do it for free, saving a lot of money. I personally think a trail following the railroad track would be a waste of money; I know I would never ride it because, first, horses more than likely would spook when a train went by, even if only twice a day, possibly causing injury to themselves, their riders, or anyone else in that vicinity. But more importantly, I wouldn't ride it because it's BORING! Might as well ride on the interstate. Equestrians enjoy not only riding the horse, but experiencing the trip – the varied terrain, scenery, wildlife encountered, bits of history, and maneuvering our mounts in more than just a straight or gently curved line. Many of us are technical riders, able to do relatively steep inclines and descents in the mountains such as at Jack's Creek. We all don't want to ride hell-bent for leather, but we want our minds stimulated and our horse/human partnership exercised.

Having worked with you on the La Tierra Trails, I know your group will do a wonderful job with this long-term project and I look forward to four years from now seeing what you've done – maybe being a part of trail cutting and building. Good luck with keeping dogs out. Santa Feans LOVE their dogs (and I'm not a dog owner).

Thank you for holding this meeting.
Trish Hug
Santa Fe County Horse Coalition member

END OF NOTES

PLANNING CONTEXT

Santa Fe County Wildlife, Mountains, Trails and Historic Places Program Application 2000

"The overriding goal of this project should be the preservation of the significant archaeological sites on the property."

"There may also be an opportunity for an interpretive trail discussing the archaeological resources of the Basin as well as the unique geologic formations in the area."

Santa Fe County Open Land and Trails Plan 2000

Use of Open Lands: Passive and Active Recreation Uses

"Protecting resources is the most important function of the program, which means that human access may need to be limited or restricted on some lands. Therefore, open lands that the County acquires should be 'developed' for primarily passive recreation uses, as well as some active recreation uses for neighborhood parks and playfields" (see Appendix A: 1998 General Election Bond)."



Galisteo Basin Archaeological Sites Protection Act (GBASPA) 2004

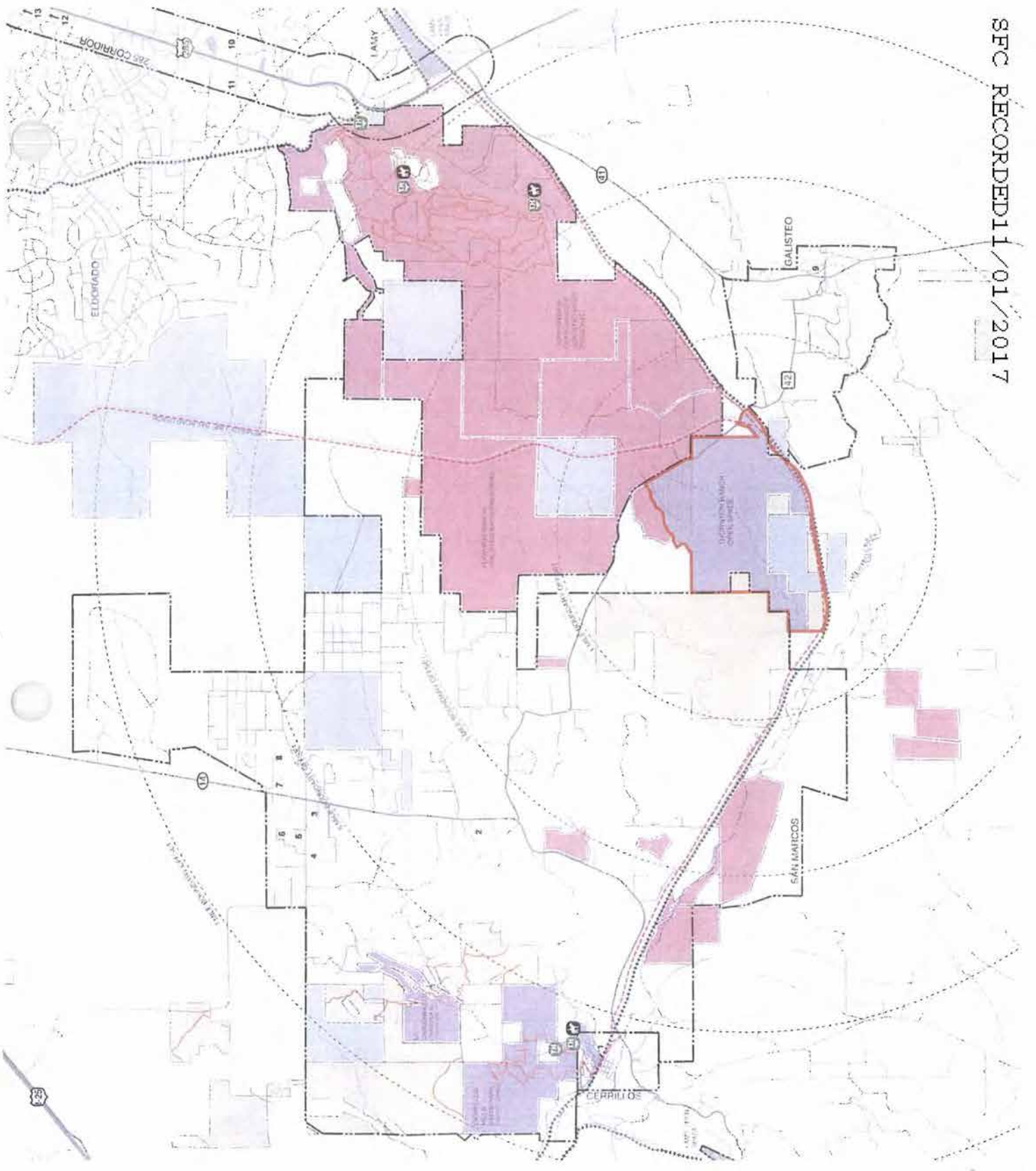
"The purpose of this Act is to provide for the preservation, protection, and interpretation of the nationally significant archaeological resources in the Galisteo Basin in New Mexico."

Santa Fe County Sustainable Growth Management Plan 2015

6.2.3.5 Thornton Ranch Open Space Management and Visitor Programming

The Thornton Ranch Open Space "... will include development of interpretive programming and construction of low impact visitor facilities for managed public access."

"The Thornton Ranch Open Space is at the center of the Galisteo Basin which is nationally recognized for its unique cultural landscape. County residents will have access to an important new space for hiking, mountain biking, and horseback riding in a scenic and historic part of the County. The educational component of the docent led tours for the archaeological, cultural and historic resources on the property will add to residents' and visitors' understanding of the prehistory, history, ecology, and geology of the Galisteo Basin. Opening Thornton Ranch will elevate the profile of Santa Fe County for its excellence and progressive approach to managing a resource of national importance within the context of the Galisteo Basin."



THORNTON RANCH
OPEN SPACE
MASTER PLAN

LEGEND

- Master Plan Project Boundary
 - Tribal/Local Planning Community
 - Public Open Space
 - State Land
 - BLM Land
 - Private Conservation Land
 - Conservation Easement
 - SFCT Conservation Easement
 - Commercial Lease
 - Root Map
 - Road, Major
 - Road, Minor
 - Parcel
 - Emergency Major
 - Emergency Minor
 - Railroad, Existing Tracks (active)
 - Railroad, Existing Grade (inactive)
 - Trail, Existing
 - Regional Trail Proposed (Santa Fe County)
 - Trailhead, Existing
 - Trailhead, Proposed
 - Trailhead, Parking, Existing
- EQUESTRIAN SERVICES
1. Brown Saddle Riding Community, Riding • Education
 2. Maier's Farm School, Riding • Education
 3. Little Hot Springs, Riding
 4. Santa Fe Western Adventure, Riding
 5. Trail Equine, Equine Hospital • Education
 6. Stony 3 Day Dressage, Riding • Training
 7. Santa Fe Equestrian, Riding • Training
 8. Maier's Horse, Riding
 9. Little Hot Springs, Riding
 10. Little Hot Springs, Riding • Training
 11. Stony 3 Day Dressage, Riding • Training
 12. Little Hot Springs, Riding • Training
 13. Maier's Horse, Riding

DRAFT
CONTEXT MAP
ANALYSIS MAP



THORNTON RANCH OPEN SPACE MASTER PLAN

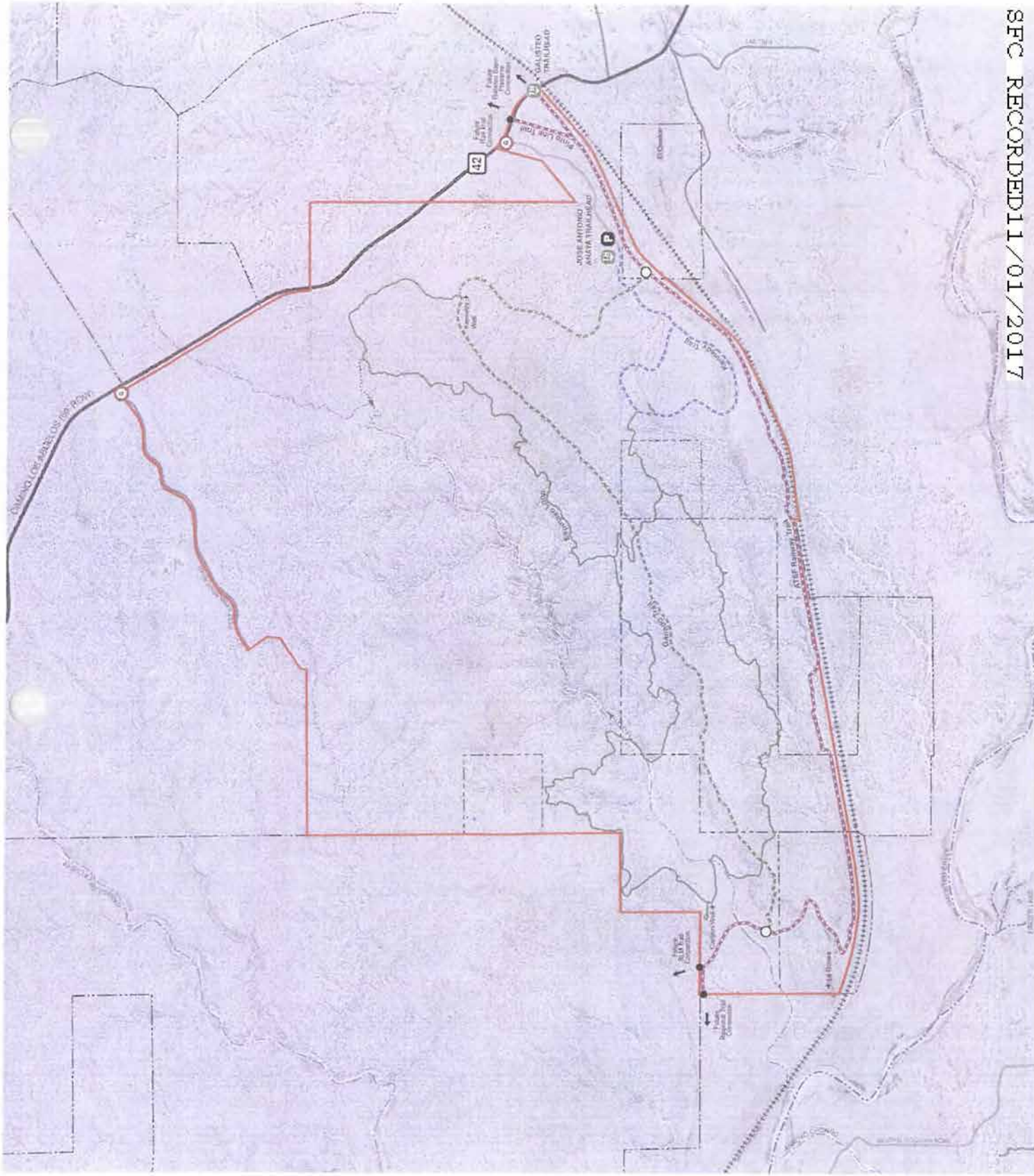
LEGEND

- Master Plan Project Boundary
- Land Boundary
- Road Major
- Road Minor
- Road Bike Course
- Stream
- Pavement
- Drainage Major
- Drainage Minor
- Removal Existing Trucks (new)
- Removal Existing Cattle (new)
- Trail Access
- Trailhead
- Trailhead Parking
- Access Gate
- Junction Trail Access
- Junction Network Identifier
- Trail Regional
- Trail Accessible
- Trail Multi-Use
- Trail Horse Back
- Trail Ranch Road Guest Only
- Marked Roads Guest Only

DRAFT TRAILS MAP UTILITARIAN MAP

design office produced for Santa Fe County

SFC RECORDED 11/01/2017



TRAIL STANDARDS

Four types of trails are included in the Thornton Ranch Open Space Master Plan. These trails provide an interconnected framework for trail users to experience and enjoy the landscape between educational uses and points of interest.

Trails designed and constructed to the following standards will help minimize disturbance impacts from precipitation, erosion, and fire use, which can lead to an excessive need for trail maintenance. The standards will also ensure that all trails are designed in a sustainable manner, based on a trail's expected user type, user frequency, and drainage patterns.

DIMENSIONAL TRAIL STANDARDS

REGIONAL MULTI-USE TRAIL



TREAD SURFACE

Hard, packed, crushed stone surface, free of large debris, occasional short bridges or paved drainage crossings.

TRAIL TREAD	CROSS SLOPE
6 - 10 feet	2 - 5% slope
TRAIL CORRIDOR	PERCENT GRADE
12 - 14 feet	5% max, when crossing
TRAIL CEILING	TURNING RADIUS
10 - 14 feet	50 feet
FEATURES	SIGHT DISTANCE
None or grade and at grade	90'

ACCESSIBLE TRAIL



TREAD SURFACE

Hard, packed asphalt (or paved) surface, occasional short bridges or paved drainage crossings.

TRAIL TREAD	CROSS SLOPE
6 - 8 feet or 8'0" max	0% max
TRAIL CORRIDOR	PERCENT GRADE
12 - 14 feet	5% max, 9.5% max
TRAIL CEILING	TURNING RADIUS
10 - 14 feet	10 feet min
FEATURES	SIGHT DISTANCE
None or grade	10 feet min

MULTI-USE TRAIL



TREAD SURFACE

Hard, packed, stable dirt, free of large debris, occasional short bridges or paved drainage crossings.

TRAIL TREAD	CROSS SLOPE
6 - 8 feet	2 - 5% max
TRAIL CORRIDOR	PERCENT GRADE
8 - 10 feet	2% max, 4% max
TRAIL CEILING	TURNING RADIUS
10 - 14 feet	15 feet min
FEATURES	SIGHT DISTANCE
None or grade	90'

HIKER /BIKER TRAIL



TREAD SURFACE

Hard, packed, stable dirt, free of large debris, occasional short bridges or paved drainage crossings.

TRAIL TREAD	CROSS SLOPE
6 - 8 feet	2 - 5% max
TRAIL CORRIDOR	PERCENT GRADE
8 - 10 feet	2% max, 4% max
TRAIL CEILING	TURNING RADIUS
10 - 14 feet	15 feet min
FEATURES	SIGHT DISTANCE
None or grade	90'

GUIDED ACCESS



TREAD SURFACE

Hard, packed, stable dirt, free of large debris, occasional short bridges or paved drainage crossings.

TRAIL TREAD	CROSS SLOPE
6 - 8 feet	2 - 5% max
ACCESS CORRIDOR	PERCENT GRADE
8 - 10 feet	2% max, 4% max
TRAIL CEILING	TURNING RADIUS
10 - 14 feet	15 feet min
FEATURES	SIGHT DISTANCE
None or grade	90'

Name	Title / Position	Email or Contact Number	Affiliation (Local Resident, Sports Organization, Other)	How did you hear about this project? (Poster, Flyer, Email, Friend, Other)	Would you like to be added to our contact list?
David Padilla	OSF	david.padilla@sanfrancisco.gov			
Betsy Walker		betsywalker@yahoo.com	NNMHA		
Cynthia Naha	Environmental Specialist	cynthia.naha@nps.gov	Santa Dominguito Pueblo		
Karen Reyer	Resident	karenreyer@gmail.com	BCH NMHA	email	
Eldon Reya	Equestrian	laespuela@gmail.com	Back Country	email	
Pete Prince	Resident	ARC2ARC@MIE.COM	NNMHA		
Scott Armstrong	Human	scottarmstrong@gmail.com	SFFTS		
Ruben S. Cedeno	CULTPAC	rograndes@gmail.com	CULTPAC	friendly	
Frederick	Resident	oh file			
Roger Taylor	Resident	jandguilder@comcast.net	comcast	email	
Blair Markes	CALISTO	CLENSKYNM@gmail.com	BCA	email	
Brent Bonwell	Pres. SFC Horse Coalition	pres@bonwell.org	SFCH	email	
Lisa Bessore	President, SFFTS	brent@bonwell.org	SFFTS	email	
Gretel Underwood	Equestrian	lisa.bessore@gmail.com		email	
Barbara King	Equestrian	familia-underwood@gmail.com		email	
SAM BROWN	CALISTO	barbaraking321@gmail.com	local horse person		
Colleen Baker	SFC Project Manager	see attached email		email	
Shirley Watson-Jones	biker	shirleywatsonjones@gmail.com	CALISTO resident	email	

Name	Title / Position	Email or Contact Number	Affiliation (Local Organization, Other)	How did you hear about this project? (Poster, Flyer, Email, Friend, Other)	Would you like to be added to our contact list?
Joyce Davis	NNMHA Programs	bjmrkitty@gmail.com	BCHSF NNMHA		yes
Henry Cannon	SFFTS Assoc	hannancan@er.com	SFFTS/TAOST	email	"
Barry Resnick		BRESNICK@VRSLOV.NET			
Wayne King	Galisteo		GALGCA		
Jacinto Perez	SFFTS HC	jacinto@jesset.net	SFFTS	email	
Gretchen Grogan	Proj Manager		Communal	email	
Sara Luthy	DRM State and Loc	jluthy@stateandloc.com	SLD		
Fred Farnham	Galisteo SFFTS		no affiliation		
Quentin Candalaria	Department of Volunteer	elaysantosantofe@gmail.com		email	
Michael Dyer	resident	candelaria.quentin@gmail.com		email	
Debbie Swiderski	Equestrian	michael.dyer1@gmail.com		email	
Jacqueline Clark	Nature	debbie.swiderski@gmail.com		email	
Matthew McQueen		jacqueline.clark@gmail.com			
Kevin Saunders	Headless Horseman	matthewmcqueen@gmail.com			
	Galisteo Equestrian	Kevin43@gmail.com			

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Appendix B

B. SITE ANALYSIS MAPS

General Map
Topographic Map
Aerial Map
Satellite Map
Soil Map
Geological Map
Hydrology Map
Land Use Map
Zoning Map
Traffic Map
Utility Map
Other Maps

LEGEND

-

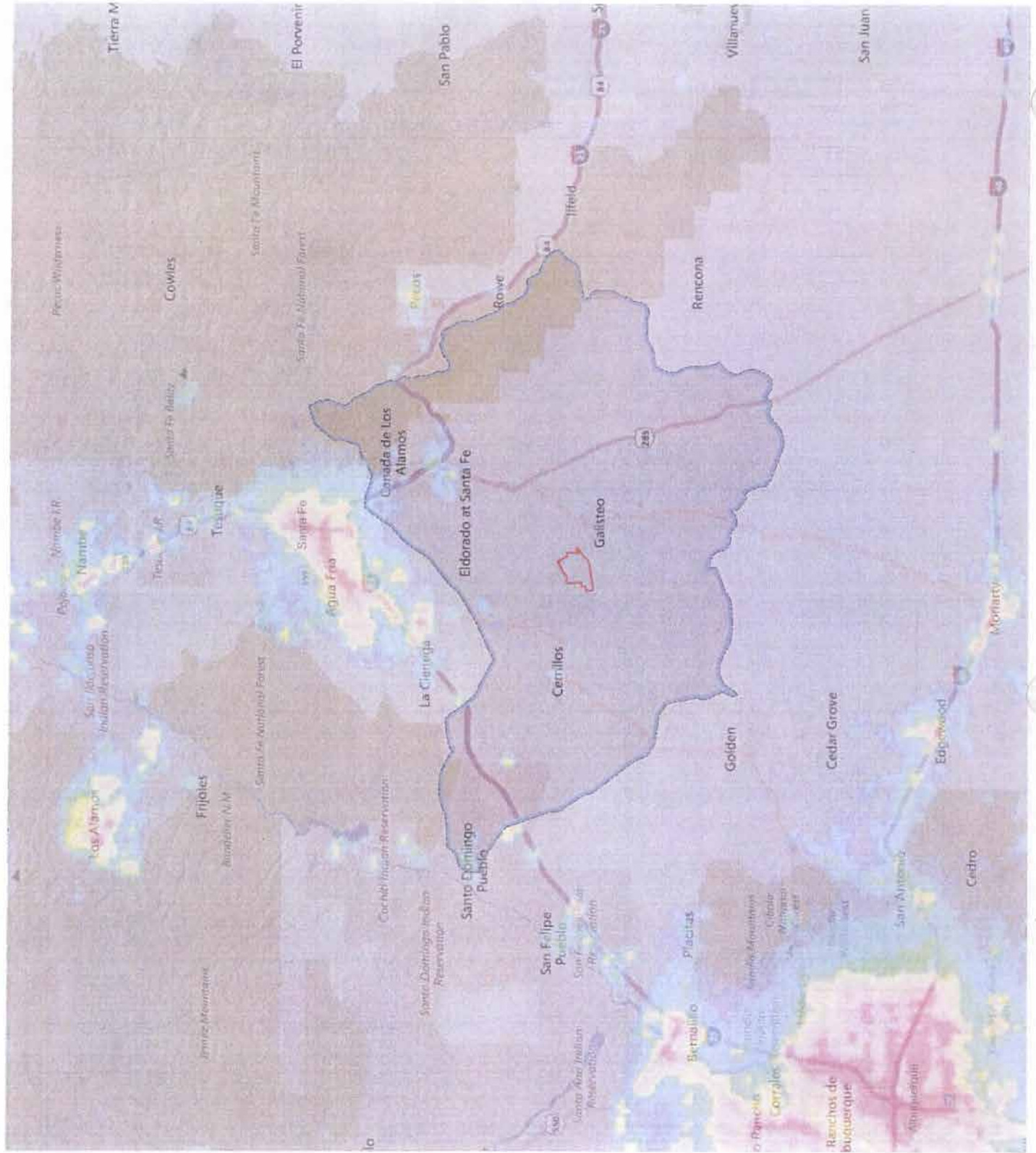
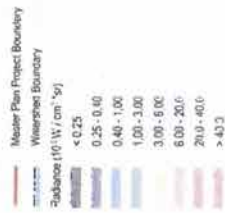
ANALYSIS MAP



Business Office: Santa Fe Community College, 1000 Alameda Blvd., Santa Fe, NM 87505

THORNTON RANCH OPEN SPACE MASTER PLAN

LEGEND

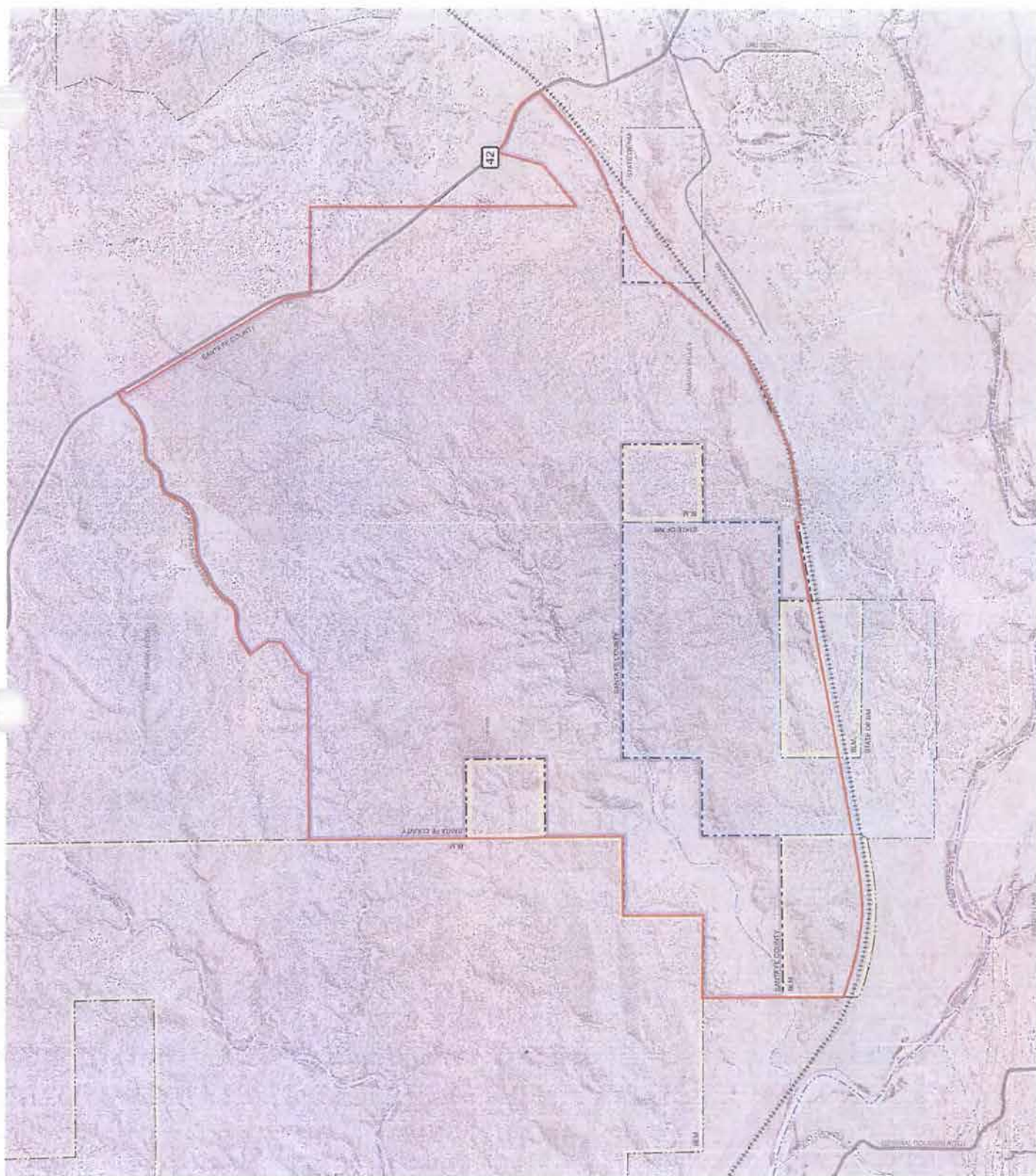


DRAFT LIGHT POLLUTION MAP

ANALYSIS MAP



Produced for Santa Fe County
August 2010



THORN RANCH
OPEN SPACE
MASTER PLAN

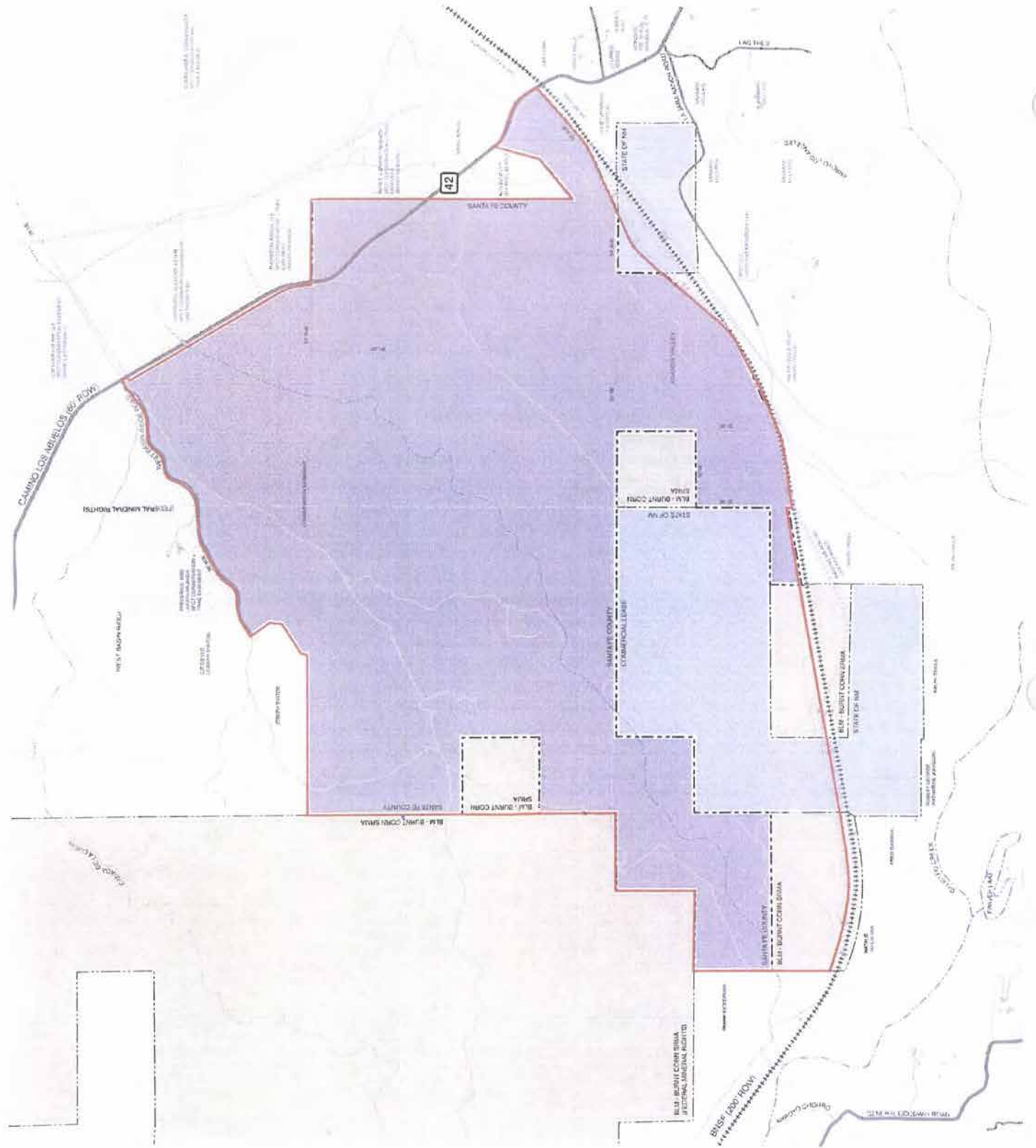
LEGEND

- | | |
|--|-------------------------------------|
| | Master Plan Project Boundary |
| | County Limit Boundary |
| | State Limit Boundary |
| | BLM Land Boundary |
| | Eminent, Conservation |
| | Exempted, Commercial |
| | Protection Area |
| | Building Footprint |
| | Road, Major |
| | Road, Minor |
| | Road, Un-paved |
| | Eminent |
| | Pavement |
| | Topography, 20-ft Contour |
| | Topography, 100-ft Contour |
| | Drainage, Map |
| | Drainage, Moor |
| | Railroad, Existing Tracks (Active) |
| | Railroad, Existing Grade (Inactive) |

THORNTON RANCH OPEN SPACE MASTER PLAN

LEGEND

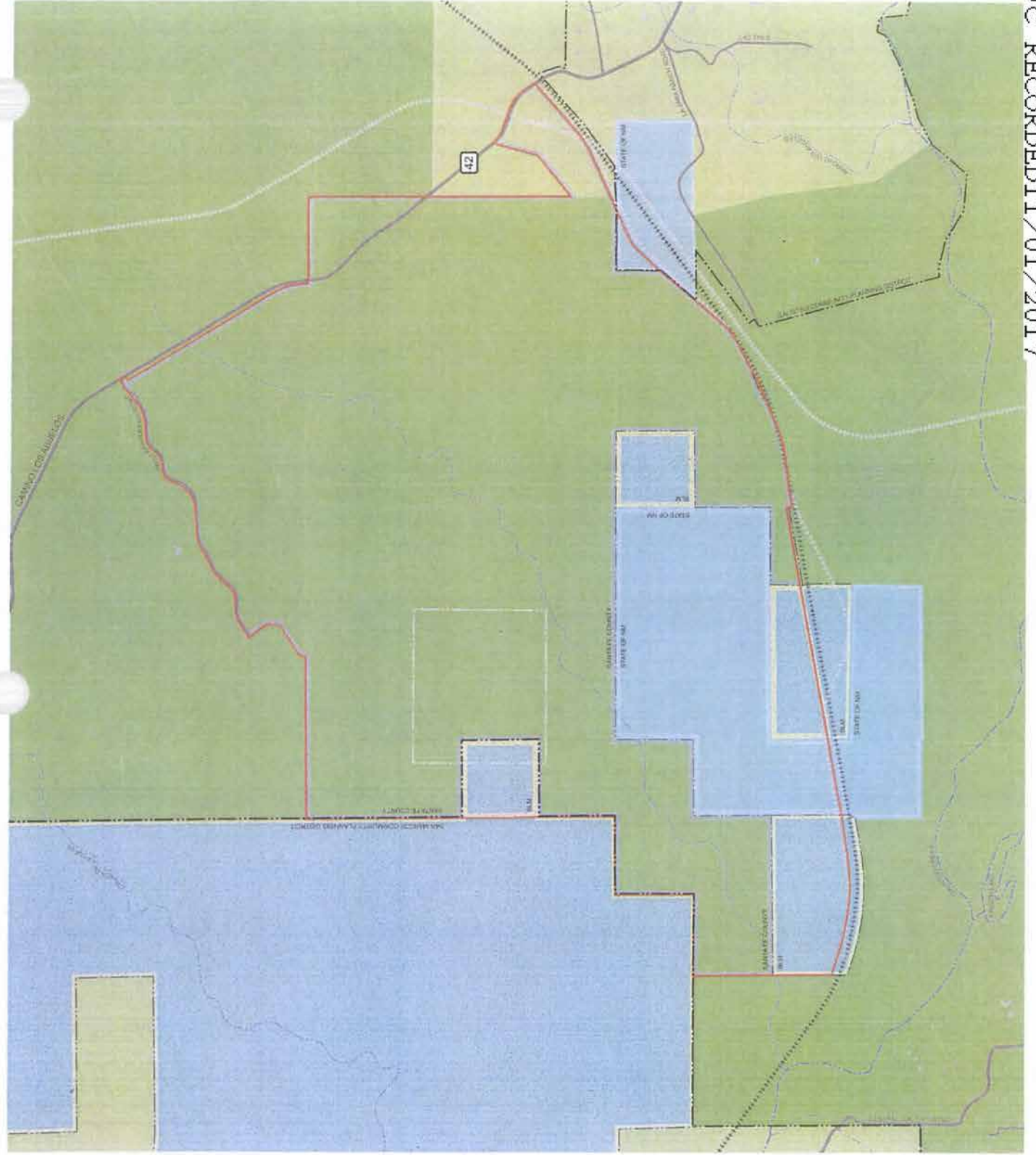
- Master Plan Project Boundary
- County Land Boundary
- State Land Boundary
- Commercial Lease, State Land Office
- BLM Land Boundary
- Grazing Lease, BLM
- Protection Area
- Conservation Easement
- Mineral Rights, Federal
- Building Footprint
- Road, Major
- Road, Minor
- Road, Un-paved
- Picnic
- Topography, 20-ft Contour
- Topography, 100-ft Contour
- Drainage, Major
- Drainage, Minor
- Railroad, Existing Tracks (Active)
- Railroad, Existing Grade (Inactive)
- Easement, Underground Utility



DRAFT OWNERSHIP MAP ANALYSIS MAP



Produced for Santa Fe County
design office: santa fe conservation trust, aca architects, ecoblow



THORN RANCH OPEN SPACE MASTER PLAN

LEGEND

- Master Plan Project Boundary
 - County Land Boundary
 - State Land Boundary
 - BLM Land Boundary
 - Community Planning Area
 - GBASPA Site Boundary
 - BLM SPMA
 - Building Footprint
 - Road, Major
 - Road, Minor
 - Road, Unimproved
 - Parcel
 - Topography, 20-ft Contour
 - Topography, 100-ft Contour
 - Drainage, Major
 - Drainage, Minor
 - Railroad, Existing Tracks (at level)
 - Railroad, Existing Grade (inactive)
- Proposed County Zoning Districts (2015):
- AUR, Ag/Ranch (1 dwelling unit per 150 acres)
 - RUR, Rural (1 dwelling unit per 40 acres)
 - Federal and State Lands (not under County jurisdiction)

Scale	North Arrow
1" = 100'	

DRAFT ZONING ANALYSIS MAP

Produced for Santa Fe County
design office space is conservation from 2004. All rights reserved.

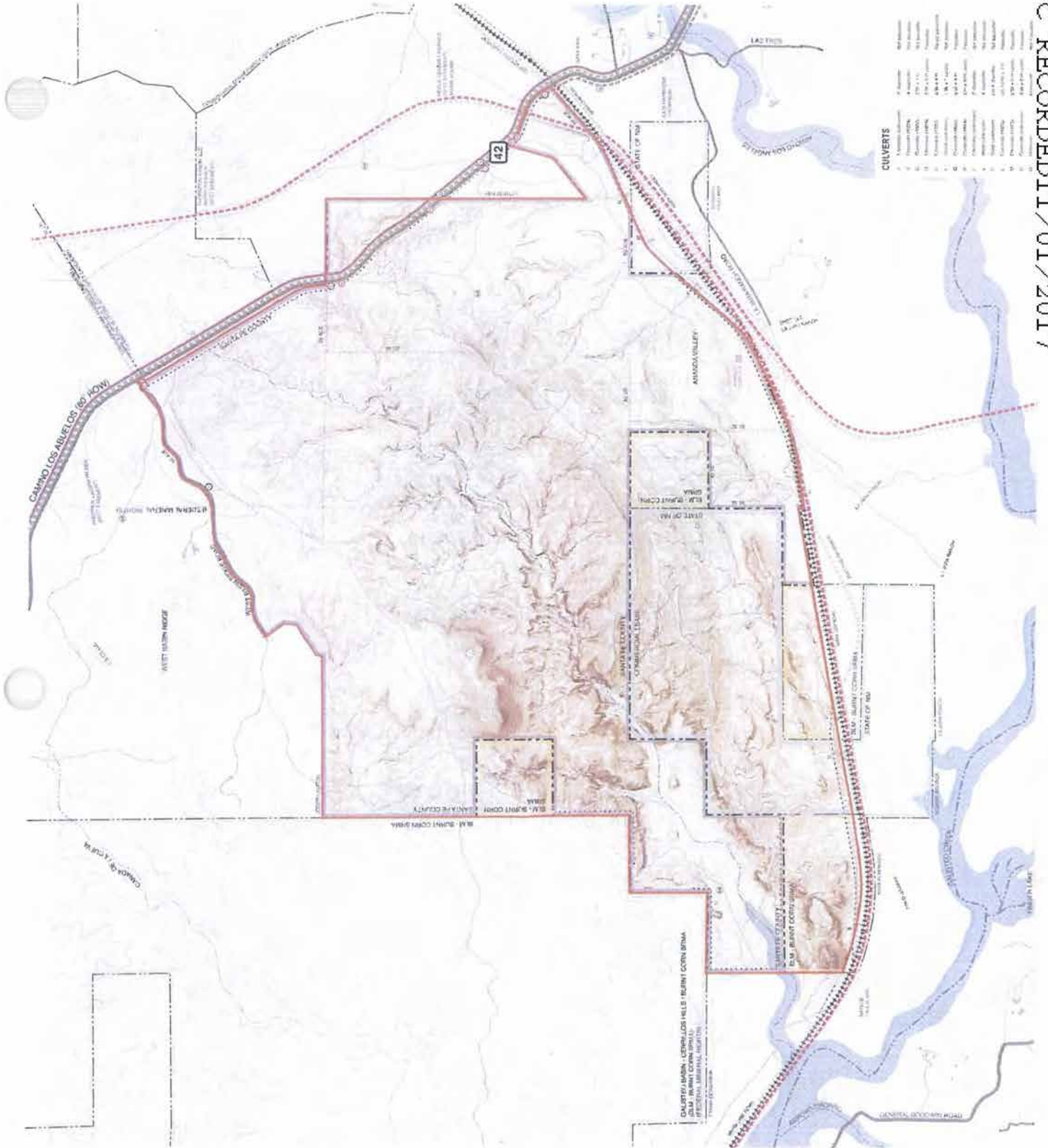
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 Master Plan Project Boundary
 County Land Boundary
 State Land Boundary
 BLM Land Boundary

- ☐ Wind
☐ Windm
☒ Gaze



Produced for Santa Fe County
design office | santa fe conservation trust | 805 Alamosa | alamosa



CULVERTS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

THORN RANCH OPEN SPACE MASTER PLAN

- LEGEND**
- Main Plan Project Boundary
 - County Land Boundary
 - State Land Boundary
 - BLM Land Boundary
 - Commonwealth Conservancy Boundary
 - Bundling Footprint
 - Road Major
 - Road Minor
 - Road Dirt/Loop Trail
 - Enrollment
 - Topography 20' Contour
 - Topography 100' Contour
 - Drainage Major
 - Drainage Minor
 - Railroad Existing Tracks (active)
 - Railroad Existing Grade (inactive)
 - Fence (Inventory ongoing)
 - Railroad Powerline
 - Solar Road County Designated
 - Bike Lane On-Road (Proposed)
 - Trail Santa Fe County Trail Route (Proposed)
 - Trail Multi Purpose Run in HOW (Proposed)
 - Well
 - Well (Artesian)
 - Gate
 - 100 year Flood Zone Zone A Floodway Area
 - Slope 0% - 5%
 - Slope 5% - 10%
 - Slope 10% - 15%
 - Slope 15% - 20%
 - Slope 20% - 25%
 - Slope 25% - 30%
 - Slope > 30% Mountain Range Viewshed Diagram

DRAFT

SITE ANALYSIS MAP

ANALYSIS MAP

Scale: 1" = 100'

North Arrow

Produced for Santa Fe County

THORNTON RANCH OPEN SPACE MASTER PLAN

LEGEND

- Master Plan Project Boundary
- Building Footprints
- Road Major
- Road Minor
- Road Dirt (Loop Trail)
- Topography, 20' Contour
- Topography, 100' Contour
- Drainage, Major
- Drainage, Minor
- Elevation Intervals (40')
- 5310 - 5338
- 5370 - 5399
- 5430 - 5459
- 5490 - 5519
- 5550 - 5579
- 5610 - 5639
- 5670 - 5699
- 5730 - 5759
- 5790 - 5819
- 5850 - 5879
- 5910 - 5939
- 5970 - 5999

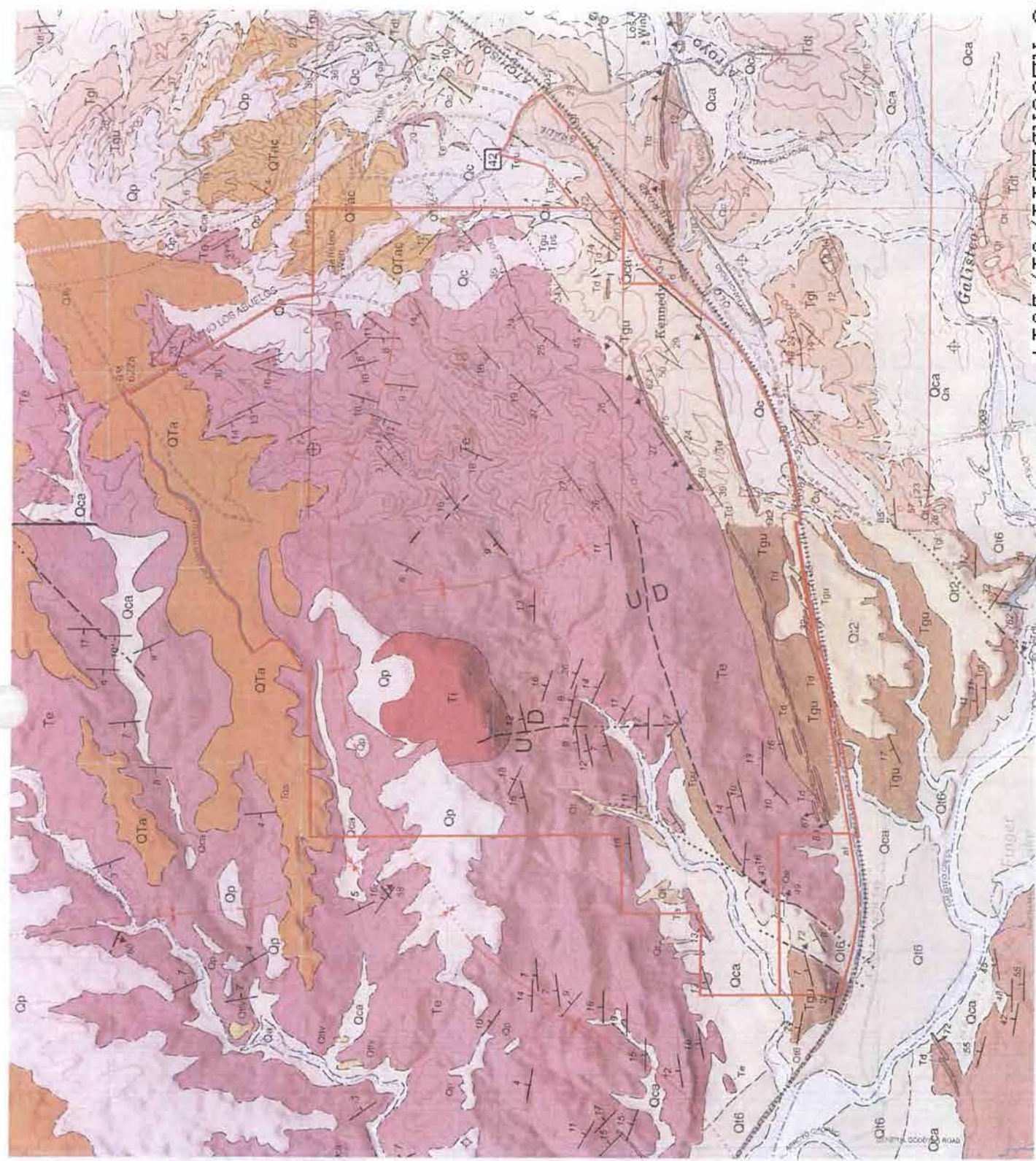
Scale: 1" = 100'



DRAFT
RELIEF MAP
ANALYSIS MAP

NOV 2014 N 52° 15' 00" 75' 00" 30' 00"

Produced for Santa Fe County
Map by: [illegible] [illegible] [illegible] [illegible] [illegible]



THORN RANCH OPEN SPACE MASTER PLAN

- ## LEGEND
- Master Plan Project Boundary
 - Building Footprint
 - Road Major
 - Road Minor
 - Road Un-surfaced
 - Topography 20-ft Contour
 - Topography 100-ft Contour
 - Drainage Major
 - Drainage Minor

Geologic Formations

Qc: Sedimentary, Colubian, unconsolidated sand, silt and clay deposits along upper hill slopes. • Flat cists

Qp: Sedimentary, Colubian / alluvium-sand, silt and clay in abandoned stream channels, flood plains and lower valley slopes.

Qta: Sedimentary, Pliocene deposits, cobble, pebbles, sand and silt lying upon remnants of surface cut to a former Galisteo Creek channel level

Qti: Sedimentary, Tertiary deposits of Galisteo Creek terrace alluvial deposits formed by Galisteo Creek.

Qti6: Sedimentary, Archaic or Neogene channel-cast channel incision or alluvial incision over very coarse alluvial sand and red silt. Formed by former groundwater.

Qti7: Sedimentary, Archaic, buff to moderate orange and gray-pink poorly sorted sand, gravel and cobble. Derived from Pleistocene / Holocene / Pliocene terranes.

Qti8: Igneous, Galisteo Dike, dark fine grained rhyolite of plagioclase, potassium, feldspar, iron-sulfide, manganese, boron and copper grains. Green, stands as well.

Qti9: Sedimentary, Eocene volcanics, grayish purple and reddish brown beds of tuff, volcaniclastic sandstone of alluvial fan origin. Source, Cerro Prieta Hills • Ortiz Mesa.

Qti10: Sedimentary, Galisteo Formation Upper Unit.

Qti11: Tuff to white, massively bedded, friable, well-sorted cross-bedded sandstone and siltstone of red, rose, tan and gray-green mudstone. Contains silicified logs to four ft diameter and 200' lengths.

Qti12: Igneous, rhyolite rock, unbedded.

DRAFT GEOLOGIC MAP ANALYSIS MAP

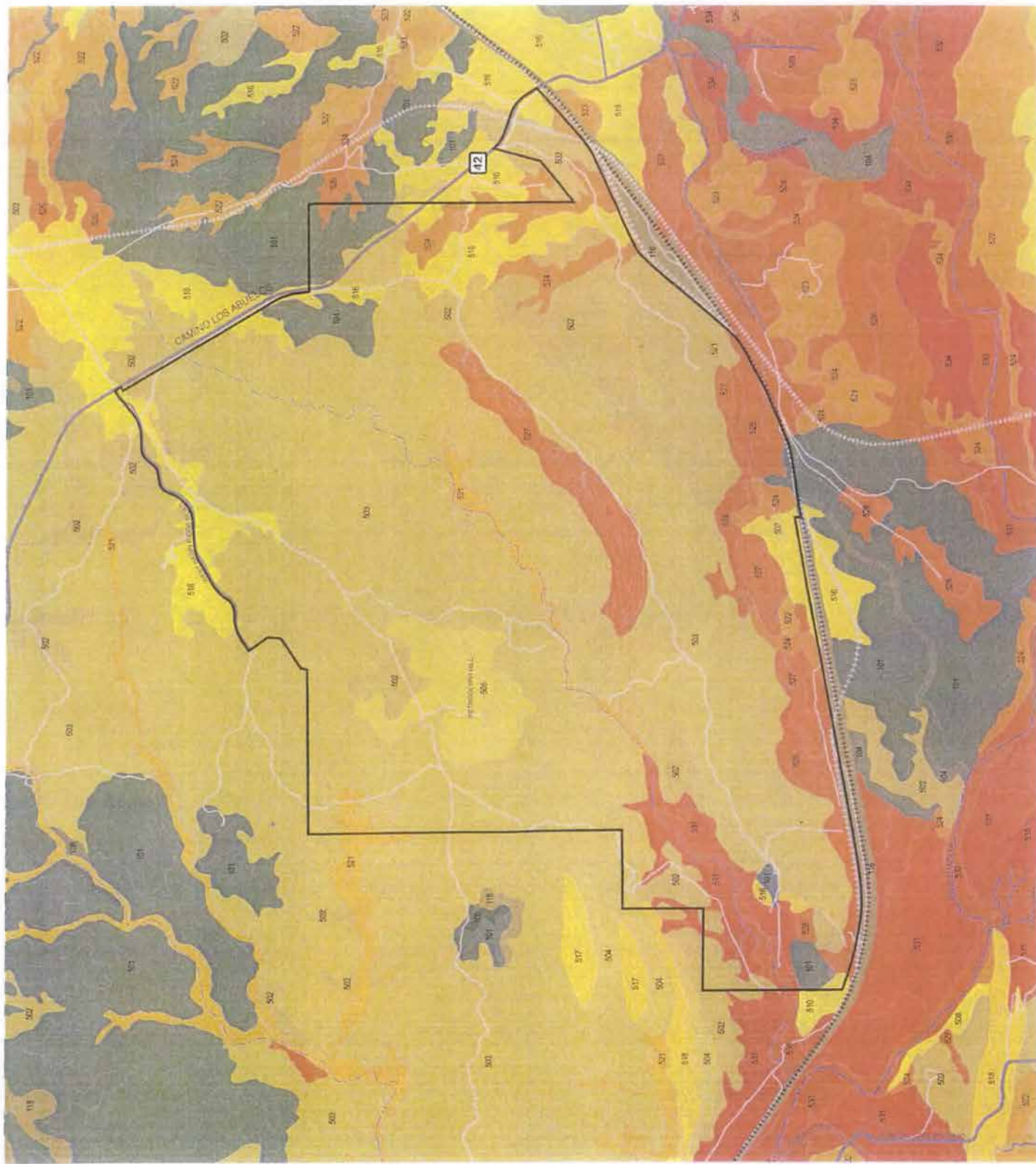
THORNTON RANCH OPEN SPACE MASTER PLAN

LEGEND

- Master Plan Project Boundary
- Building Footprint
- Road, Major
- Road, Minor
- Road, Dirt/Jeep Trail
- Topography, 20-ft Contour
- Topography, 100-ft Contour
- Drainage, Major
- Drainage, Minor

- Soils
- 100. Pinyon Loam (1-4% slopes)
- 101. Zabrion-Jacinto complex (5-25% slopes)
- 104. Chico-Riverbank complex (1-2% slopes, flooded)
- 108. Zia Fine Sandy Loam (0-2% slopes)
- 115. Arroyo-Juan Land-Olivaria Complex (1-60% slopes)
- 118. Gordinza-Paraje Complex (1-8% slopes)
- 502. Kibao Fine Sandy Loam (1-3% slopes)
- 503. Esposo Very Gravelly Coarse Sandy Loam (6-10% slopes)
- 504. Salsolav-Ballard Complex (15-45% slopes)
- 505. Puerco-Paraje Complex (15-50% slopes)
- 507. Induro Extremly Gravelly Sandy Loam (5-10% slopes)
- 508. Chardiso-Riverbank Complex (1-3% slopes)
- 510. Camion-Santo Complex (1-5% slopes)
- 516. Camion Fine Sandy Loam (1-4% slopes)
- 517. Puerco Extremly Gravelly Fine Sandy Loam (5-20% slopes)
- 518. Irons Quartz-Sylva Complex (5-35% slopes)
- 521. Divergo-Riverbank Complex (5-35% slopes)
- 522. Puerco Family Fine Sandy Loam (1-3% slopes)
- 523. Men-Corona-Rob (Kibao Complex) (5-50% slopes)
- 524. Zia Gravelly Land Complex (2-10% slopes)
- 526. Pindaga Family Fine Sandy Loam (1-3% slopes)
- 527. Musdize-Agostis Complex (20-50% slopes)
- 528. Puerco Family Loam (3-8% slopes)
- 532. Jarama-Chico-Riverbank Complex (0-1% slopes)
- 531. Sana Very Fine Sandy Loam (0-2% slopes)
- 532. Galvan Silty Clay Loam (0-2% slopes)
- 534. Chico-Chardiso Complex (1-3% slopes)

DRAFT SOILS MAP ANALYSIS MAP





THORN RANCH OPEN SPACE MASTER PLAN

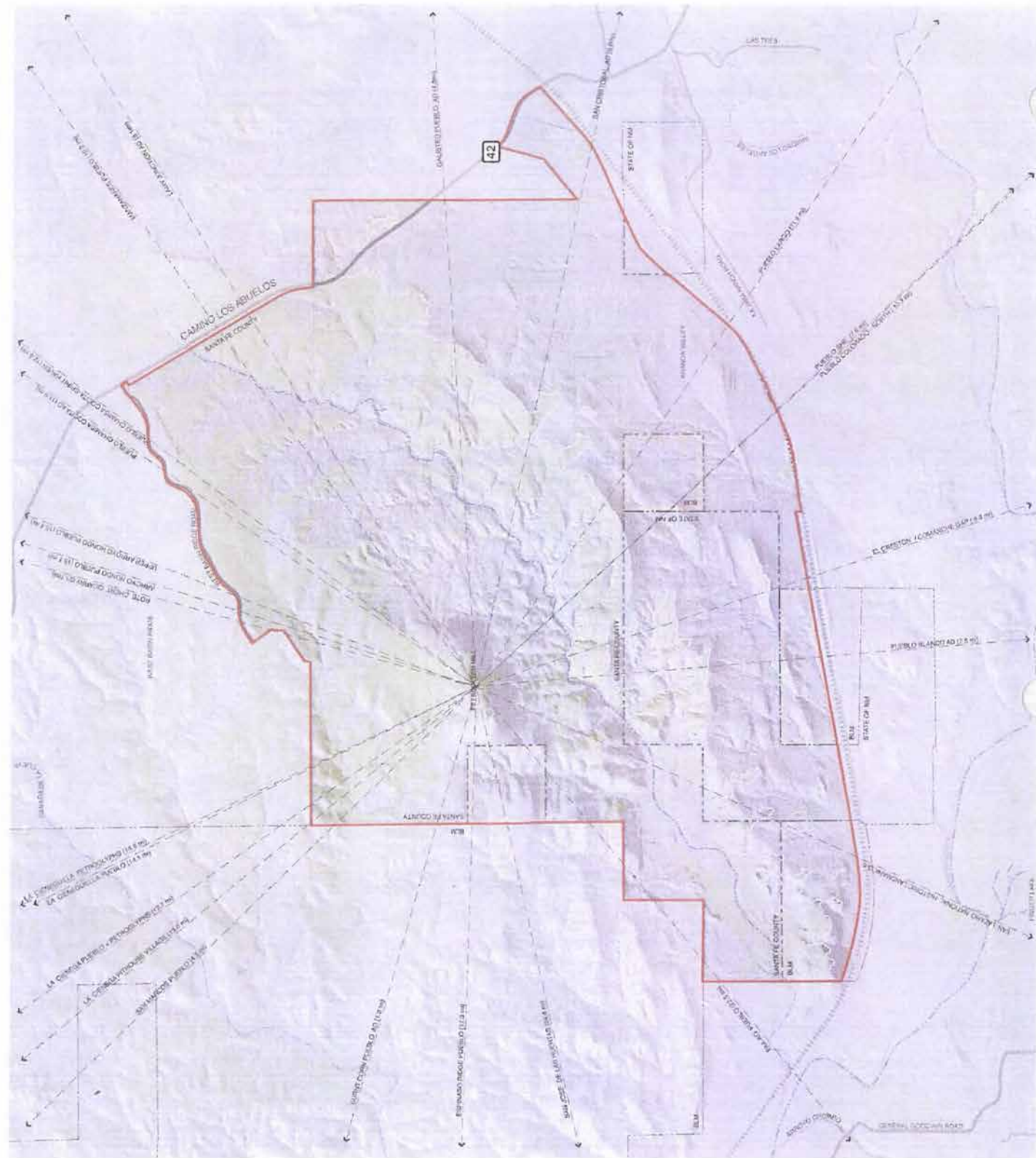
LEGEND

- Master Plan Project Boundary
- Watershed Boundary
- Viewshed

DRAFT VIEWS MAP ANALYSIS MAP



Produced for Santa Fe County



THORNTON RANCH OPEN SPACE MASTER PLAN

LEGEND

- Master Plan Project Boundary
- County Land Boundary
- State Land Boundary
- BLM Land Boundary
- Commonwealth Conservancy Boundary
- Road Major
- Road Minor
- Road Unimproved
- Easement
- Facility
- Topography, 20' Contour
- Topography, 100' Contour
- Drainage, Major
- Drainage, Minor
- Railroad Existing Tracks
- Viewpoint (Sight Right and Left)
- Visible from Thornton Hill
- Not Visible from Thornton Hill

DRAFT
VIEWSHED
ANALYSIS MAP



Produced for Santa Cruz County
design: dca

THORN RANCH
OPEN SPACE
MASTER PLAN

LEGEND

- Master Plan Project Boundary
Waterland Boundary
Gallardo Easement Acquisition of Sales Protection Act, Sites

DRAFT
GBASPA SITES MAP
ANALYSIS MAP

Produced for Santa Fe County
design office

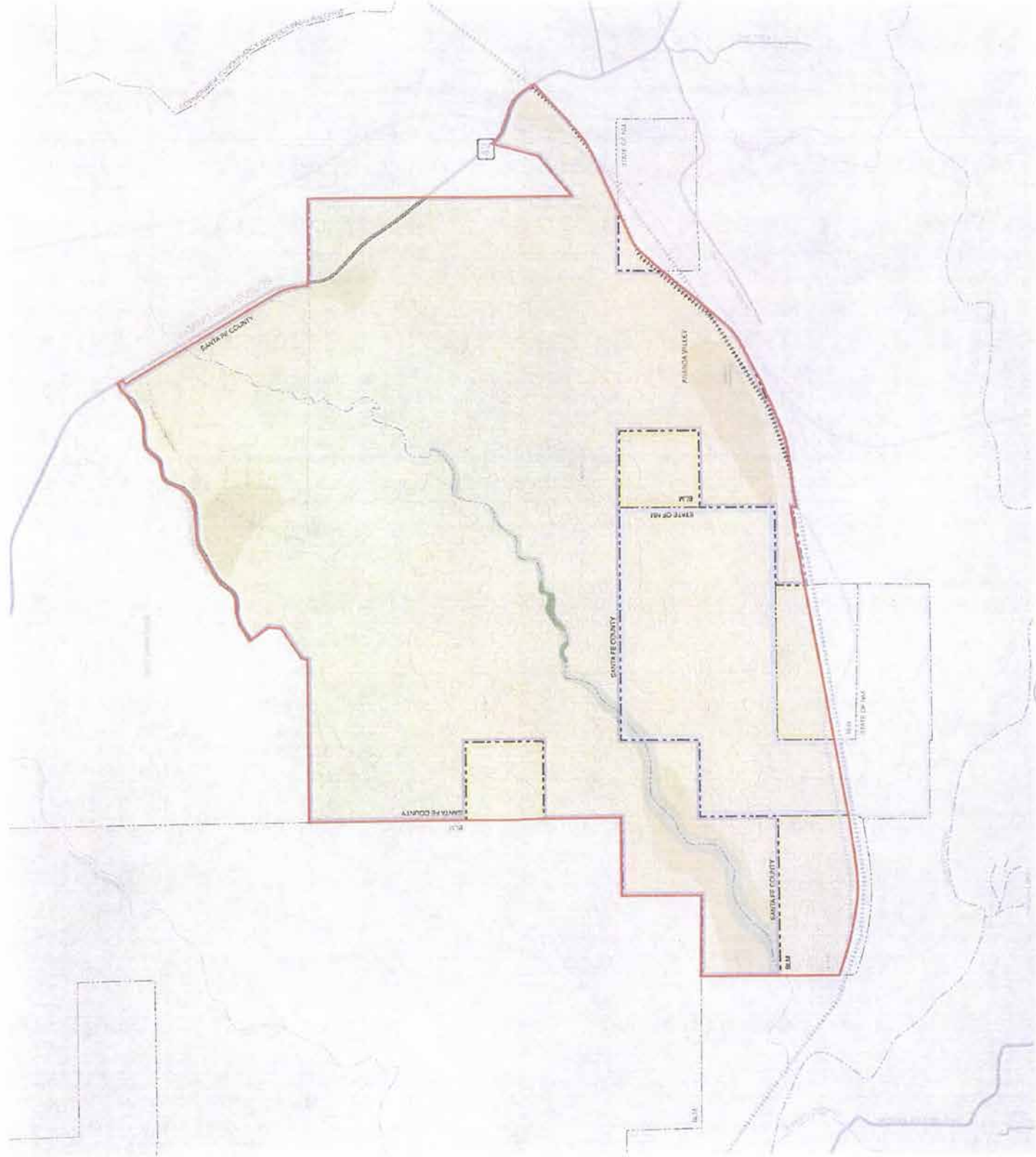
THORNTON RANCH OPEN SPACE MASTER PLAN

LEGEND

- Master Plan Project Boundary
- County Land Boundary
- State Land Boundary
- BLM Land Boundary
- Continental Conservancy Boundary
- Building Footprint
- Road Major
- Road Minor
- Road Upgraded
- Estimated
- Pavement
- Topography, 20-ft Contour
- Topography, 10-ft Contour
- Drainage Major
- Drainage Minor
- Railroad, Existing Tracts (active)
- Railroad, Existing Grade (inactive)

Vegetation Types

- Upland Woodland Savanna (dry woodland)
- one-seed juniper pinyon pine, adobe grass, yucca, purple threeawn, leather cholla, lup prickly pear, tree-leaf shrub
- One-seed Juniper / Blue gramma Savanna
- (deeper soils, gentle slopes): one-seed juniper, adobe grass, yucca, purple threeawn, leather cholla, lup prickly pear, tree-leaf shrub, white sage cholla, big sage shrub
- Aspen Pinyon Juniper Woodland
- (dry wash margins, deep alluvial soil): aspen pine, rubber rabbitbrush, wax currant, silver cholla
- Pio Grande Cottonwood / Narrowleaf Willow Woodland (resembles streamside woodland): no grade cottonwood, narrowleaf willow, new manzanita, cane



DRAFT VEGETATION TYPES ANALYSIS MAP

Appendix C

- C PROPERTY AGREEMENTS
 - BLM GBASPA Sites MOA
 - SLO Business Lease
 - Grant of Easement 1 (Access)
 - Grant of Easement 2 (Access)
 - Grant of Temporary Easement (Access)
 - Deed of Conservation Easement
 - Thornton Ranch OS - Boundary Surveys

**MEMORANDUM OF AGREEMENT BETWEEN SANTA FE COUNTY
AND THE
BUREAU OF LAND MANAGEMENT FOR
PROTECTION AND PRESERVATION OF THE LA CIENEGUILLA PETROGLYPHS,
LAMY JUNCTION SITE AND PETROGLYPH HILL
Agreement 2016-0059-PW/BT**

THIS MEMORANDUM OF AGREEMENT (hereinafter "Agreement") is entered on this 17 day of July 2015, by and between Santa Fe County (hereinafter referred to as ("County")), a New Mexico political subdivision, and the Bureau of Land Management (hereinafter referred to "BLM"), a Federal Government entity, located at 226 Cruz Alta Road, Taos, NM 87571.

RECITALS

WHEREAS, in the spirit of cooperation, mutual respect and service to the residents of Santa Fe County, this Agreement confirms the parties' commitment and mutual cooperation which recognize that the partnering activities between governmental entities of similar purposes may produce community and constituency benefits beyond what might be produced independently;

WHEREAS, the County has designated its Open Space and Trails Program as the program responsible for the development and preservation of open space and cultural and historical open spaces throughout the County;

WHEREAS, through the Galisteo Basin Archaeological Sites Protection Act (Public Law 108-208, hereafter referred to as the "Act"), the United States Congress has recognized that the Galisteo Basin and surrounding areas of New Mexico are the location of many well preserved prehistoric and historic archaeological resources, including some of the largest Pueblo Indian settlements in the United States, spectacular examples of Native American petroglyphs, and ruins of Spanish Colonial settlements;

WHEREAS, the County's Open Space and Trails Program is working in collaboration with the BLM to implement the purpose of the Act for property owned by the County at Petroglyph Hill on the Thornton Ranch Open Space, Lamy Junction and La Cieneguilla Petroglyphs. Whereas, the parties desire to formalize the cooperative work and efforts between the BLM and County Open Space Trails Program to further the purpose of the Act.

NOW, THEREFORE, IT IS MUTUALLY AGREED BETWEEN THE PARTIES as follows:

1. SCOPE OF UNDERSTANDING BETWEEN THE PARTIES:

a. The parties agree that the purpose of this Agreement is to provide for the protection, preservation, maintenance, and administration of the nationally significant archaeological resources identified in the Act.

b. The BLM and County Open Space and Trails agree to strive to achieve the highest level of protection, preservation, maintenance, and administration of archaeological resources at La Cieneguilla Petroglyphs (T.16N., R.8E., Section 17, projected), the Lamy Junction Site (T.14N., R.10E., Section 5), and Petroglyph Hill (T.14N., R.9E., Section 29), herein referred to collectively as the "Sites." Our cooperative efforts to attain these goals will be guided by the Act.

c. The BLM and County Open Space and Trails agree to work jointly on planning, preservation, protection, resource management, and other matters, including preparation of a site assessment, site management plan, and a general management plan. The County also agrees to permit access to the Sites to members of the Galisteo Act Implementation Group, a group formed by the BLM and comprised of representatives of the County, Open Space, BLM, State Office of Archeological Studies and volunteer members of the public, for these purposes under such terms and conditions as the County may implement.

2. FUNDING

a. If the BLM and the County Open Space and Trails Program jointly secure public funds for the purpose of archaeological resource preservation, protection, interpretation, or research for the sites, the expenditure of such funds shall be implemented in accordance with a written agreement that sets forth the required terms and conditions established by the funding source and describes the work or duties to be funded. By this Agreement the BLM or County Open Space and Trails Program is not obligated to expend any public funds for these purposes, and this Agreement does not restrict the County Open Space and Trails Program from expending any funds it may independently secure toward preservation efforts at the Sites.

3. EFFECTIVE DATE AND TERM

a. The term of this Agreement shall begin upon the date of last signature by the parties and will expire July 31, 2020 unless terminated earlier pursuant to Paragraph 4, or the County ceases to own the Sites prior to the date of expiration of this Agreement.

4. TERMINATION

The County or BLM may cancel this Agreement at any time by providing ten (10) days written notice to the other party.

5. NO THIRD-PARTY BENEFICIARIES; RESERVATION OF RIGHTS

a. This Agreement was not intended to and does not create any rights in any persons or party not a party hereto.

b. The County retains all legal rights to the Sites and to the quiet enjoyment thereof. Nothing in this Agreement is to be construed as granting any legal authority to the BLM over the Sites or over any actions by the County Open Spaces and Trails Program.

6. LIABILITY

Neither party shall be responsible for liability incurred as a result of the other party's acts or omissions in connection with this Agreement. Any liability incurred by the County in connection with this Agreement is subject to the immunities and limitations of the New Mexico Tort Claims Act, § 41-4-1, et seq., NMSA 1978, as amended.

7. AMENDMENT

This Agreement shall not be altered, changed or amended except by an instrument in writing executed by the parties hereto.

8. INTEGRATION CLAUSE

This Agreement incorporates all the covenants and understandings between the parties hereto concerning the subject matter hereof, and all such covenants and understandings have been merged into this Agreement. No prior covenants or understanding, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless embodied in this Agreement.

9. DISPUTE RESOLUTION; APPLICABLE LAW; VENUE

a. In the event of any dispute between the parties regarding the enforcement, effect, or interpretation of this Agreement, the parties shall first resort to mediation before a neutral mediator, mutually agreed to by both parties. If mediation is not successful to resolve a dispute, the parties agree to resolve disputes in New Mexico State and Federal District Courts.

b. The terms of this Agreement shall be construed in accordance with the laws of the State of New Mexico. The BLM and the County agree that the forums for any litigation arising out of or related to this Agreement shall be the State and Federal Courts of New Mexico.

10. APPROPRIATIONS AND AUTHORIZATIONS

Any commitment of funds by County pursuant to the purpose and goals of this Agreement is contingent upon sufficient appropriations and authorizations being made by the Santa Fe County Board of County Commissioners. If sufficient appropriations and authorizations

are not made in this or future fiscal years, this Agreement shall terminate upon written notice by the County to the BLM. Such termination shall be without penalty to the County, and the County shall have no duty to reimburse BLM for expenditures made in the performance of this Agreement. The County is expressly not committed to expenditure of any funds until such time as they are programmed, budgeted, encumbered and approved for expenditure by the County. The County's decision as to whether sufficient appropriations and authorizations have been made for the fulfillment of this Agreement shall be final and not subject to challenge by the BLM.

11. FACSIMILE SIGNATURES

The parties hereto agree that a facsimile signature has the same force and effect as an original for all purposes.

12. NOTICES

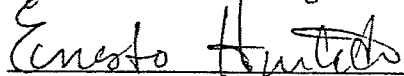
Any notice required by this Agreement shall be given in writing to the parties designated below. Notice shall be effective when delivered personally to any party, or three business days after deposited, postage fully prepaid, registered or certified, in an official receptacle of the U.S. Postal Service.

For BLM: BLM Taos Field Office
226 Cruz Alta Road
Taos, NM 87571
Phone: 575-758-8851
ATTN: Ernesto Hurtado

For County: Open Space and Trails Program
901 W. Alameda, Suite 20C
Santa Fe, NM 87501
Phone: 505-992-9868
ATTN: Colleen Baker

By their signatures below, the County Open Space and Trails Program, and the BLM agree to cooperate and work together to preserve and protect the above listed Sites.

Bureau of Land Management



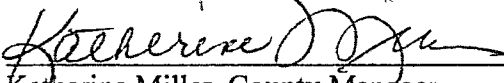
Ernesto Hurtado

Taos Field Office Manager-Acting

7-17-2015

Date

SANTA FE COUNTY:


Katherine Miller, County Manager

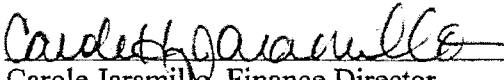
7.17.2015
Date

APPROVED AS TO LEGAL FORM:


Greg Shaffer, County Attorney

7/17/2015
Date

SANTA FE COUNTY FINANCE DEPARTMENT


Carole Jaramilla, Finance Director

7/17/15
Date



**Aubrey Dunn, Commissioner of Public Lands
State of New Mexico**

BUSINESS LEASE

Lease No. BL-2351

THIS LEASE, dated January 9, 2017 is made and entered into by and between the Commissioner of Public Lands, hereinafter referred to as "Lessor", and Santa Fe County, whose address is 107 Grant Avenue, Santa Fe, NM 87501, hereinafter referred to as "Lessee".

Lessor and Lessee agree and covenant as follows:

1. **LEASE.** For and in consideration of and subject to the terms, conditions, covenants and reservations contained herein, Lessor leases to Lessee the following described tract of land, hereinafter referred to as the "leased premises":

A tract of land containing 320 acres, more or less, and allocated by forties as follows: N2NE4, NE4NW4, S2N2, NW4SW4, Section 32, Township14N, Range 09E, in Santa Fe County, New Mexico (320 acres).

The rights granted herein are subject to all valid existing rights in the leased premises.

2. **WATER RIGHTS.** No water rights shall be used, placed or developed on the leased premises without the express, written consent of Lessor. All water appropriated shall be pursuant to state law and regulations. Any water rights used, placed or developed on the Lease Premises are herein and hereby deemed to belong to the Lessor, and all such rights shall be developed in the name of the Lessor.

3. **RESERVATIONS.** Lessor reserves the right to execute leases for the exploration, development and production of geothermal resources, oil and gas, sand, gravel, coal, shale, clay, rock, building stone or materials, potassium, sodium, phosphorus, salt or any other minerals or deposits of whatsoever kind located in, under or upon the leased premises and all rights of access, ingress and egress through or across the leased premises that are necessary or convenient to such exploration, development or production. Lessor further reserves the right to grant rights-of-way and easements over, upon, or across the leased premises for public highways, railroads, tramways, telephone, telegraph and power lines, irrigation works, sewer lines, drainage ditches, mining, logging, and for other purposes.

4. **TERM.** The term of this lease shall begin on the date of this lease and end at midnight on **January 8, 2041** unless terminated or canceled earlier as herein provided. Nothing contained herein shall limit the right of Lessor to sell or exchange the leased premises during the lease term.

5. **RENT.** Lessee shall pay to Lessor as rent for the leased premises and for the rights and privileges granted hereunder annual base rental as designated in **Exhibit "A" attached hereto**, due and payable in advance **on or before the 9th day of January** each year during the term of this lease. Time is of the essence in the performance of this agreement. Interest on delinquent rent payments shall accrue from the date the payment becomes due at the rate of one percent a month or any fraction of a month. Lessee shall also pay a late processing fee of **\$50.00** for any delinquent payment of rent, in accordance with the Lessor's schedule of fees.

6. **PERMITTED USE.** Lessee shall use the leased premises for the sole and exclusive purpose of: **Open space for recreational trails.** No other uses shall be permitted.

7. **IMPROVEMENTS.** Lessee may place the following improvements on the leased premises:

No Improvements were identified

No other improvements shall be placed on the leased premises without the prior amendment of this lease pursuant to Paragraph 20 hereof to permit such improvement placement. Lessee shall maintain and protect from waste and trespass all improvements placed on the leased premises. In the event improvements other than those authorized herein are placed on the leased premises, Lessor may either declare title to such improvements in Lessor without payment of compensation to Lessee or Lessor may order the removal of such improvements and the restoration of the leased premises to their condition existing prior to the placement of said improvements at Lessee's expense. The foregoing rights of Lessor shall be cumulative to Lessor's right to cancel this lease as herein provided.

8. **LIEN.** To secure the payment of any rent amount that becomes due, and to satisfy all reasonable costs incurred by Lessor in recovering said rent amount, Lessor shall have a first and prior lien on any and all improvements, fixtures and equipment placed on the leased premises.

9. **IMPROVEMENT REMOVAL AND RECLAMATION.** Before relinquishment or termination of this lease without re-lease to Lessee, or upon Lessor's cancellation of this lease as provided herein, Lessee shall remove all improvements placed on the leased premises and shall restore the leased premises to their condition existing prior to the placement of said improvements, provided, however, if any rent amount is due and unpaid at the time of lease cancellation or termination, Lessee shall remove improvements and restore the leased premises as herein provided only at such

time, in such manner and under such conditions as Lessor may in writing demand. Lessee hereby waives, and shall not assert, any right to compensation for improvements on the leased premises under Section 19-7-14, NMSA 1978. This paragraph shall survive termination of this lease.

10. **RELINQUISHMENT.** Lessee, if not in default under this lease, may at any time apply to relinquish the lease to Lessor and be relieved of further obligations under the lease, provided, however, such relinquishment shall not be valid or effective until approved in writing by Lessor. Lessee must file an application to relinquish the Lease at least 30 days prior to the date on which the Lessee requests the relinquishment to go into effect. Lessor may condition relinquishment on any terms he deems reasonable. Relinquishment shall be made on a form prescribed by Lessor and shall be accompanied by the required relinquishment fee as set forth in Lessor's schedule of fees. Upon relinquishment Lessee shall not be entitled to the refund of any rent previously paid.

11. **ASSIGNMENT.** Lessee shall not assign this lease, any part thereof, or assign any improvements located on the leased premises without the prior amendment of this lease pursuant to Paragraph 20 hereof to permit such assignment. Any lease assignment without lease amendment shall be null and void. Lessor may condition such lease amendment upon an increase in the rent amount and the modification or addition of other lease provisions.

12. **SUBLEASE.** Lessee shall not sublease the rights granted hereunder, any part thereof, any portion of the leased premises or any improvements located on the leased premises without the prior amendment of this lease pursuant to Paragraph 20 hereof to permit such sublease. Any sublease without lease amendment shall be null and void. Lessor may condition such lease amendment upon an increase in the rent amount and the modification or addition of other lease provisions.

13. **COLLATERAL ASSIGNMENT.** Lessee shall obtain approval of Lessor in accordance with State Land Office Rule 19.2.9.15 NMAC before making any collateral assignment or mortgage of its interest in this Lease or its improvements, and any such collateral assignment or mortgage shall be subject to the conditions, limitations and requirements set forth in the State Land Office rules. Lessor's approval of a collateral assignment or mortgage shall not release Lessee from any of its obligations under this Lease, except as agreed to in writing by Lessor. If Lessor gives Lessee a notice of default, Lessor shall simultaneously provide a copy of the notice to an approved collateral assignee or mortgagee, which shall have the right to cure the default within the time provided, subject to the requirements of State Land Office rules. An approved collateral assignee or mortgagee may succeed to the rights and duties of Lessee, and it may assign the lease in accordance with Paragraph 11, above, and State Land Office rules governing assignments.

14. **DEFAULT AND CANCELLATION.** Upon Lessee's violation of any of the terms, conditions or covenants contained herein, including the failure to pay the rent when due, Lessor may cancel this lease after providing Lessee thirty (30) days notice of

the default by registered mail. The mailing of such notice as herein provided shall constitute notice of Lessor's intention to cancel the lease and no proof of receipt of such notice shall be necessary in order for Lessor to enter lease cancellation thirty days after the mailing of the notice if Lessee has not cured the default to Lessor's satisfaction within said thirty day period. Lessee agrees that if a court of competent jurisdiction determines that Lessee has breached any of the terms, conditions or covenants of this lease, Lessee shall pay the costs incurred by Lessor in litigating the default, including reasonable attorney fees. In the event of a breach of the terms of this Lease by the Lessee, the Lessor also shall have all remedies available at law or equity.

15. **WAIVER.** No employee or agent of Lessor has the power, right or authority to orally waive any of the terms, conditions, or covenants hereof and no waiver by Lessor of any of the terms, conditions or covenants hereof shall be effective unless in writing and executed by Lessor. Lessor's waiver of Lessee's breach or default of any of the terms, conditions or covenants hereof shall not constitute or be construed as a waiver of any other or subsequent breach or default by Lessee. The failure of Lessor to enforce at any time any of the terms, conditions or covenants hereof or to exercise any option herein provided, or to require at any time performance by Lessee of any of the terms, conditions, or covenants hereof shall not constitute or be construed to be a waiver of such terms, conditions, or covenants, nor shall it affect the validity of this lease or any part thereof, or Lessor's right to thereafter enforce each and every such term, condition and covenant.

16. **COMPLIANCE WITH LAWS.** Lessee shall fully comply with all federal and state laws, regulations, rules, ordinances and requirements, applicable to the leased premises or to Lessee's operations thereon, including but not limited to all applicable laws governing water; endangered or threatened species; hazardous materials; environmental protection; land use; health and safety; cultural, historic or archeological / paleontological properties; waste; trespass; and all New Mexico State Land Office Rules and Regulations, including those that may be hereafter promulgated. Lessee's obligations under this paragraph include but are not limited to compliance with NMSA 1978 Section 19-6-5, requiring a lessee of State Trust Land to protect the leased premises from waste or trespass. Lessee's compliance with all laws, regulations and policy shall be at its own expense.

17. **WAIVER, RELEASE AND PROTECTION OF THE LEASED PREMISES.** Lessee is leasing the leased premises based on Lessee's own inspection and investigation of and judgment regarding the leased premises. Lessor makes no warranties or representations of any kind or nature with regard to the leased premises or with regard to this transaction.

If accidental discharge, release, spill, or fire or any other event having environmental consequence occurs, Lessee agrees to provide notice to Lessor at the same time and in the same manner as Lessee is required to provide to the federal, state or local agency having responsibility for enforcing compliance with environmental laws, regulations and policy. Lessee agrees that, upon request by Lessor, Lessor shall have

access to all reports, documents, test data and all other materials provided by Lessee to or received by Lessee from a governmental agency having responsibility for enforcing compliance with environmental or other laws.

18. INDEMNIFICATION; INSURANCE.

The parties shall not be jointly liable. Neither party shall be responsible for liability incurred as a result of the other party's acts or omissions in connection with this Agreement. Any liability incurred by either party in connection with this Agreement is subject to the immunities and limitations of the New Mexico Tort Claims Act, §41-4-1, et seq., NMSA 1978, as amended.

19. SCOPE OF AGREEMENT. This lease incorporates all the agreements, covenants and understandings between Lessor and Lessee concerning the subject matter hereof and all such agreements, covenants and understandings are merged into this written lease. No prior agreement or understanding between Lessor and Lessee shall be valid or enforceable unless expressly embodied in this lease.

20. AMENDMENT. This lease shall not be altered, changed or amended except by an instrument executed by both Lessor and Lessee.

21. APPLICABLE LAW. This lease shall be governed by the laws of the State of New Mexico.

22. EXHAUSTION OF ADMINISTRATIVE REMEDIES. In the event that Lessee is aggrieved by a decision of Lessor to cancel this Lease, Lessee shall within thirty (30) days after the date of such decision file an administrative contest pursuant to NMSA 1978, § 19-7-64 and State Land Office Rule 15 (19.2.15 NMAC). Lessee shall initiate no court action regarding this Lease except to appeal a final decision of the Commissioner of Public Lands rendered pursuant to such a contest proceeding, and as provided by NMSA 1978, § 19-7-64.

23. SUCCESSORS IN INTEREST; THIRD PARTIES. All terms, conditions and covenants of this lease and all amendments thereto shall extend to and bind the heirs, successors and assigns of Lessee and Lessor. There are no third party beneficiaries of this Lease.

24. RE-LEASE. At the expiration of the term of this lease, Lessee may re-lease the leased premises provided Lessor has determined to offer the leased premises for the same uses as permitted herein, Lessee is not in default under this lease, Lessee agrees to the terms offered by Lessor, and Lessee has bettered any offer to lease the leased premises made by a third party.

25. HOLDING OVER. If Lessee enters upon the leased premises after the termination or cancellation of this lease for any purpose, or leaves any equipment, buildings, materials, property or debris on the leased premises after the termination or cancellation of this lease, the rent due Lessor for such entry or presence shall be **\$111.38**

for each day or any part of a day. Nothing contained herein shall be construed as the grant to Lessee of the right to enter the leased premises for any purpose after the termination or cancellation of this lease without the prior written consent of Lessor.

26. LEASE ENTERED INTO UNDER STATE LAND OFFICE RULE 9.

This Lease is entered into pursuant to New Mexico State Land Office Rule 9, "Business Leasing" (19.2.9 NMAC), and the provisions of that rule control the interpretation and application of the terms of this Lease, except that in the event of a conflict between a provision of this Lease and a provision of Rule 9, the Lease provision controls.

Executed in duplicate.

LESSEE:

SANTA FE COUNTY

By: [Signature]

Name: Henry P. Roybal

Title: Chair, Board of County Commissioners
of Santa Fe County

ATTESTATION

[Signature]
Geraldine Salazar
Santa Fe County Clerk

Date

LESSOR:

NEW MEXICO COMMISSIONER OF
PUBLIC LANDS

By: [Signature]

AUBREY DUNN



Approved as to form
Santa Fe County Attorney

By: [Signature]
Date: 2-7-17

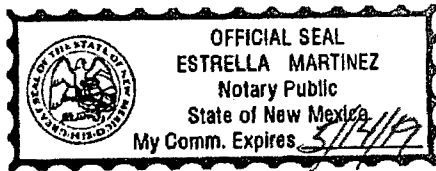
Reviewed and Approved
for SIGNATURE
Don Moye [Signature] Date 2-9-17
SFC Finance

2017 MAR 17 PM 12 19

ACKNOWLEDGMENT IN AN INDIVIDUAL CAPACITY

State of New Mexico
 County of Santa Fe

This instrument was acknowledged before on Feb 18, 2017 (date) by
Henry P. Raybald (name).
 (seal)



Estrella Martinez
 (Signature of notarial officer)

My commission expires: 5/14/19

ACKNOWLEDGMENT IN A REPRESENTATIVE CAPACITY

State of _____
 County of _____

This instrument was acknowledged before on _____ (date) by
 _____ (name) as _____ (title) of
 _____ (name of party on behalf of whom instrument is
 executed).

(seal)

 (Signature of notarial officer)

My commission expires: _____

2017 MAR 17 PM 12 19

EXHIBIT "A"

Rent Schedule for the Term of Base Lease

**BL-2351
Santa Fe County**

BASE LEASE TERM: January 9, 2017 – January 8, 2041

All rent is due and payable in advance on or before the 9th day of January

1st year	1-9-2017 – 1-8-2018	\$10,000.00
2 nd year	1-9-2018 – 1-8-2019	\$10,300.00
3 rd year	1-9-2019 – 1-8-2020	\$10,609.00
4 th year	1-9-2020 – 1-8-2021	\$10,927.00
5 th year	1-9-2021 – 1-8-2022	\$11,255.00
6 th year	1-9-2022 – 1-8-2023	\$11,593.00
7 th year	1-9-2023 – 1-8-2024	\$11,941.00
8 th year	1-9-2024 – 1-8-2025	\$12,299.00
9 th year	1-9-2025 – 1-8-2026	\$12,668.00
10 th year	1-9-2026 – 1-8-2027	\$13,048.00
11 th year	1-9-2027 – 1-8-2028	\$13,439.00
12 th year	1-9-2028 – 1-8-2029	\$13,842.00
13 th year	1-9-2029 – 1-8-2030	\$14,258.00
14 th year	1-9-2030 – 1-8-2031	\$14,685.00
15 th year	1-9-2031 – 1-8-2032	\$15,126.00
16 th year	1-9-2032 – 1-8-2033	\$15,580.00
17 th year	1-9-2033 – 1-8-2034	\$16,047.00
18 th year	1-9-2034 – 1-8-2035	\$16,528.00
19 th year	1-9-2035 – 1-8-2036	\$17,024.00
20 th year	1-9-2036 – 1-8-2037	\$17,535.00
21 st year	1-9-2037 – 1-8-2038	\$18,061.00
22 nd year	1-9-2038 – 1-8-2039	\$18,603.00
23 rd year	1-9-2039 – 1-8-2040	\$19,161.00
24 th year	1-9-2040 – 1-8-2041	\$19,736.00
25 th year	1-9-2041 – 1-8-2042	\$20,328.00

2017 MAR 17 PM 12 19

GRANT OF EASEMENT

THIS GRANT OF EASEMENT is made this 2nd day of October, 2000, by and between BLUFORD A. THORNTON, a single man dealing in his sole and separate property, JIM PAT THORNTON, a married man dealing in his sole and separate property joined by MARY ANN THORNTON, his spouse pro forma, GENE V. THORNTON, a married man dealing in his sole and separate property joined by BARBARA THORNTON, his spouse pro forma, and GENORA V. MOORE, a married woman dealing in her sole and separate property joined by SERGEANT R. MOORE, her spouse pro forma, (collectively the "Grantor"), and THE TRUST FOR PUBLIC LAND, a nonprofit California public benefit corporation authorized to do business in New Mexico ("Grantee"), whose principal business address is 116 New Montgomery, 4th Floor, San Francisco, California 94105

WITNESSETH:

A. Grantor owns, among other property, that certain real estate located in the County of Santa Fe, State of New Mexico more particularly described as follows:

Sections 20, 21, 28 and the NE/4, SE/4, E/2 W/2, W/2 NW/4, SW/4 SW/4 of 29, all within T14N, R9E, N.M.P.M., Santa Fe County, New Mexico,

and through which runs Santa Fe County Road 42.

B. Grantee anticipates owing that certain real estate in fee or by leasehold interest located in Santa Fe County, State of New Mexico, which is currently owned by Grantor, and which is more particularly described as follows:

approximately 780 acres, more or less, located in Santa Fe County, New Mexico, and more particularly described as follows:

NE/4, SE/4, E/2 W/2, W/2 NW/4, SW/4 SW/4 of Section 29;
NE/4 NE/4, S/2 NE/4 of Section 31, and NW/4 NW/4 plus that portion of the NE/4 SE/4 laying north of the railroad of Section 32 all within T14N, R9E, N.M.P.M.

That certain grazing lease with the State of New Mexico covering 320 acres, more or less, which is more particularly described as follows:

NE/4, E/2 NW/4, SW/4 NW/4, NW/4 SW/4, all of Section 32, T14N, R9E, N.M.P.M.

That certain grazing lease with the Bureau of Land Management covering 115 acres, more or less, which is more particularly described as follows:

NW/4 SW/4 of Section 29, NW4 NW/4 of Section 33, and that portion of NW/4 SE/4 and NE/4 SW/4, laying north of the railroad tracks, of Section 32, all within T14N, R9E, N.M.P.M.

(hereinafter collectively the "Dominant Estate").

C. The Dominant Estate is presently unimproved.

D. Grantor desires to grant and Grantee desires to receive an easement, over and across certain property, constituting a portion of the property owned by the Grantor identified in Recital A above, for the benefit of the Dominant Estate and the centerline for which is more particularly described as follows:

From the point of beginning which is the point of intersection of Santa Fe County Road 42 and the Northern Boundary line of Section 28 which is the Southern Boundary line of Section 21, T14N, R9E, N.M.P.M., Santa Fe County, New Mexico:

Thence westerly along the Northern Boundary line of Section 28 which is the Southern Boundary line of Section 21, T14N, R9E, N.M.P.M. to the point of intersection of Sections 20, 21, 28 and 29, T14N, R9E, N.M.P.M., which is the most northeasterly point of the Dominant Estate,

the "Roadway". The Roadway shall extend from the centerline description a distance sufficient to meet any and all Santa Fe County road standards when it is constructed, but in no even less than 25 feet either side of the centerline.

Grantor further grants to Grantee the right to use any and all of what is currently identified as County Road 42 on any portion of the property owned by the Grantors.

E. The effectiveness, validity and enforceability of this easement is specifically and unconditionally conditioned upon Grantee becoming owner of the Dominant Estate, but it shall run with the land.

NOW, THEREFORE, in consideration of their respective covenants and agreements set forth herein and for other good and valuable consideration, the parties covenant and agree to the following.

1. **INCORPORATION OF RECITALS.** The recitals set forth above are incorporated herein by reference as if fully set forth herein.

2. **GRANT OF EASEMENT.** Subject to satisfaction of the condition precedent set forth in Recital E above, Grantor hereby grants to Grantee a nonexclusive, permanent and perpetual easement, to run with the land, over, across and on the Roadway for ingress, egress, utility and all other purposes (the "Easement"), and for purposes of development, construction, repair, maintenance and improvement of the Easement. Grantee agrees, upon construction of the Easement, to fence the

Easement on both sides with a type and style of fencing in common use within the geographic area of the Dominant Estate.

3. MODIFICATION OF CENTERLINE BASED ON NECESSITY. No developed road exists on or across the Roadway at this time. Should the physical condition of the Roadway prove such that it would be impractical to develop, the parties agree that they shall meet, negotiate and agree to varying the centerline to the degree necessary to make construction of the Roadway possible.

4. MISCELLANEOUS.

(a) Governing Law. This Agreement shall be governed by the laws of the State of New Mexico.

(b) Waiver of Default. Failure by either party to enforce any provision of this Agreement shall not be construed as a waiver of such provision or of the right to such party thereafter to enforce such provision. No term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented.

(c) Modifications. Except as expressly set forth elsewhere in this Agreement, this Agreement may be modified only in writing, signed by both parties hereto.

(d) Integration Clause. This Agreement shall constitute the entire agreement between the parties hereto with respect to the subject matter hereof and shall supersede all prior correspondence, conversations and negotiations with respect thereto.

(e) Attorney's Fees. The parties agree that reasonable attorneys fees and costs shall be awarded to the prevailing party in any arbitration or litigation between the parties in connection with this Agreement.

(f) Binding Effect. This Agreement shall be binding upon the heirs, successors, assigns and representatives of the parties hereto.

(g) Severability. If any provision, in whole or in part, of this Agreement should be found to be invalid or unenforceable, it shall not affect the validity of any other provisions within this Agreement which shall continue to bind the parties.

IN WITNESS WHEREOF, the parties have executed this Agreement effective the date first above set forth.

GRANTORS

Bluford A. Thornton
BLUFORD A. THORNTON

Jim Pat Thornton
JIM PAT THORNTON

Mary Ann Thornton
MARY ANN THORNTON, spouse pro
forma

Gene V. Thornton
GENE V. THORNTON

Genora V. Moore
GENORA V. MOORE

Barbara D. Thornton
BARBARA THORNTON, spouse pro
forma

Sergeant R. Moore
SERGEANT R. MOORE, spouse pro
forma

GRANTEE

THE TRUST FOR PUBLIC LAND

By: Peter N. Ives

Name: PETER N. IVES

Title: REGIONAL COUNSEL

ACKNOWLEDGMENTS

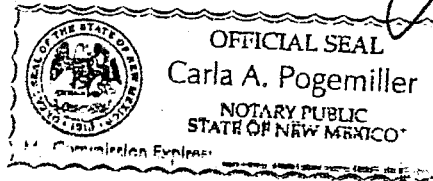
STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Bluford A. Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03
(SEAL)



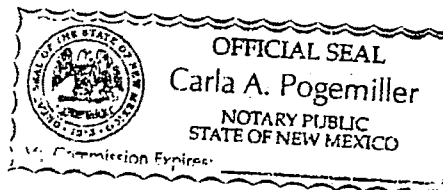
STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Jim Pat Thornton and Mary Ann Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03
(SEAL)



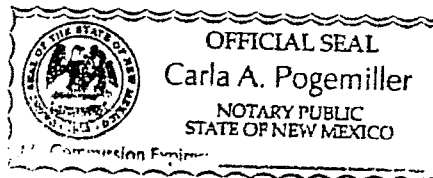
STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Gene V. Thornton and Barbara Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03
(SEAL)



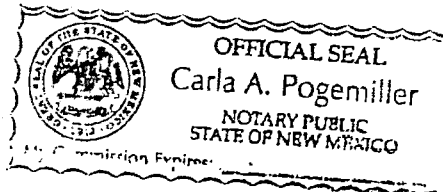
STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Genora V. Moore and Sergeant R. Moore.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03
(SEAL)



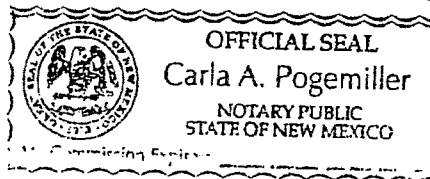
STATE OF New Mexico
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me October 2nd 2000, by
Peta N. Green Regional Council of The Trust for Public Land, a
nonprofit California public benefit corporation, on behalf of the Corporation.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03



GRANT OF EASEMENT

THIS GRANT OF EASEMENT is made this 2d day of October, 2000, by and between BLUFORD A. THORNTON, a single man dealing in his sole and separate property, JIM PAT THORNTON, a married man dealing in his sole and separate property joined by MARY ANN THORNTON, his spouse pro forma, GENE V. THORNTON, a married man dealing in his sole and separate property joined by BARBARA THORNTON, his spouse pro forma, and GENORA V. MOORE, a married woman dealing in her sole and separate property joined by SERGEANT R. MOORE, her spouse pro forma, (collectively the "Grantor"), and THE TRUST FOR PUBLIC LAND, a nonprofit California public benefit corporation authorized to do business in New Mexico ("Grantee"), whose principal business address is 116 New Montgomery, 4th Floor, San Francisco, California 94105

WITNESSETH:

A. Grantor owns, among other property, that certain real estate located in the County of Santa Fe, State of New Mexico more particularly described as follows:

Sections 28, and THE NE/4 OF THE NW/4, THE SE/4 NW/4, THE SW/4 OF THE NW/4, THE PORTION OF THE NW/4 OF THE SW/4 LYING TO THE NORTH OF THE RIGHT OF WAY OF THE ATCHISON TOPEKA AND SANTA FE RAIL LINE, all of Section 33, T14N, R9E, N.M.P.M., Santa Fe County, New Mexico.

B. Grantee anticipates owing that certain real estate in fee or by leasehold interest located in Santa Fe County, State of New Mexico, which is currently owned by Grantor, and which is more particularly described as follows:

that portion of the NE/4 SE/4 laying north of the railroad of Section 32 all within T14N, R9E, N.M.P.M.;

(hereinafter collectively the "Dominant Estate").

C. The Dominant Estate is presently unimproved.

D. Grantor desires to grant and Grantee desires to receive an easement, over and across certain property, constituting a portion of the property owned by the Grantor identified in Recital A above, for the benefit of the Dominant Estate and which is more particularly described as follows:

From the point of beginning which is the southwestern point of Section 28, where it adjoins Section 29, T14N, R9E, N.M.P.M., along the boundary line of said Section 28 and the northern boundary line of the NW/4 NW/4 of Section 33, and for thirty (30) feet along the northern boundary line of the NE/4 NW/4 of Section 33 from the northwestern point of said NE/4

NW/4, T14N, R9E, N.M.P.M. for a width of thirty (30) feet to the north of said line; thence along the western boundary line of said NE/4 NW/4 of said Section 33, south along the boundary line shared by the NW/4 NW/4 and NE/4 NW/4 of said Section 33, and for thirty (30) feet along the common boundary line between the SW/4 NW/4 and SE/4 NW/4 of said Section 33, for a width of thirty (30) feet to the east of said line; thence along the boundary line of the NW/4 NW/4 and the SW/4 NW/4 of said Section 33 to the westernmost point along said boundary and for thirty (30) feet to the south of said line; thence south along the boundary line between Section 32 and said Section 33 to a point thirty feet south of that point of intersection of the SW/4 NW/4 and NW/4 SW/4 of said Section 33 and the SE/4 NE/4 and the NE/4 SE/4 of said Section 32, T14N, R9E, N.M.P.M. for a width of thirty (30) feet to the east of said line.

the "Roadway".

E. The effectiveness, validity and enforceability of this easement is specifically and unconditionally conditioned upon Grantee becoming owner of the Dominant Estate, but it shall run with the land.

NOW, THEREFORE, in consideration of their respective covenants and agreements set forth herein and for other good and valuable consideration, the parties covenant and agree to the following.

1. **INCORPORATION OF RECITALS.** The recitals set forth above are incorporated herein by reference as if fully set forth herein.

2. **GRANT OF EASEMENT.** Subject to satisfaction of the condition precedent set forth in Recital E above, Grantor hereby grants to Grantee a nonexclusive, permanent and perpetual easement, to run with the land, over, across and on the Roadway for ingress and egress purposes (the "Easement"), and for purposes of development, construction, repair, maintenance and improvement of the Easement. Grantee agrees, upon construction of the Easement, to fence the Easement on both sides with a type and style of fencing in common use within the geographic area of the Dominant Estate.

3. **MODIFICATION OF CENTERLINE BASED ON NECESSITY.** No developed road exists on or across the Roadway at this time. Should the physical condition of the Roadway prove such that it would be impractical to develop, the parties agree that they shall meet, negotiate and agree to varying the Roadway to the extent necessary to make construction of the Roadway possible.

4. **MISCELLANEOUS.**

(a) **Governing Law.** This Agreement shall be governed by the laws of the State of New Mexico.

(b) Waiver of Default. Failure by either party to enforce any provision of this Agreement shall not be construed as a waiver of such provision or of the right to such party thereafter to enforce such provision. No term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented.

(c) Modifications. Except as expressly set forth elsewhere in this Agreement, this Agreement may be modified only in writing, signed by both parties hereto.

(d) Integration Clause. This Agreement shall constitute the entire agreement between the parties hereto with respect to the subject matter hereof and shall supersede all prior correspondence, conversations and negotiations with respect thereto.

(e) Attorney's Fees. The parties agree that reasonable attorneys fees and costs shall be awarded to the prevailing party in any arbitration or litigation between the parties in connection with this Agreement.

(f) Binding Effect. This Agreement shall be binding upon the heirs, successors, assigns and representatives of the parties hereto.

(g) Severability. If any provision, in whole or in part, of this Agreement should be found to be invalid or unenforceable, it shall not affect the validity of any other provisions within this Agreement which shall continue to bind the parties.

IN WITNESS WHEREOF, the parties have executed this Agreement effective the date first above set forth.

GRANTORS

Bluford A. Thornton
BLUFORD A. THORNTON

Jim Pat Thornton
JIM PAT THORNTON

Mary Ann Thornton
MARYANN THORNTON, spouse pro
forma

Gene V. Thornton
GENE V. THORNTON

Genora V. Moore
GENORA V. MOORE

Barbara D. Thornton
BARBARA THORNTON, spouse pro
forma

Sergeant R. Moore
SERGEANT R. MOORE, spouse pro
forma

GRANTEE

THE TRUST FOR PUBLIC LAND

By:

Name:

PETER N. IVEs

Title:

REGIONAL COUNSEL

ACKNOWLEDGMENTS

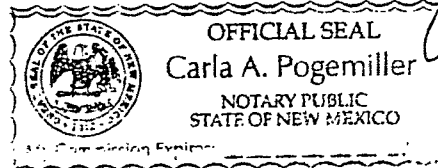
STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Bluford A. Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03
(SEAL)



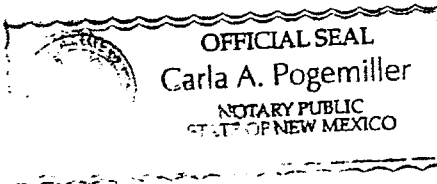
STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Jim Pat Thornton and Mary Ann Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03
(SEAL)

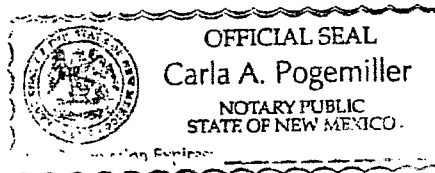


STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Gene V. Thornton and Barbara Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:
6/4/03
(SEAL)

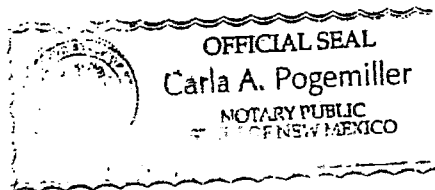


STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Genora V. Moore and Sergeant R. Moore.

Carla A. Pogemiller
Notary Public

My Commission Expires:
6/4/03
(SEAL)



STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me October 2nd 2000, by
Peter N. Oliver Regional Council of The Trust for Public Land, a
nonprofit California public benefit corporation, on behalf of the Corporation.

Carla A. Pogemiller
Notary Public

My Commission Expires:

6/4/03



OFFICIAL SEAL
Carla A. Pogemiller
NOTARY PUBLIC
STATE OF NEW MEXICO

TEMPORARY GRANT OF EASEMENT

THIS TEMPORARY GRANT OF EASEMENT is made this 2d day of October, 2000, by and between BLUFORD A. THORNTON, a single man dealing in his sole and separate property, JIM PAT THORNTON, a married man dealing in his sole and separate property joined by MARY ANN THORNTON, his spouse pro forma, GENE V. THORNTON, a married man dealing in his sole and separate property joined by BARBARA THORNTON, his spouse pro forma, and GENORA V. MOORE, a married woman dealing in her sole and separate property joined by SERGEANT R. MOORE, her spouse pro forma, (collectively the "Grantor"), and THE TRUST FOR PUBLIC LAND, a nonprofit California public benefit corporation authorized to do business in New Mexico ("Grantee"), whose principal business address is 116 New Montgomery, 4th Floor, San Francisco, California 94105

WITNESSETH:

A. Grantor owns, among other property, that certain real estate located in the County of Santa Fe, State of New Mexico more particularly described as follows:

Sections 20, 21, 28 and the NE/4, SE/4, E/2 W/2, W/2 NW/4, SW/4 SW/4 of 29, all within T14N, R9E, N.M.P.M., Santa Fe County, New Mexico,

and through which runs Santa Fe County Road 42.

B. Grantee anticipates owing that certain real estate in fee or by leasehold interest located in Santa Fe County, State of New Mexico, which is currently owned by Grantor, and which is more particularly described as follows:

approximately 780 acres, more or less, located in Santa Fe County, New Mexico, and more particularly described as follows:

NE/4, SE/4, E/2 W/2, W/2 NW/4, SW/4 SW/4 of Section 29;
NE/4 NE/4, S/2 NE/4 of Section 31, and NW/4 NW/4 plus that portion of the NE/4 SE/4 laying north of the railroad of Section 32 all within T14N, R9E, N.M.P.M.

That certain grazing lease with the State of New Mexico covering 320 acres, more or less, which is more particularly described as follows:

NE/4, E/2 NW/4, SW/4 NW/4, NW/4 SW/4, all of Section 32, T14N, R9E, N.M.P.M.

That certain grazing lease with the Bureau of Land Management covering 115 acres, more or less, which is more particularly described as follows:

NW/4 SW/4 of Section 29, NW4 NW/4 of Section 33, and that portion of NW/4 SE/4 and NE/4 SW/4, laying north of the railroad tracks, of Section 32, all within T14N, R9E, N.M.P.M.

(hereinafter collectively the "Dominant Estate").

C. The Dominant Estate is presently unimproved.

D. Grantor desires to grant and Grantee desires to receive a temporary ingress and egress easement, over and across certain property, constituting a portion of the property owned by the Grantor identified in Recital A above, for the benefit of the Dominant Estate which is more particularly described as follows:

From the point of beginning which is the point of intersection of Santa Fe County Road 42 and the existing dirt roadway running west from said County Road 42, the point of intersection of which is located in Section 21 at an existing gate, which dirt roadway is the current principal access point in and to the Dominant Estate and which runs in a southwesterly direction, over, on and across said dirt roadway, as it currently exists, to the Dominant Estate, all located in Sections 21 and 20, T14N, R9E, N.M.P.M., Santa Fe County, New Mexico:

the "Temporary Roadway".

E. The effectiveness, validity and enforceability of this easement is specifically and unconditionally conditioned upon Grantee becoming owner of the Dominant Estate, but it shall run with the land.

NOW, THEREFORE, in consideration of their respective covenants and agreements set forth herein and for other good and valuable consideration, the parties covenant and agree to the following.

1. INCORPORATION OF RECITALS. The recitals set forth above are incorporated herein by reference as if fully set forth herein.

2. GRANT OF EASEMENT. Subject to satisfaction of the condition precedent set forth in Recital E above, Grantor hereby grants to Grantee a nonexclusive, temporary easement for a period of one (1) years from the recording hereof, over, across and on the Temporary Roadway for ingress and egress purposes (the "Temporary Easement"), and for purposes of repair and maintenance of the Easement. Grantee agrees to keep the gate by which the Temporary Easement is accessed from County Road 42, locked. Grantor shall provide Grantee a key to said Temporary Easement.

3. MISCELLANEOUS.

(a) Governing Law. This Agreement shall be governed by the laws of the State of

New Mexico.

(b) Waiver of Default. Failure by either party to enforce any provision of this Agreement shall not be construed as a waiver of such provision or of the right to such party thereafter to enforce such provision. No term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented.

(c) Modifications. Except as expressly set forth elsewhere in this Agreement, this Agreement may be modified only in writing, signed by both parties hereto.

(d) Integration Clause. This Agreement shall constitute the entire agreement between the parties hereto with respect to the subject matter hereof and shall supersede all prior correspondence, conversations and negotiations with respect thereto.

(e) Attorney's Fees. The parties agree that reasonable attorneys fees and costs shall be awarded to the prevailing party in any arbitration or litigation between the parties in connection with this Agreement.

(f) Binding Effect. This Agreement shall be binding upon the heirs, successors, assigns and representatives of the parties hereto.

(g) Severability. If any provision, in whole or in part, of this Agreement should be found to be invalid or unenforceable, it shall not affect the validity of any other provisions within this Agreement which shall continue to bind the parties.

IN WITNESS WHEREOF, the parties have executed this Agreement effective the date first above set forth.

GRANTORS

Bluford A. Thornton
BLUFORD A. THORNTON

Jim Pat Thornton
JIM PAT THORNTON

Mary Ann Thornton
MARY ANN THORNTON, spouse pro
forma

Gene V. Thornton
GENE V. THORNTON

Genora V. Moore
GENORA V. MOORE

Barbara D. Thornton
BARBARA THORNTON, spouse pro
forma

Sergeant R. Moore
SERGEANT R. MOORE, spouse pro
forma

GRANTEE

THE TRUST FOR PUBLIC LAND

By: Peter N. Ives

Name: PETER N. IVES

Title: REGIONAL COUNSEL

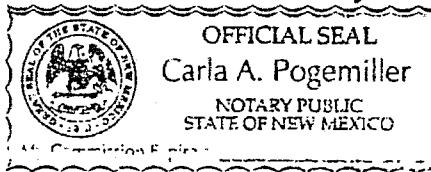
ACKNOWLEDGMENTS

STATE OF New Mexico
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Bluford A. Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:
6/4/03
(SEAL)

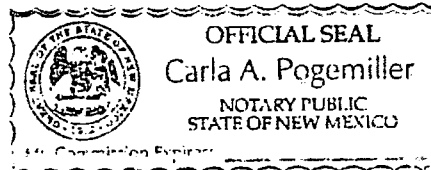


STATE OF New Mexico
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Jim Pat Thornton and Mary Ann Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:
6/4/03
(SEAL)

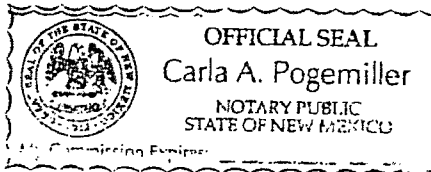


STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Gene V. Thornton and Barbara Thornton.

Carla A. Pogemiller
Notary Public

My Commission Expires:
6/4/03
(SEAL)

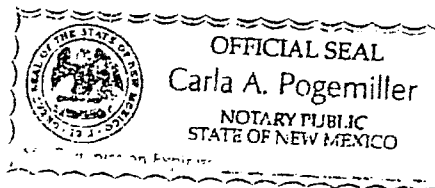


STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me on October 2nd, 2000, by Genora V. Moore and Sergeant R. Moore.

Carla A. Pogemiller
Notary Public

My Commission Expires:
6/4/03
(SEAL)



STATE OF New Mexico)
COUNTY OF Santa Fe) ss.

This instrument was acknowledged before me October 2nd 2000, by
Peter N. Ives, Regional Counsel of The Trust for Public Land, a
nonprofit California public benefit corporation, on behalf of the Corporation.

[Signature]
Notary Public

My Commission Expires:

6/4/03

CCTS

DEED OF CONSERVATION EASEMENT

This Deed of Conservation Easement (this "Deed") is granted by Commonweal, a New Mexico non-profit corporation (the "Landowner") to the County of Santa Fe New Mexico, a political subdivision of the State of New Mexico (the "County"), on this 21st day of December, 2004.

RECITALS

The Landowner grants this Deed, and the Landowner and the County enter into the agreements contained within this Deed, on the basis of the following facts, understandings, and intentions.

A. Property. The Landowner is the sole owner in fee simple of the Property commonly known as Tract 10 of the Thornton Ranch (the "Property") as depicted on Exhibit "A", which consists of Two Hundred Sixty-Three and 63/100 (263.63) acres of land, located in Santa Fe County, New Mexico. The portion of the Property that is encumbered by this Conservation Easement (hereafter, the "Conservation Easement Tract") is depicted on Exhibit "A" and the legal description for the Conservation Easement Tract is contained in Exhibit "B". The Conservation Easement Tract consists of One Hundred and Sixty-Eight (168) acres of land, more or less.

B. Survey. The Conservation Easement Tract is shown on Exhibit "A", which is the survey prepared by Dawson Surveys, Inc. and dated December 13, 2004 (the "Survey").

C. Water Rights. The Property is eligible for a Section 72-12-1 New Mexico State Water Permit that would authorize the Landowner, its successor, and Santa Fe County to utilize up to Three (3) acre feet of water for irrigation, domestic and limited institutional uses (the "Water Rights").

D. Mineral Rights. The mineral rights associated with the Conservation Easement Tract have not been separated from the Conservation Easement Tract. Any and all mineral rights associated with the Conservation Easement Tract as of the date of this Deed are covered by the terms of this Deed.

E. Development. The Conservation Easement Tract has not been, and by virtue of this Deed shall not be, used for the purpose of fulfilling density requirements to obtain subdivision or building permits on the Property.

F. Scenic Values. The Conservation Easement Tract includes scenic open space consisting of gently rolling topography, shortgrass prairie, pinon/juniper trees, mountain vistas, and views of the region's unobstructed skyline and landforms. The Conservation Easement Tract is visible from County Road 42, which is a main thoroughfare that links the historic village of Galisteo and the nearby community of San Marcos. The Conservation Easement Tract is also clearly visible from adjoining County open space, known as "Petroglyph Hill," and cultural resource lands under stewardship by the Bureau of Land Management.

G. Biological Values. The Conservation Easement Tract contains significant natural habitat and represents a high quality example of a semi-arid ecosystem. The Conservation Easement Tract supports habitat for a wide range of mammals including antelope, deer, bear, prairie dog, and jackrabbit, among others. Reptile species include rattlesnake and Texas Horned Lizards, among other species. Birds of significance include Pinon Jays, falcons and hawks of various species, among others. Plant species include cholla of different species and subspecies, black gramma and blue gramma grasses, yucca plants, juniper and pinon trees. The riparian corridors near the Conservation Easement Tract include the Canada de la Cueva and the San Marcos Arroyo.

H. Agricultural Values. The Conservation Easement Tract has been used primarily as ranchland. The soil types associated with the Conservation Easement are primarily alluvial and comprised of unconsolidated clays and sands.

I. Historical Values. The Conservation Easement Tract contains cultural resources such as scattered evidence of prehistoric stone tool fragments and pottery shards dating to the early 1400s.

J. Educational Values. The Conservation Easement Tract is capable of providing educational opportunities to the general public including information regarding, and physical evidence of, prehistoric tool use, hunting practices, and agricultural practices.

K. Recreational Values. The Conservation Easement Tract is capable of providing recreational opportunities to the general public including hiking, biking and equestrian trails.

L. Governmental Policies. The Conservation Easement Tract includes open space, farmland, and range and forest land, the preservation of which is consistent with:

(1) The Santa Fe County Open Space, Wildlife, Mountains, Trails and Historic Places Protection Program.

(2) The Santa Fe County General Plan, adopted December 17, 1997, the Santa Fe County Growth Management Plan, adopted October 26, 1999, and the Santa Fe County Open Land and Trails Plan, adopted May 22, 2000, which acknowledge the importance of open space to the County and commit substantial public resources to acquiring and protecting open space.

(3) The New Mexico Land Conservation Incentives Act, Sections 75-9-1 through 75-9-6 NMSA 1978, which encourages private landowners to be stewards of lands that are important habitat areas or contain significant natural, open space, and historic resources and which provides financial incentives that encourage the protection of private lands for open space, natural resources, biodiversity conservation, outdoor recreation, farmland and forest land preservation, historic preservation, and land conservation purposes.

(4) The New Mexico Land Use Easement Act, Sections 47-12-1 through 47-12-6 NMSA 1978, which aids the landowner who wishes voluntarily to donate a conservation easement intended to restrict the use of a specific parcel of land so as to maintain in perpetuity the character of the land.

(5) The New Mexico Cultural Properties Preservation Easement Act, Sections 47-12A-1 through 47-12A-6 NMSA 1978, which aids the landowner who wishes voluntarily to donate a conservation easement intended to restrict the use of a specific parcel of land so as to maintain in perpetuity the significant archeological or historical character of that land.

(6) The New Mexico Watershed District Act, Sections 73-20-1 through 73-20-49 NMSA 1978, which states the Legislature's desire to further the "conservation ... of water, and thereby preserve and protect New Mexico's land and water resources."

(7) The New Mexico Property Tax Code, specifically Section 7-36-20 NMSA 1978, which provides for tax relief for agricultural properties through a special method of valuation of land used primarily for agricultural purposes.

M. Public Benefit. Conserving the scenic, biological, historical, educational, and recreational values described above (collectively, the "Conservation Values") of the Conservation Easement Tract is consistent with, and important to, the history, culture, and economy of the area, which is under increasing threat of development and fragmentation, and will result in a significant public benefit to the people of Santa Fe County, the people of the State of New Mexico, and the people of this nation.

N. Baseline Documentation Report. The characteristics of the Conservation Easement Tract and its current use and state of improvement are to be described in a Baseline Documentation Report prepared by the Landowner with the cooperation of the County. The Baseline Documentation Report is subject to the County's approval.

O. Intent. The Landowner intends to make a charitable gift to the County of the difference between the appraised value of the conservation easement and the acquisition price paid by the County for the purpose of assuring that, under the County's perpetual oversight, the Conservation Values will be maintained forever and uses of the Conservation Easement Tract that are inconsistent with the Conservation Values will be prevented or corrected.

AGREEMENT

NOW, THEREFORE, based on the recitals set forth above, and in consideration of the mutual promises and covenants contained herein, the Landowner hereby grants and conveys to the County a "land use easement" as defined by Section 47-12-2B NMSA 1978 of the Land Use Easement Act (the "Easement") subject to the following conditions and agreements.

1. Retained Rights. The Landowner reserves all rights to the Conservation Easement Tract not conveyed by this Deed, including all rights accruing by virtue of ownership

of the Property, the right to engage (and to invite others to engage) in all uses of the Conservation Easement Tract consistent with and not to the detriment of the Conservation Values, and the right to sell, lease, or mortgage the Property (provided that any mortgage shall be subordinate to this Deed).

2. General Prohibition. The Landowner shall not perform, nor knowingly allow others to perform, any act on or affecting the Conservation Easement Tract that is inconsistent with or to the detriment of the Conservation Values. All rights reserved by the Landowner under this Deed shall be exercised, if at all, in a manner consistent with and not to the detriment of the Conservation Values. The Landowner and the County acknowledge that the current uses of the Property and the improvements to the Property described in this Deed and in the Baseline Documentation Report are consistent with the Conservation Values.

3. Construction. The construction of any temporary or permanent buildings, facilities, equipment, or structures of any kind is prohibited except that the County is permitted to construct an access maintenance road, a road for access to Petroglyph Hill, public trails, parking facilities and related facilities such as a visitor's center within the defined boundaries of the Conservation Easement Tract in various locations as generally depicted on Exhibit "C". The County explicitly acknowledges that any construction of restrooms, a visitor's center or other structures must not be visible from West Basin Ridge road or any proposed homesites planned or developed within the adjoining West Basin Preserve. Similarly, any parking lots, trails or roads within the Conservation Easement Tract shall be developed with the goal of minimizing their impact on the viewshed of the West Basin Preserve parcels and County Road 42.

4. Subdivision. The division or subdivision of the Property into two or more parcels, whether by physical or legal process, is prohibited. Condominium ownership, leasing portions of the Property less than the entire Property, or any *de facto* division of the Property is prohibited. Lot line adjustment or lot consolidation without the prior written consent of the County is prohibited. The Landowner may transfer joint or undivided interests in the Property, provided, however, that no cotenant, joint tenant, tenant-in-common, or owner of an undivided interest shall have the right, either independently or through legal action, to have the Property physically or legally divided and any such ownership is subject to the rights of the County.

5. Water Rights. Except as specifically provided below, the voluntary separation of any Water Rights from the Property is prohibited. The Landowner shall take all prudent measures, including timely payment of assessments, beneficial use of water, and participation in conservation programs or water banks, to avoid forfeiture or abandonment of the Water Rights. Should the Landowner be notified for any reason regarding possible forfeiture or abandonment of any of any Water Rights, the Landowner shall immediately notify the County in writing and arrange for the beneficial use of the Water Rights on the Property. If for any reason the Landowner is unable to beneficially use the Water Rights on the Property, the Landowner shall (i) transfer the Water Rights to the County or to a third party designated by the County; (ii) with the express written consent of the County, lease the Water Rights to a third party; or (iii) with the express written consent of the County, place the Water Rights in a conservation program or water bank approved by the County. Presently no well exists on the Property. Either party may, subject to applicable law, drill a well on the Property and the other party agrees to enter into a

well sharing agreement for the maintenance of the well and equal allocation of the water. The parties, prior to drilling, shall agree upon the location of the well on the Property taking into account relevant considerations of accessibility and protection of the Conservation Values. The party first undertaking to drill the well shall be responsible for the costs associated with drilling the well. The County is entitled to beneficial use of the Water Rights in an amount up to 1.5 acre feet per year.

6. Agriculture. All farming, ranching, and agricultural practices shall be conducted in a sustainable manner, and in keeping with practices that are best suited for the conservation of soil and water, the maintenance of soil and water quality, and so as to avoid erosion, overgrazing, soil contamination, and water pollution. The establishment of any feedlot on the Conservation Easement Tract is prohibited. The Landowner and the County desire to encourage the continuation of agricultural activities on the Conservation Easement and to provide sufficient flexibility so that the Landowner can take advantage of appropriate practices and technologies in the future, all in a manner consistent with and not to the detriment of the Conservation Values.

7. Timber. Timber or wood products may be removed only to prevent encroachment onto open fields, to control insects or disease, to thin stands appropriately for fire management, to prevent personal injury and Conservation Easement Tract damage, to provide firewood for use on the Conservation Easement Tract, and to cut posts for maintaining and constructing fences on the Conservation Easement Tract and by the County to construct roads, trails, parking lots and trail facilities.

8. Utilities. Above ground utilities (including electric, sewer, water, telephone, cable, gas, *etc.*), except for those as currently located on the Conservation Easement Tract or specifically anticipated by the Landowner and described in the Baseline Documentation Report, are prohibited. Prior to placing any utilities underground, the Landowner shall notify the County in writing, specifying the type and location of such utilities and the steps to be taken to protect the Conservation Values.

9. Roads. The construction of roads is prohibited for the Landowner on the Conservation Easement Tract but shall be allowed for the County's access to its adjoining property.

10. Impervious Surfaces. Paving, covering, or treating the soil with an impervious surface including concrete, asphalt, or any other material, on the Conservation Easement Tract is prohibited except for roads specifically permitted by this Deed or as foundations for construction specifically permitted by this Deed. Any use of the Conservation Easement Tract that causes its surfaces to become relatively impervious or causes significant erosion (either through compaction, denuding the land, or otherwise) is prohibited.

11. Mining. Soil, sand, gravel, and rock may be extracted from the Conservation Easement Tract provided that such extraction is solely for use on the Conservation Easement, that not more than one acre of the Conservation Easement Tract is disturbed by such extraction, and that such extraction is done in a manner consistent with and not to the detriment of the Conservation Values. Any other mining or extraction, or consent by the Landowner to any

mining or extraction, of soil, sand, gravel, rock, hydrocarbons, or any mineral substance, using a surface mining method or any other extractive technique that is inconsistent with or to the detriment of the Conservation Values, is prohibited.

12. Refuse. The dumping, accumulation, or storage of any kind of refuse on the Conservation Easement Tract is prohibited. Should refuse be found on the Conservation Easement Tract, it is the County's responsibility to remove it unless it was placed on the Conservation Easement Tract by the Landowner in which case Landowner shall remove it.

13. Commercial Activity. Commercial or industrial activity on the Conservation Easement Tract is prohibited except for: (i) commercial activity related to agricultural products grown on the Conservation Easement Tract and agricultural services performed on the Conservation Easement Tract; (ii) low impact recreational activities consistent with and not to the detriment of the Conservation Values; provided, however, that such recreational activities do not constitute more than a *de minimis* use of the Conservation Easement Tract.

14. Signs. Signs are permitted for purposes of identifying the Conservation Easement Tract as private property, posting the Conservation Easement Tract against trespassing or hunting, identifying the Conservation Easement Tract as protected by the County, or any posting or notice required by law so long as such signs do not conflict with the recreational uses of the Conservation Easement Tract. All other signs placed by Landowner are prohibited. Signs shall not exceed one (1) by two (2) feet in size, be made with reflective surfaces, or be artificially illuminated. The County may place appropriate signs on the Conservation Easement Tract identifying trails and recreational access.

15. Miscellaneous Uses. The Conservation Easement Tract shall not be used in any manner that is inconsistent with or to the detriment of the Conservation Values. Without limiting the generality of the foregoing or the other terms of this Deed, the construction or placement of any antennae, satellite dish, cell phone tower, or similar equipment is prohibited; the construction of runways, landing strips, or landing pads is prohibited; the operation of motorized vehicles off of roads existing as of the date of the Deed or approved by the County is prohibited (other than for occasional maintenance or emergency purposes).

16. Public Access. This Deed is intended to provide for public access to the Conservation Easement Tract by the County for recreational purposes and to access adjacent County property. The Landowner retains the right to allow public access to the Conservation Easement Tract in the future provided that such public access complies with the terms of this Deed and is consistent with and not to the detriment of the Conservation Values. The County shall take reasonable precautions to prevent trespassing on the Property.

17. Perpetual Duration. The Easement shall run with the land in perpetuity. Every provision of this Deed that applies to the Landowner or County shall also apply to their respective heirs, executors, administrators, assigns, and all other successors in interest to this Deed or the Conservation Easement Tract or any interest therein. A party's rights and obligations under this Deed terminate upon transfer of the party's interest in this Deed or the

Conservation Easement Tract except that liability for acts or omissions prior to transfer shall survive transfer.

18. Responsibilities of Landowner. Other than as specified herein, this Deed is not intended to impose any legal or other responsibility on the County, or in any way to affect any obligation of the Landowner as owner of the Property, including:

(a) *Taxes.* The Landowner is solely responsible for payment of all taxes and assessments levied against the Conservation Easement Tract. If the County is ever required to pay any taxes or assessments on its interest in the Conservation Easement Tract, the Landowner will reimburse the County for the same, and until such reimbursement occurs, such payment shall constitute a lien on the Conservation Easement Tract. The County shall comply, however, with any and all request(s) of the Landowner evidencing to the County Tax Assessor that the Conservation Easement Tract is a preservation/open space use equivalent to agricultural use for property tax assessment purposes.

(b) *Upkeep and Maintenance.* The Landowner shall be responsible for the upkeep and maintenance of the Conservation Easement Tract to the extent that the Landowner causes any condition on the Conservation Easement Tract that would require such upkeep or maintenance. The County will maintain its trails, roads, visitors center, and recreational and parking facilities.

19. Landowner Warranties.

(a) *Title Warranty.* The Landowner represents and warrants that the Landowner has good and sufficient title to the Conservation Easement Tract, and that there are no liens on, leases to, or other interests in the Conservation Easement Tract that have not been disclosed to the County in writing. The Landowner shall defend the Conservation Easement Tract and the Easement against all claims from persons claiming by, through, or under the Landowner.

(b) *Environmental Warranty.* The Landowner represents and warrants that the Landowner has no knowledge of a release or threatened release of hazardous substances on the Conservation Easement Tract. The Landowner shall indemnify, defend, and hold harmless the County, its elected officials, employees, and agents, from and against any and all loss, cost, liability, or expense, including reasonable attorneys' fees, for injury (bodily or otherwise) or damage to any person or organization arising from or connected with any release of hazardous substances or violation of federal, state, or local laws. Nothing in this Deed shall be construed as giving rise to any right or ability in the County, nor shall the County have any right or ability, to exercise physical or managerial control over the day-to-day operations of the Conservation Easement Tract, or otherwise to become an operator with respect to the Conservation Easement Tract within the meaning of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, as amended.

(c) *Recitals Warranty.* The Landowner represents and warrants that the information contained in the recitals of this Agreement is true and correct to the best of the Landowner's knowledge.

20. Inspection.

(a) *Annual.* With reasonable advance notice to the Landowner, representatives of the County may enter the Conservation Easement Tract at reasonable times for the purpose of inspecting the Conservation Easement Tract to determine if there is compliance with the terms of this Deed. Inspections will generally occur once a year but may occur whenever the County deems appropriate. The Landowner is welcome and encouraged to accompany County representatives during such inspections.

(b) *Emergency.* If the County believes or has reason to believe that there is an ongoing, imminent, or threatened violation of the terms of this Deed, the County may enter the Conservation Easement Tract for the purpose of inspecting the Conservation Easement Tract to determine if there is compliance with the terms of this Deed. The County will use good faith efforts to contact the Landowner, but the County may enter the Conservation Easement Tract without the Landowner's presence.

(c) Notwithstanding the foregoing, the County has the right to use and allow members of the public to use all recreational facilities, trails and roads on the Conservation Easement Tract and the Property.

21. Enforcement. The County has all the rights, remedies, and powers to enforce the terms of this Deed against the Landowner that are provided by law. Except when an ongoing or imminent violation could irreversibly diminish or impair the Conservation Values, the County shall give the Landowner written notice of a violation and thirty (30) days to correct it before filing any legal action. If a court with jurisdiction determines that a violation may exist or has occurred, the County may obtain an injunction to stop the violation, temporarily or permanently, and to restore the Conservation Easement Tract to its condition prior to the violation. (However, nothing in this Deed shall require the Landowner to take any action to restore the condition of the Conservation Easement Tract after any Act of God or other event over which the Landowner had no control.) In any case where a court finds that a violation has occurred, the Landowner shall reimburse the County for all its expenses incurred in stopping and correcting the violation, including reasonable attorneys' fees and court costs. If the court finds no violation, the Landowner and County shall each bear their own expenses and attorneys' fees.

22. Transfer of Easement. The Easement, and the rights and responsibilities contained in this Deed, may be transferred by the County to another organization only pursuant to the following conditions:

If the County ever wishes voluntarily to transfer the Easement, the County will notify the Landowner in writing and give the Landowner sixty (60) days from receipt of notification in which to deliver any preferences the Landowner may have regarding a successor organization. The Easement shall be transferred only to another organization

having similar purposes, that is qualified under Section 170(h)(3) of the Internal Revenue Code and applicable state law, and that agrees to monitor the Easement and enforce the terms of this Deed.

23. Termination.

(a) *Condemnation.* If all or a part of the Conservation Easement Tract is taken for public use (or sold to a public authority under threat of condemnation), and the Easement is terminated in whole or in part, then the County shall be entitled to a percentage of the condemnation award or sale proceeds equal to the ratio, as of the date of this Deed, of the appraised value of the Easement to the unrestricted fair market value of the Conservation Easement Tract.

(b) *Changed Conditions.* The Landowner and the County recognize that conditions on or surrounding the Conservation Easement Tract could change so much in the future that it becomes impossible to protect and preserve the Conservation Values. The Landowner and the County have the right to jointly request that a court with jurisdiction terminate the Easement created by this Deed and order the division of and sale of the Conservation Easement Tract. Upon such termination of the Easement and sale of the Conservation Easement Tract, the County shall be entitled to a percentage of the sale proceeds equal to the ratio, as of the date of this Deed, of the appraised value of the Easement to the unrestricted fair market value of the Conservation Easement Tract.

(c) *Criteria.* The fact that a use of the Conservation Easement Tract may become greatly more economically valuable than uses permitted under this Deed shall not be considered a changed condition. The inability to use the Conservation Easement Tract for permitted uses, or the unprofitability of doing so, shall not warrant termination of the Easement. The fact that Conservation Value(s) may be compromised by changed conditions shall not warrant termination of the Easement if other Conservation Value(s) remain.

(d) *Other Termination Provisions.* The Easement conveyed by this Deed constitutes a Property right, immediately vested in the County, which the parties stipulate to have a fair market value determined as set forth above. Nothing in this section ("Termination") shall require the Landowner or the County to agree to, or negotiate regarding, any proposed Termination.

24. Approvals. Before doing anything that requires the County's consent or approval pursuant to this Deed, the Landowner shall seek such approval from the County in writing. Any consent or approval by the County permitted or required by this Deed for uses or acts that are conditional or not expressly reserved by the Landowner may be granted only if the County has determined in its reasonable discretion, that the proposed use or act conforms to the intent of this Deed, meets any applicable conditions stated herein, and is consistent with and not to the detriment of the Conservation Values. The County shall grant or withhold its consent or approval in writing within thirty (30) days of receipt of the Landowner's written request therefore.

25. Liability. Neither party shall be responsible for liability to a third party as a result of the other party's acts or omissions in connection with this Deed. Any liability incurred in connection with this Deed or the existence of trails, roads and related structures is subject to the immunities and limitations of the New Mexico Tort Claims Act, NMSA 1978, §§41-4-1, *et seq.*, as amended. The County and its "public employees" as defined in the New Mexico Tort Claims Act do not waive sovereign immunity, do not waive any defense, and do not waive any limitation of liability pursuant to law. Further, any liability incurred in connection with this Deed is subject to the protections provided to the Landowner by NMSA 1978 §17-4-7, as amended. This paragraph is intended only to define the liabilities between the parties hereto and is not intended to modify, in any way, the party's liabilities as governed by the law or statutes of the State of New Mexico.

26. Notices.

(a) *Generally.* Any notices permitted or required by this Deed shall be in writing and shall be personally delivered or sent by first class mail, postage prepaid and any such notice shall be deemed given when personally served or on the third business day after being so mailed.

(b) *Current Addresses.* As of the date of this Deed, the addresses for the Landowner and the County are as follows:

To the Landowner: Commonweal Conservancy
117 N. Guadalupe Street, Suite C
Santa Fe, NM 87501

To the County: Santa Fe County Manager
The County of Santa Fe
P. O. Box 276
Santa Fe, NM 87504-0276
Facsimile Number 505-995-2740

With Copies to: The County of Santa Fe Attorney
P. O. Box 276
Santa Fe, NM 87504-0276

The County of Santa Fe
Open Space and Trails Program Director
P. O. Box 276
Santa Fe, NM 87504-0276

(c) *Change of Address Addresses.* Either party may designate by written notice, a change in address for notice.

27. Compliance Certificates. Within thirty (30) days following receipt of written request from the Landowner, the County shall execute a compliance certificate and deliver it to the Landowner to certify to the best of the County's knowledge the Landowner's compliance (or noncompliance) with any obligation of the Landowner contained in this Deed.

28. Subsequent Mortgages. No provision of this Deed should be construed as impairing the ability of the Landowner to use the Property as collateral for subsequent borrowing, provided that any mortgage or lien arising from such a borrowing shall be subordinate to this Deed.

29. Waiver. No term of this Deed shall be deemed waived unless such waiver is in writing signed by the party making the waiver. No forbearance, delay, or failure to exercise any right, power, or remedy shall impair such right, power, or remedy, shall be construed as a waiver of such right, power, or remedy, or shall prevent the exercising of such right, power, or remedy in the future. The Landowner hereby waives the defenses of estoppel, laches, prescription, and adverse possession.

30. Incorporation. The recitals set forth at the beginning of this Deed, and any exhibits referenced herein and attached hereto, are incorporated herein by this reference.

31. Interpretation. This Deed shall be governed by the laws of the State of New Mexico (without giving effect to the State of New Mexico's choice of law provisions). This Deed shall not be interpreted for or against any party on the basis of authorship, but rather shall be interpreted so as to give maximum protection to the Conservation Values. The captions and section headings of this Deed are not necessarily descriptive (or intended or represented to be descriptive) of all the terms thereunder, and such captions and section headings shall not be deemed to limit, define, or enlarge the terms of this Deed. The use of the words "include" and "including" shall be construed as if the phrases "without limitation" or "but not [be] limited to" were annexed thereafter.

32. Severability. If any provision of this Deed or the application thereof to any person or circumstance is found to be illegal, invalid, or unenforceable, the remainder of the provisions of this Deed shall not be affected thereby.

33. Integration. This Deed sets forth the entire agreement of the parties with respect to the Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to this Deed or the Easement.

TO HAVE AND TO HOLD unto the County and its successors and assigns forever.

IN WITNESS WHEREOF, the Landowner and the County have executed this Deed of Conservation Easement on the day and year first above written.

SIGNATURE PAGES
TO
DEED OF CONSERVATION EASEMENT

In Witness Whereof, the Landowner and the County, intending to legally bind themselves, have set their hands on the date first written above.

"Landowner"
COMMONWEAL CONSERVANCY

[Signature]
Name

President
Title

STATE OF NEW MEXICO)
) SS
COUNTY OF SANTA FE)

The foregoing instrument was acknowledged before me this 15 day of December, 2004, by Ted Harrison and _____

Witness my hand and official seal.

[Signature]
Notary Public
My Commission Expires: July 31, 2005

THE COUNTY OF SANTA FE

BY: 
Paul D. Campos, Chairman

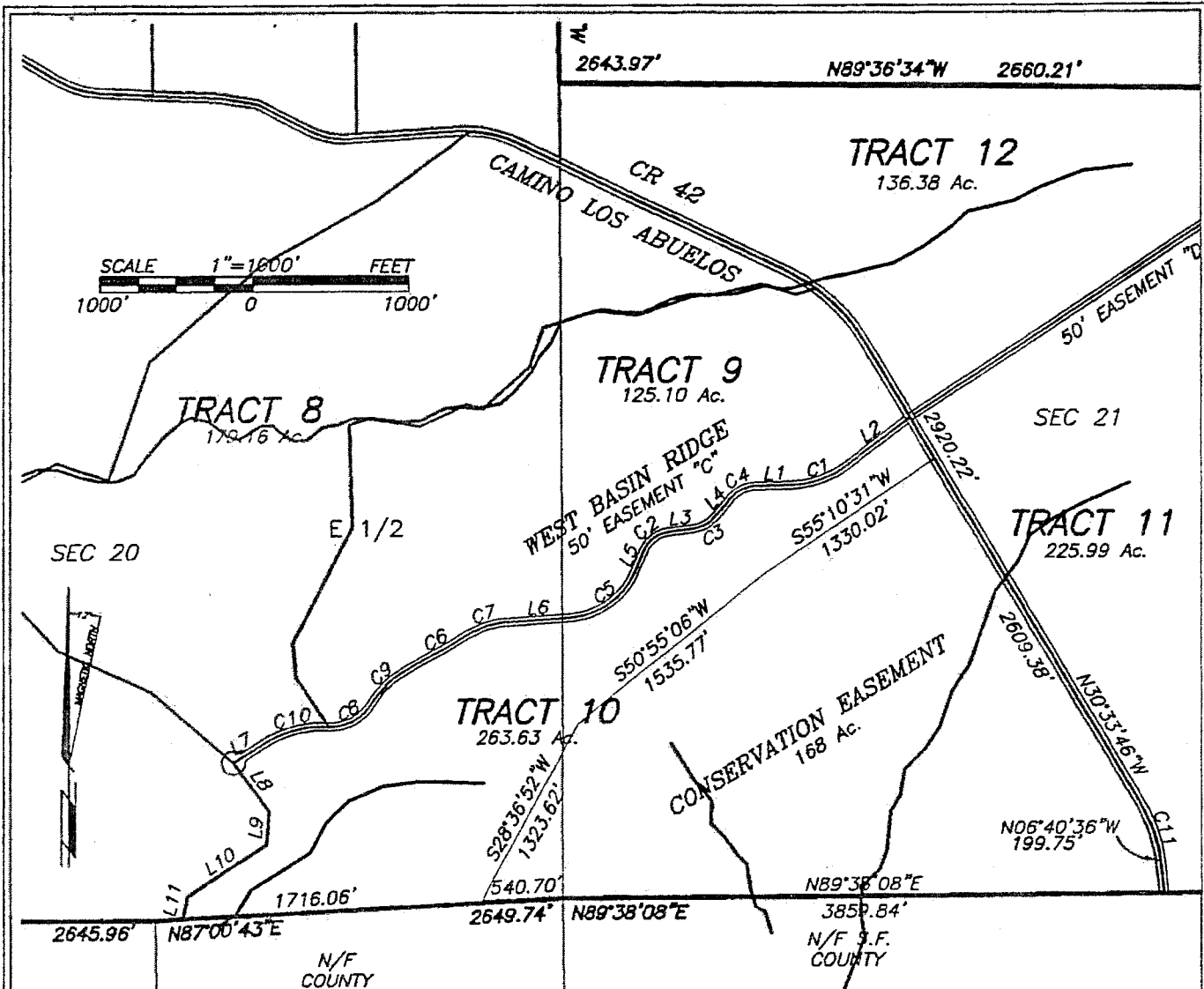
Stephen C. Ross
County Attorney

Rebecca Bustamante
County Clerk

~~STATE OF NEW MEXICO~~)
) SS
COUNTY OF SANTA FE)

Witness my hand and official seal.

Notary Public
My Commission Expires:



CURVE	DELTA	RADIUS	ARC	CHORD	CHD BRG
C1	36°04'48"	600.00'	377.83'	371.62'	N70°09'56"E
C2	59°38'46"	200.00'	208.20'	198.93'	S52°12'57"W
C3	41°53'38"	200.00'	146.24'	143.00'	N61°05'31"E
C4	48°03'38"	235.00'	197.12'	191.39'	S64°10'31"W
C5	63°31'27"	500.00'	554.35'	526.39'	N54°09'18"E
C6	2°40'47"	8671.15'	405.53'	405.49'	N60°25'19"E
C7	26°50'05"	600.00'	281.01'	278.45'	S72°29'59"W
C8	60°27'49"	300.00'	316.59'	302.10'	N62°57'16"E
C9	29°02'21"	750.00'	380.12'	376.07'	S47°14'32"W
C10	36°14'31"	700.00'	442.78'	435.43'	S75°03'55"W
C11	23°55'13"	1000.00'	417.49'	414.46'	N18°38'12"W

LINE	BEARING	DIST
L1	S88°12'20"W	218.60'
L2	S52°07'32"W	510.78'
L3	S82°02'20"W	163.10'
L4	S40°08'42"W	161.97'
L5	S22°23'34"W	133.85'
L6	S85°55'01"W	415.88'
L7	S56°57'24"W	226.53'
L8	N35°46'22"W	391.92'
L9	N05°00'20"E	218.21'
L10	N56°19'36"E	611.10'
L11	N11°18'25"E	146.36'

EXHIBIT "A"

CONSERVATION EASEMENT WITHIN
TRACT 10, BOOK 546, PAGE 046
SECTION 21 & 21, T14N, R9E, NMPM
SANTA FE COUNTY, NM



DAWSON SURVEYS INC.
PROFESSIONAL LAND SURVEYORS
2502 CAMINO ENTRADA
SANTA FE, N.M.
FILE# 7056 DATE: 12-13-

DESCRIPTION OF CONSERVATION EASEMENT

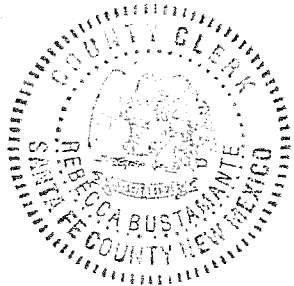
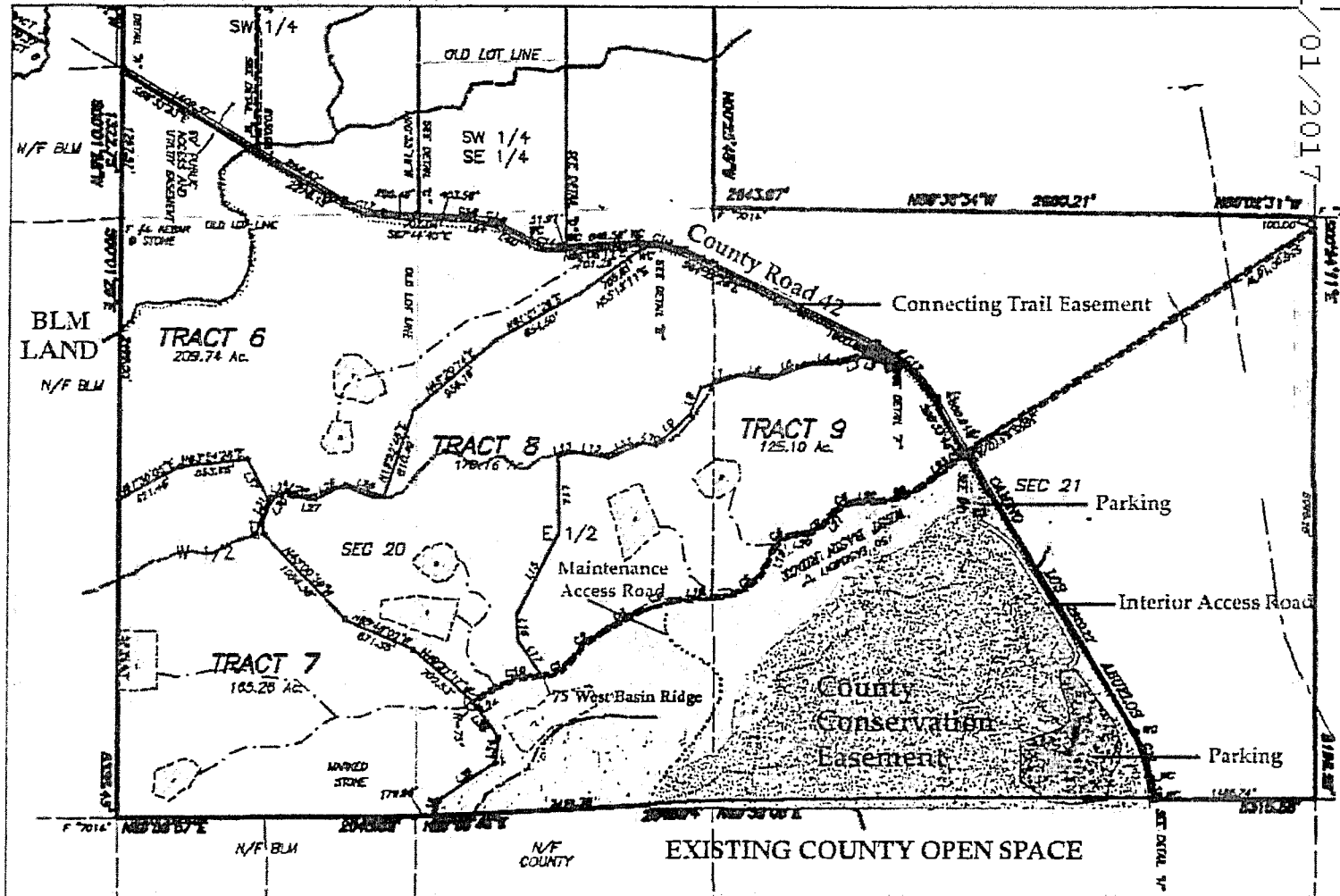
ALL THAT PART OF TRACT 10, SHOWN ON LOT LINE ADJUSTMENT PLAT PREPARED FOR THE THORNTON RANCH RECORDED IN PLAT BOOK 564, PAGE 046, ALL WITHIN SECTIONS 20 AND 21, T14N, R9E, NMPM, SANTA FE COUNTY, NM, WHICH PART MAY BE MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A THE SOUTH EAST CORNER OF SAID TRACT 10:

THENCE N06°40'36"W, 199.75 FEET;
THENCE COUNTERCLOCKWISE 417.49 FEET ON A CURVE
HAVING A RADIUS OF 1000.00 FEET AND A
CHORD OF N18°36'12"W, 414.46 FEET;
THENCE N30°33'46"W, 2609.38 FEET;
THENCE S55°10'31"W, 1330.02 FEET;
THENCE S50°55'06"W, 1535.77 FEET;
THENCE S28°36'52"W, 1323.62 FEET;
THENCE N87°00'43"E, 540.70 FEET;
THENCE N89°38'08"E, 3859.84 FEET TO THE POINT OF BEGINNING,
CONTAINING 168.02 ACRES, MORE OR LESS, SHOWN ON EXHIBIT "A" ATTACHED
HERETO.

Exhibit C
Deed of Conservation Easement
Santa Fe County/Commonweal Con.

General Depiction of Future Improvement Sites in Conservation Easement Area



COUNTY OF SANTA FE
STATE OF NEW MEXICO
I hereby Certify That This Instrument was Filed for Record On The 22ND Day Of December A.D. 2004
And Was duly Recorded as Instrument 100000000
In The Records Of Santa Fe County
Witness My Hand And Seal This 11th Day Of December 2004
Rebecca Bustamante
County Clerk Santa Fe NM

THIS PLAT SUBJECT TO ANY RESTRICTIONS, COVENANTS AND EASEMENTS OF RECORD.

SURVEYORS CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN, BASED ON A SURVEY CONDUCTED UNDER MY PERSONAL SUPERVISION AND CONTROL ON THE 23rd DAY OF SEPTEMBER 1986, HAS BEEN UPDATED TO REFLECT ANY CHANGES AS SHOWN IN CAPITAL CITY TITLE COMMITMENT #44863, DATED 5-15-00, TO THE BEST OF MY KNOWLEDGE AND BELIEF. THE SURVEY AND PLAN ARE CORRECT AND MEET MINIMUM STANDARDS FOR SURVEYS IN NEW MEXICO. THIS IS A SURVEY OF EXISTING UTILITIES AND IS NOT A SUBDIVISION AS DEFINED IN THE NEW MEXICO SUBDIVISION ACT.

0

LEGEND

BEARINGS ARE GRID, BASED ON NAD 83 N.M. STATE PLANE CONTROL THROUGH THE MERIDIAN 500,000E.
THE DELTA ALPHA = +070213" THROUGH THE NE COR OF SECTION T14N R9E

773M SALON 3D
DENOTES WELL

* DENOTES REAR OF AS SHOWN TOWARD
 ** DENOTES REAR OR AS SHOWN SET
 # DENOTES CALCULATED POINT NOT SET
 AC DENOTES REAR WITH ALUMINUM CAP
 L DENOTES EXPOSED UTILITY LINE
 DENOTES 1/2" X 1/2" X 1/2"
 DENOTES BOUNDARY OF LANDS SURROUNDING CITY
 TITLE COMMITMENT REFERENCE DATE 5/15/2000 ACCT. CITY
 BACKGROUND INFORMATION: NOT VERIFIED FOR ACCURACY
 AND IS NOT PART OF THIS PLAN.

TITLE AND INDEXING INFORMATION FOR COUNTY CLERK
BOUNDARY SURVEY
PLAT PREPARED FOR
THORNTON RANCH
SHOWING

THE PERIMETER OF PARTS OF THE THORNTON RANCH
WITHIN SECTIONS 29, 31 AND 32, T14N, R9E, NMPM,
SANTA FE COUNTY, NM

DAWSON SURVEYS INC.
PROFESSIONAL LAND SURVEYORS
2502 CAMINO ENTRADA
SANTA FE, N.M.
FILE# 4964 DATE: 8-11-00

[illegible]

FLOOD ZONE

REFERENCE DOCUMENTS

DAWSON SURVEYS INC.
PROFESSIONAL LAND SURVEYORS
25028 CAMINO ENTRADA
SANTA FE, N.M.
FILE # 5026 DATE: 7-17-01

PUBLIC NOTICE

THIS PLAT SUBJECT TO ANY RESTRICTIONS, COVENANTS AND EASEMENTS OF RECORD.



BART E. DAWSON, N.M.P.L.S. 7014

SURVEYORS' CERTIFICATE

I AM A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR AND HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY COMPLETED ON THE 5th DAY OF MAY, 2001. THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYS IN NEW MEXICO. FURTHER THAT THIS IS A BOUNDARY SURVEY OF AN EXISTING TRACT(S) THAT IS NOT A SUBDIVISION AS DEFINED BY THE NEW MEXICO SUBDIVISION ACT.

TITLE AND INDEXING INFORMATION FOR COUNTY CLERK*

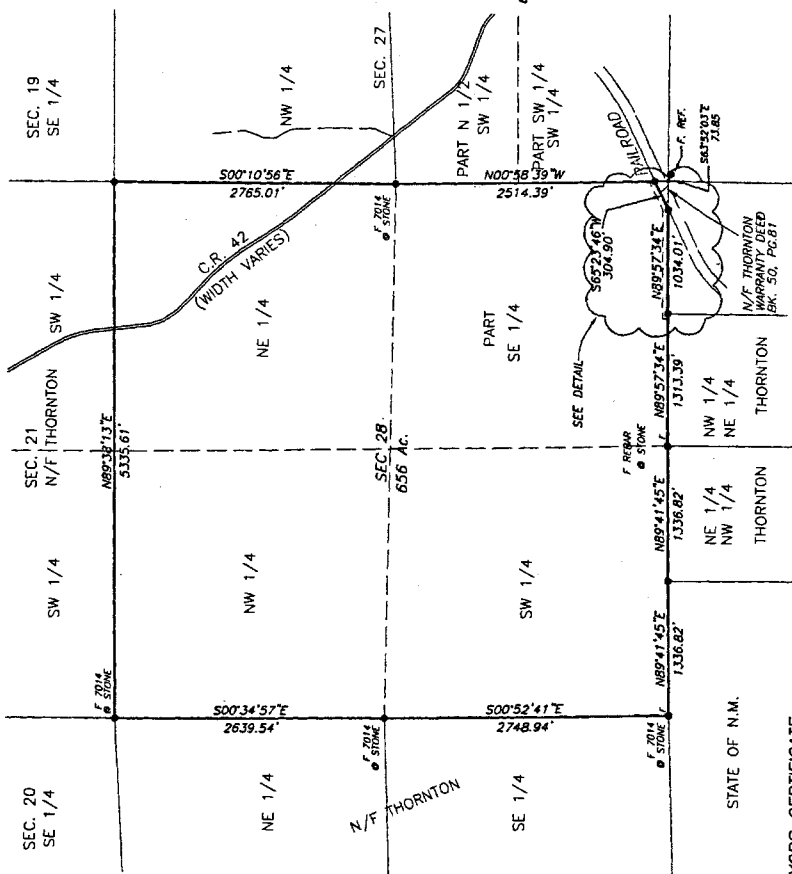
BOUNDARY SURVEY
PREPARED FOR
THORNTON RANCH
PART OF
SECTION 28, T14N, R9E, N1PM
SANTA FE COUNTY, N.M.

LEGEND
BEARINGS ARE GRID, BASED ON NAD 83 N.M. STATE PLANE CONTROL THROUGH THE MERIDIAN 500,000.
DELT. CORR. = +00'09"13" THROUGH THE NE COR OF SECTION 18 T14N R9E

• F DENOTES REBAR, OR AS SHOWN FOUND
• DENOTES REBAR, OR AS SHOWN SET
— DENOTES EASEMENT
— DENOTES EASEMENT POINT NOT SET
— DENOTES BOUNDARY OF LANDS DEALT WITH BY THIS PLAT
— INFORMATION OUTSIDE OF THIS BOUNDARY IS BACKGROUND INFORMATION ONLY, NOT VERIFIED FOR ACCURACY AND IS NOT PART OF THIS PLAT.

REFERENCE DOCUMENTS
ALL DOCUMENTS SHOWN HEREON.

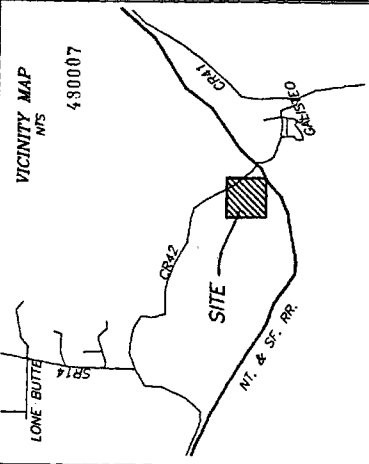
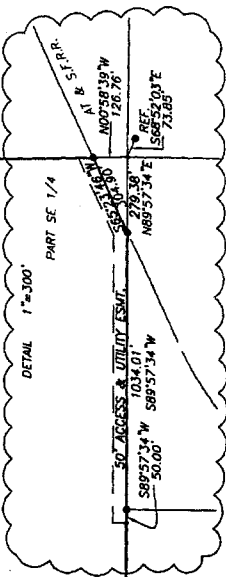
LEGEND

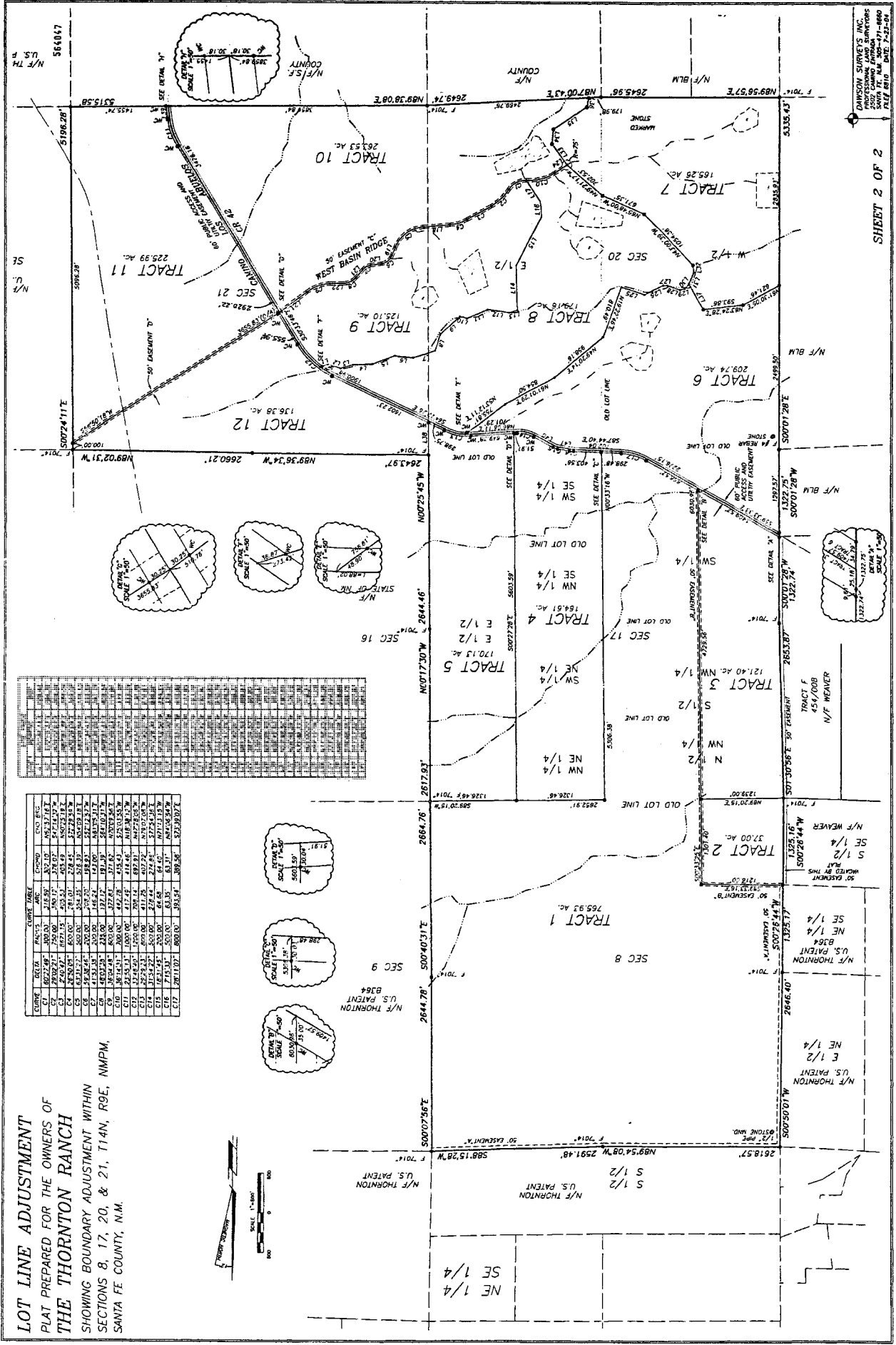


COUNTY OF SANTA FE 1166-586 JSS
STATE OF NEW MEXICO
I hereby certify that this instrument was recorded on the 15th day of May, 2001, at 10:00 A.M. in book 50, page(s) 81, of the records of Santa Fe County.

Witness my Hand and Seal of office
County Clerk, Santa Fe County, N.M.

[Signature]
Deputy





DANSON SURVEYS INC.
 2002 SAN ANTONIO, TEXAS
 SANTA FE, N.M. 300-471-4660

7000

LEGEND

BEARINGS ARE GRID, BASED ON NAD 83 N.M. STATE PLANE CENTRAL ZONE.
DISTANCES ARE GROUND DISTANCES, CONVERGED TO GRID SCALE
FACTOR 0.999618

* DENOTES WELL
 ○ DENOTES SPRING
 ○ DENOTES REBAR (CAP7014/PDS/DAWSON) OR AS SHOWN FOUND
 ○ DENOTES REBAR, GR 60 AS SHOWN SET
 ○ DENOTES REBAR, GR 60 AS SHOWN NOT SET
 ○ DENOTES BRASS CAP FOUND
 ○ DENOTES REBAR WITH ALUMINUM CAP
 — DENOTES ONE-READ UTILITY LINE
 AC

THE BOUNDARY OF LANDS DESCRIBED HEREIN AND DEALT WITH BY THIS PLAT, INFORMATION OUTSIDE OF THIS BOUNDARY IS BACKGROUND INFORMATION ONLY, NOT VERIFIED FOR ACCURACY AND IS NOT PART OF THIS PLAT.

NOTES

THERE ARE NUMEROUS RANCH ROADS AND TRAILS ON THIS PROPERTY NOT SHOWN ON PLAN.
THIS PLAN SUBJECT TO ANY RESTRICTIONS, COVENANTS AND EASEMENTS OF RECORD.
BOUNDARY DATA IN PARENTHESES IS FROM PRIOR PLATS OR DOCUMENTS.

FLOOD ZONE

UNLESS OTHERWISE SHOWN THIS PROPERTY LIES WITHIN
ZONE "A" AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE
FLOOD PLAIN AS SHOWN ON F.I.R.M. PANEL J5049C D875D AND
J5049C D875D DATED JUNE 17, 2008

PUBLIC NOTICE

THE SANTA FE COUNTY LAND USE ADMINISTRATOR HAS NOT REVIEWED THIS PLAN OF SURVEY BEFORE ITS FILING IN THE OFFICE OF THE COUNTY CLERK. THIS PLAN IS NOT BEING FILED FOR THE PURPOSE OF CREATING A SUBDIVISION OR NEW LOTS, ALTERING THE BOUNDARIES OF ANY EXISTING LOTS OR FOR THE DOWNGRADING OF ANY LOT. THE COUNTY OF SANTA FE IS A COUNTY LAND USE PLANNING COMMUNITY AS DEFINED IN THE SANTA FE COUNTY LAND USE PLANNING ORDINANCES. THE PLANNING ORDINANCE ON EXTRAORDINARY SUPERVISION REGULATIONS, THIS STATUTE DOES NOT IN ANY MANNER REPRESENT OFFICIAL COUNTY OPINION ON THIS PLAN.

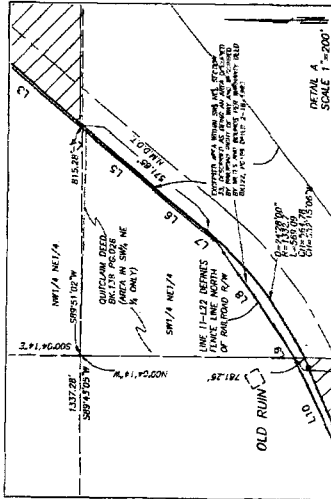
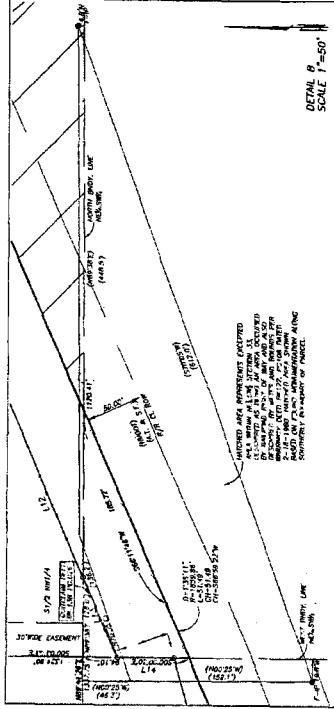
SHEET 2 OF 2

"TITLE AND INDEXING INFORMATION FOR COUNTY CLERK"

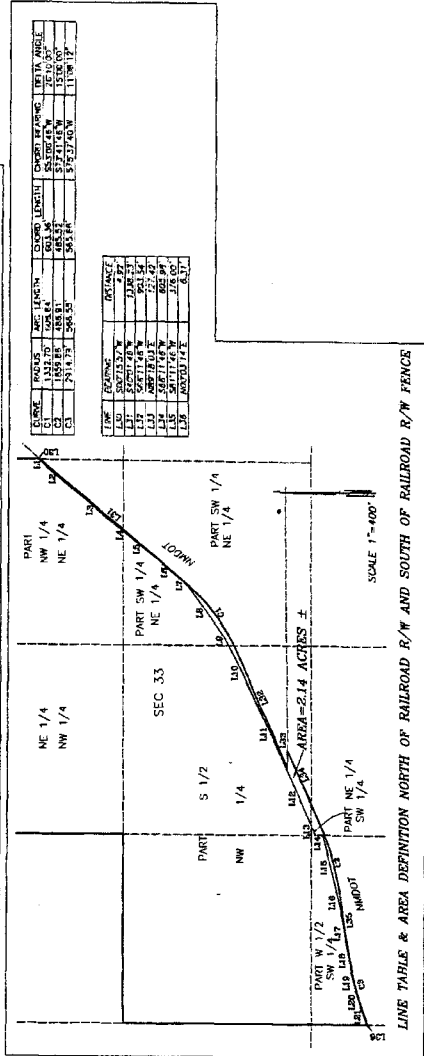
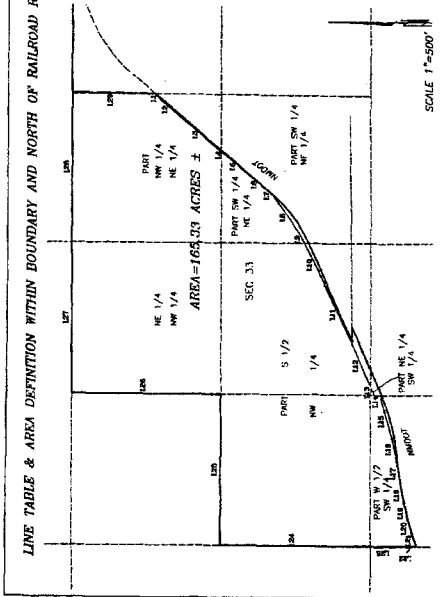
BOUNDARY SURVEY
PLAT PREPARED FOR
COMMONWEAL CONSERVANCY

SHOWING LOTS OF RECORD AS SHOWN HEREIN:
COMMONWEALTH CONVEYANCE
PART NW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, PART S $\frac{1}{2}$ NW $\frac{1}{4}$, PART
W $\frac{1}{2}$ SW $\frac{1}{4}$, PART NE $\frac{1}{4}$, SW $\frac{1}{4}$, PART SW $\frac{1}{4}$, NE $\frac{1}{4}$,
SECTION 33 T.14N., R.9E. N.M.P.M.,
SANTA FE COUNTY, NEW MEXICO.

DAWSON SURVEYS INC.
PROFESSIONAL LAND SURVEYORS
2502 B CAMINO ENTRADA
SANTA FE, N.M.
TEL# 7941-1 DATE: 4/17/2009



LINE	REPAIRING	DISTANCE
1	5.1557175	8.13
2	5.1547405	19.81
3	5.1537635	31.49
4	5.1527865	43.16
5	5.1518095	54.84
6	5.1508325	66.52
7	5.1498555	78.19
8	5.1488785	90.00
9	5.1479015	101.67
10	5.1469245	113.35
11	5.1459475	125.02
12	5.1449705	136.70
13	5.1439935	148.37
14	5.1430165	160.00
15	5.1420395	171.67
16	5.1410625	183.35
17	5.1400855	195.02
18	5.1391085	206.70
19	5.1381315	218.37
20	5.1371545	230.00
21	5.1361775	241.67
22	5.1352005	253.35
23	5.1342235	265.02
24	5.1332465	276.70
25	5.1322695	288.37
26	5.1312925	300.00
27	5.1303155	311.67
28	5.1293385	323.35
29	5.1283615	335.02
30	5.1273845	346.70
31	5.1264075	358.37
32	5.1254305	370.00
33	5.1244535	381.67
34	5.1234765	393.35
35	5.1224995	405.02
36	5.1215225	416.70
37	5.1205455	428.37
38	5.1195685	440.00
39	5.1185915	451.67
40	5.1176145	463.35
41	5.1166375	475.02
42	5.1156605	486.70
43	5.1146835	498.37
44	5.1137065	510.00
45	5.1127295	521.67
46	5.1117525	533.35
47	5.1107755	545.02
48	5.1097985	556.70
49	5.1088215	568.37
50	5.1078445	580.00
51	5.1068675	591.67
52	5.1058905	603.35
53	5.1049135	615.02
54	5.1039365	626.70
55	5.1029595	638.37
56	5.1019825	650.00
57	5.1010055	661.67
58	5.1000285	673.35
59	4.9990515	685.02
60	4.9980745	696.70
61	4.9970975	708.37
62	4.9961205	720.00
63	4.9951435	731.67
64	4.9941665	743.35
65	4.9931895	755.02
66	4.9922125	766.70
67	4.9912355	778.37
68	4.9902585	790.00
69	4.9892815	801.67
70	4.9883045	813.35
71	4.9873275	825.02
72	4.9863505	836.70
73	4.9853735	848.37
74	4.9843965	860.00
75	4.9834195	871.67
76	4.9824425	883.35
77	4.9814655	895.02
78	4.9804885	906.70
79	4.9795115	918.37
80	4.9785345	930.00
81	4.9775575	941.67
82	4.9765805	953.35
83	4.9756035	965.02
84	4.9746265	976.70
85	4.9736495	988.37
86	4.9726725	1000.00
87	4.9716955	1011.67
88	4.9707185	1023.35
89	4.9697415	1035.02
90	4.9687645	1046.70
91	4.9677875	1058.37
92	4.9668105	1070.00
93	4.9658335	1081.67
94	4.9648565	1093.35
95	4.9638795	1105.02
96	4.9629025	1116.70
97	4.9619255	1128.37
98	4.9609485	1140.00
99	4.9599715	1151.67
100	4.9589945	1163.35



[illegible]

7020605

REFERENCE DOCUMENTS

1. LOT LINE ADJUSTMENT PLAT SHOWING BOUNDARY ADJUSTMENT BETWEEN PARCELS A AND B, RECORDED IN BOOK 433 PAGE 004, RECORDS OF SANTA FE COUNTY, NEW MEXICO. (DATA FROM PLAT SHOWN IN PARENTNESS—EXCEPT CURVE DATA (UNCHANGED))

2. PLAT OF BOUNDARY SURVEY FOR THORNTON ANCEstral PART OF SECTION 28, BOOK 480, PAGE 7, SANTA FE COUNTY, NEW MEXICO.

LEGEND

BEARINGS ARE GRID, BASED ON NAD 83 N.M. STATE PLANT CENTRAL ZONE
DISTANCES ARE GROUND DISTANCES, COMBINED GROUND TO GRID SCALE
FACTOR 0.999916

- F • DEMOTES REBAR/CAP (2014/TS/TAWSON) OR AS SHOWN FOUND
- • DEMOTES REBAR, OR AS SHOWN SET
- • DEMOTES CALCULATED POINT NOT SET
- • DEMOTES INRASS CAP FOUND

301

* DENOTES BOUNDARY OF LANDS DESCRIBED HEREIN AND DEALT WITH BY THIS PLAT. INFORMATION OUTSIDE OF THIS BOUNDARY IS BACKGROUND INFORMATION ONLY, NOT VERIFIED FOR ACCURACY AND IS NOT PART OF THIS PLAT.

NOTES

1. THERE ARE NUMEROUS RANCH ROADS AND TRAILS ON THIS PROPERTY NOT SHOWN ON REPORT. (REFER TO USGS MAPS FOR LOCATIONS)—SEE PLAT BNC.63.170.5.
2. THE LOTS SHOWN ARE SUBJECT TO ANY RESTRICTIONS, COVENANTS AND EASEMENTS OF RECORD.

FLOOD ZONE

UNLESS OTHERWISE SHOWN THIS PROPERTY LIES WITHIN
"Z" AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE
FLOOD PLAIN AS SHOWN ON F.I.R.M. PANEL 35049C 0675D AND
35049C 0650D DATED JUNE 17, 2008.

PUBLIC NOTICE

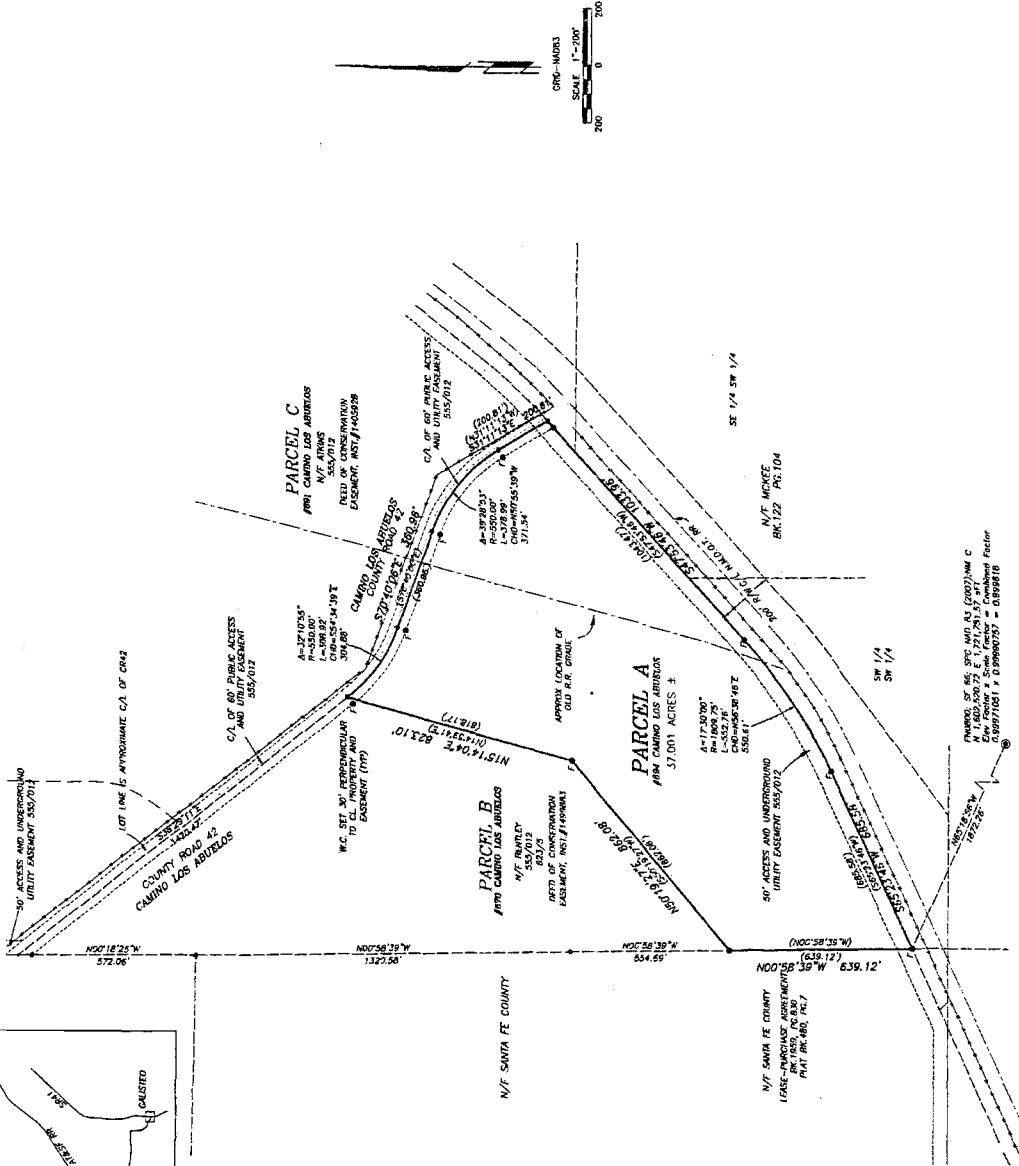
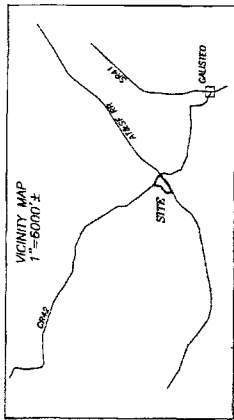
THE SANTA FE COUNTY LAND USE ADMINISTRATOR HAS NOT REVIEWED THIS PLAT OF SURVEY BEFORE HIS FILING IN THE OFFICE OF THE COUNTY CLERK. THIS PLAT IS NOT BEING FILED FOR THE PURPOSE OF CREATING A SUBDIVISION OR NEW LOTS, ALTERING THE BOUNDARIES OF ANY EXISTING LOTS OR FOR THE PURPOSE OF DEVELOPMENT. ANY DEVELOPMENT OF ANY SANTA FE COUNTY LAND SUBJECT TO THIS PLAT OF SURVEY WILL BE SUBJECT TO THE APPLICABLE ZONING AND OTHER APPLICABLE COUNTY REGULATIONS. THE STATEMENT DOES NOT IN ANY MANNER PRESENT AN OFFICIAL COUNTY APPROVAL OF THIS PLAT.

UPC/ 1-052-060-089-111
TYPE AND INVINCING ADDRESS FOR THE COUNTY OF COV...

BOUNDARY SURVEY
PLAT PREPARED FOR
COMMONWEAL CONSERVANCY

PARCEL A,
WITHIN SECTIONS 27 T.14N., R.9E. N.M.P.M.,
SANTA FE COUNTY, NEW MEXICO.

DAWSON SURVEYS INC.
PROFESSIONAL LAND SURVEYORS
25102 R CAMINO ENTRADA
SANTA FE, N.M.
PHONE 8526 DATE 4/17/2009



INST # 1561160 }
COUNTY OF SANTA FE } SS
STATE OF NEW MEXICO }
I hereby certify that this instrument
was filed for record on the 30 day of
AUG. 2003 at
O'clock, 12:25 and was duly recorded in
book 30, page(s) 8 of the
records of Santa Fe County.

SURVEYORS CERTIFICATE

I AM A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR AND HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY COMPLETED ON THE 17TH DAY OF APRIL, 2009. THIS SURVEY IS BASED ON THE BEST OF MY KNOWLEDGE AND BELIEF. THERE ARE NO UNDISCOVERED SURVEYING MONUMENTS FOR THIS SURVEY IN NEW MEXICO. FURTHER, THAT THIS IS A BOUNDARY SURVEY OF AN EXISTING TRACT(S). IT IS NOT A SUBDIVISION AS DEFINED BY THE NEW MEXICO SUBDIVISION ACT.

Barry S. Phillips, N.M.P.I.S. #15517
Barry S. Phillips
 April 30th, 2009

John King

Appendix D

D ESTIMATE OF PROBABLE COSTS

THORNTON RANCH OPEN SPACE | MASTER PLAN IMPROVEMENTS
MASTER PLAN ELEMENTS - BUDGET PLANNING DRAFT

1.July.2016

MASTER PLAN ELEMENTS

DESCRIPTION	UNITS	ESTIMATED QUANTITY	UNIT COST	ESTIMATED COST
ESTIMATED BUDGET				
SITE IMPROVEMENTS				
Roadways and Parking				
Roadway, vehicular access (22' wide, basecourse, side stabilization / erosion control)				
Roadway, to trailhead A (Interior)	LF	3,000	\$ 27.50	\$ 82,500
Roadway, to trailhead B (West Basin Ridge Rd.)	LF	1,600	\$ 27.50	\$ 44,000
Trailheads (parking, signage, access control, wheel stops)				
Trailhead A (Interior)	AL	1	\$ 350,000.00	\$ 350,000
Trailhead B (West Basin Ridge Rd.)	AL	1	\$ 50,000.00	\$ 50,000
Trailhead C (CR 42 / NMRX)	AL	1	\$ 225,000.00	\$ 225,000
Subtotal, Roadways and Parking				\$ 751,500
Trails and Pathways				
ADA Pathway - 5' wide				
Crusher fines paving, stabilized (4" deep)	LF	7,920	\$ 10.00	\$ 79,200
Trails - 2' wide				
Multi-use trail	MI	3.5	\$ 25,000.00	\$ 87,500
Hiker / Biker trail	MI	7.0	\$ 25,000.00	\$ 175,000
Guided trail, 1 mi.	AL	1	\$ 15,000.00	\$ 15,000
Trails - 4' wide				
Regional trail	MI	1.0	\$ 25,000.00	\$ 25,000
Regional trail (rehabilitate existing ranch road, stone work)	AL	4.0	\$ 25,000.00	\$ 100,000
Regional trail (rehabilitate existing ranch road, stone work)	AL	1.0	\$ 25,000.00	\$ 25,000
Arroyo Crossing				
Wood Tressles, 10' wide (1 at 25 LF, 1 at 75 LF)	LF	100.0	\$ 1,000.00	\$ 100,000
Subtotal, Trails and Pathways				\$ 606,700
Site Furnishings				
Site Furnishings (Benches, Receptacles)				
Bench / Boulders	EA	18	\$ 600.00	\$ 10,800
Trash / Recycling Receptacles (bolted to concrete pad)	EA	6	\$ 850.00	\$ 5,100
Orientation / Wayfinding Signage (trail markers)	AL	1	\$ 7,500.00	\$ 7,500
Gateway Monument	AL	1	\$ 75,000.00	\$ 75,000
Shade Structure / Amphitheater / Welcome Area	AL	1	\$ 115,000.00	\$ 115,000
Restroom Facility / Storage	AL	1	\$ 85,000.00	\$ 85,000
Fencing / Gates (miscellaneous improvements)				
Trailhead A (Interior)	LF	6,000	\$ 37.50	\$ 225,000
Trailhead B (West Basin Ridge Rd.)	LF	100	\$ 37.50	\$ 3,750
Trailhead C (CR 42 / NMRX)	LF	1,250	\$ 37.50	\$ 46,875
Miscellaneous improvements / repairs to perimeter fence	AL	1	\$ 15,000.00	\$ 15,000
Subtotal, Site Furnishings				\$ 527,150
Total, Site Improvements				\$ 1,885,350
NMGRT			7.0000%	\$ 131,975
Contingency			15%	\$ 282,803
Total Estimated Construction Cost				\$ 2,300,127

Notes

1. Takeoffs based on preliminary master plan as presented to GBASPA-WG in May 2016. All program elements subject to change.
2. Assumes kiosk and interpretive signage is supplied as part of a separate contract.

Appendix E

- E PUBLIC REVIEW COMMENTS
 - Summary of Public Comments / Response
 - Agency Comments
 - COLTPAC Memorandum
 - Public Comments
 - Tribal Comments

THORNTON RANCH OPEN SPACE MASTER PLAN

Review Comments / Document Edits Public Comment Period: 11/01/2016 - 11/30/2016



The Trinity Ranch, Cat Parks

Comment noted

I would like to express gratitude for the changes to the Thornton Ranch Open Space Master Plan on behalf of my family and the THIRTY boarders at my riding stable for making ALL trails at Thornton Ranch open to horses AND for including trailer parking.

In the last month, we have had guests from Colorado AND Alaska stop at our ranch as they travel down to Arizona for the winter to ride. Both enjoyed their horses' stay at our facility so much, they stayed a few extra days shopping and sightseeing in Santa Fe.

More equestrian options/access out in the County means more travelers spending time enjoying Santa Fe, stocking up on necessities at the Agora in Eldorado before heading south... and gassing up their trucks hauling trailers at the Phillips 66 Station off of Hwy 285 before driving down that barren stretch down to Cline's Corner or getting on I-25... it is a WIN/WIN.

THANK YOU again. We SUPPORT your changes to make ALL Thornton Ranch trails accessible to horses wholeheartedly!

PS- THIS WILL MAKE EQUESTRIAN PROPERTIES ALONG THE Hwy 285 corridor subdivisions MORE desirable, MORE I'm just reading about the Thornton Ranch Open Space that was sent out by the SF County Horse Coalition and thinking "OMG, this HAS to go through!" It's awesome! Should we be writing our county commissioners, go to the December 13th meeting, or...how can we make our support known? It says it's "approved" but not official. Does that mean there's still some convincing to do, or just waiting for the final stamp?

Tina Ossorgin

Comment noted

Let me know and I'll write a letter of support, or put my name on a list of supporters or...whatever, if need be. Any open space for horses and their riders is greatly appreciated.

Ginny Boawn

Julia Belt

Comment noted
Text revised

p. 33 Backcountry Trail description - include equestrians in list of allowed users; p. 53 Non-Motorized Trail Access /Backcountry Trail Access - include access to the trails for equestrians; paragraph under "intent" should be revised to read: "Backcountry trail access gates should effectively prevent access of motorized users into the trail system, but should allow comfortable passage of people with their bikes and equestrians with their horses through the entry-point." Revise 'Standards' so gate access is accessible to both bikes and horses (chicane-style switchbacks are not acceptable to equestrians)

Julia Belt

Include access gates to trails that work for equestrians and mountain bikers and exclude motorized vehicles.

Text revised, equestrian-friendly access gates added

Lois Lockwood

Text revised

p. 11, column 1, paragraph 2: Delete the extra "their" before "land".
p. 11, column 3, paragraph 2: When you refer to the "Eldorado community" do you mean just the subdivision of Eldorado or are you including all the subdivisions in the 285 Corridor in the census numbers? Eldorado is not a community, it is one subdivision among many in the 285 Corridor. Perhaps you could refer to the area on 285 north of Lamy as the 285 corridor or as a number of subdivisions(I don't know how many there are, if it is important).
p. 14, column2, paragraph 1: Eldorado is a subdivision not a town or a village. I should not be included in this list of nearby villages.
p. 14, column 3, paragraph 1: Add "subdivision" after "Eldorado".
To avoid confusion with the Eldorado wilderness area.
p. 14, column 3, paragraph 3: Eldorado should not be in this list, it is a subdivision not a village.
p. 55, column 3, paragraph 2: If dogs are not allowed do you need a facility for dog waste?

Julia Belt

Text revised

p. iii, under "Equestrian" -- Reyes should be "Reyer" for both Eldon and Karen
p. 11, under Ranching -- in the second paragraph, there is an extra "their" in the last sentence " . . . leave their cultivated their land."
p. 25, under "Night Skies" - in the 3rd line, the "to" after so should be "too"

Trish Hug	map p. 15 indicates several Equestrian Service locations (E in an orange circle); what does this signify? p. 34: It is stated that "in certain locations, trail routes encroach on designated historic archaeological sites in a deliberate way to reduce impacts to the site while providing opportunities for education". Bravo! I wonder if these will include any rock art locations or adobe ruins, possibly protected by fencing as are the mine openings at Cerrillos Hills State Park. p. 49: Consider, at these locations, a couple of hitching rails a short distance from the site so equestrians could tie their horses and approach on foot. Consider horses when building bridges and water crossings. p. 36 & 37: Are either the Kennedy Well or the Canyon Well watering tanks planned to be available for horse watering? If so, thank you very much. Has a small daily use fee been considered? People easily pay this at Cerrillos Hills (\$5/horse trailer/car), Jack's Creek, Valles Calderas and other public places. This is not unreasonable. p. 43 Construction Guidelines: When building the trails, consider flagging them and using horse riders to walk back and forth to create the trailbed. Better than motorized and free because horsemen would fight to participate!	Text revised (p. 15 Equestrian Services defined; p. 49 - hitching rails added to amenities; p. 28 - water tank access for horses included in amenities for equestrians); use fees to be addressed County-wide at a later date
Michael Bentley	For your information: under Utilities, you mention power is not available or planned in near future in the vicinity, but there are currently existing estimates and PNM designs to bring electrical in the very near future, for both the Conservation Ranches and my property, and other adjacent property owners. Regarding the overall trails plan, I have several comments: (i) there seems to be a great over-emphasis on equestrian access to most trails. I believe this is a mistake. Equestrians do not mix well with other trail users, and require a considerably greater trail width, which is NOT welcomed by other trail users. The excrement deposits are not appreciated by hikers or bikers either. I don't think you should assume that the majority of users really want equestrians every which way. They can be quite hazardous to other users. (ii) I picked up an apparent prohibition on dogs in the plan. That is truly a big mistake. I have found no greater joy in hiking than to be with my or another's dog on the trail. Much more important to permit accompanied dogs than to spend so much effort accommodating a handful of equestrians. Indeed, one of the trails in the Galisteo basin is named after my late dog Kobe ("Kobe's Cutoff") who was a veteran of the trail system. Other hikers welcome dogs as well. I might add that no one will pay attention to the "no dog" signs anyways, so you will be picking an unwinnable fight. I think that if you were to take a poll of potential trail users, and asked the question of dogs versus equestrians, dogs would win a resounding victory. (iii) I get the distinct feeling that the County is planning to "overbuild" the trails, making them more like a Central Park walk than a true trail. I encourage you to consider the Galisteo Basin Preserve trail model--it's both low cost and efficient and good. Save the County's money for the expansion of this thoughtful project and don't spend so much on a high end trail concept.	Comment noted
David Cartwright		Comment noted, no changes made
Paula Cook (for SPDT / La Jara Ranch)	Revise all maps to exclude the 6.95 acre state land leased by La Jara Ranch LLC; p. 29 map - remove improvements on La Jara Ranch leased land, concern about trespassing from TROS land to La Jara Ranch leased land; p. 14, p. 17 map - remove open space corridor south of NIMRX rail line from map and text (for full comments, see La Jara Ranch /SPDT letter in Appendix) p. 16 - Land Ownership - 7 acre parcel leased by La Jara Ranch has not been discussed to change lease holders	Comment noted, no changes made to maps except to add language to context map on p.17 regarding proper acquisition of ROW by SF County prior to developing regional trails (see full response letter in Appendix) Comment noted, text in reference to the Land Lease revised as follows: "The lease of an additional approximate 7-acre tract of state land straddling along the rail line is being negotiated- considered to provide a contiguous planning management area bounded on the south by the rail line." Text revised: Regional Trail standards revised (p. 32, p. 50): trail tread (width) at full buildout to be 4-8 ft (changed from 6-10 ft)
Paula Cook (for SPDT / La Jara Ranch)		
Brent Bonwell	p. 33 add equestrians to list of users of Backcountry Trail; concerned about regional trail width standard cost and maintenance	

Gretchen Grogan	p. 19 - revise Galisteo Basin Preserve full buildout to reflect most recently approved plans (275 homes / 71,000 sf commercial civic); p. 33- add equestrians to Backcountry Trails allowed users; concern about 'Regional Trail' width and GBP not being able to meet SFCo standards for the trail on their property, and ROW easements east of TROS	Text revised; Regional Trail standards revised (see comment note above)
J. Parker	p. 12, image II-5 - image is mislabeled, should be Prairie Zinnia instead of Snakeweed p. 6 Define Railroad ROW major breach; confirm access control remedies / process is addressed in Management Plan regarding NMRX trespassing (for original comments, see complete letter in Appendix)	Text revised Comment noted, access control issues addressed in management plan
Craig Johnson (SLO)	p. 16 revise SLO description for 320 acres to read that there is not a lease currently in place and the County has applied for a business lease	Text revised to reflect current land lease status
Tim Rogers (SFCT)	p. 48 provide more specific document references from USFS and IMBA standards than just the organization names, add AASHTO bicycle guidelines as a standard for accessible multi-use trails; reconsider 'Regional Trail' as an engineered wide trail and instead designate it as a 'Multi-Use Trail' that could be upgraded in the future; p. 50 - change 'shall be implemented' to 'may be implemented'; illustrate 'Regional Trail' engineered cross section with a center crown and ditches on both sides; clarify regional trails avoiding road crossings; concern about short bridges and paved drainage crossings indicated in the plan and their cost; the 6-10 ft Regional Trail is not appropriate for sections along the abandoned 'Kennedy Line' railroad - SFCT will not build wide trails within easements they hold on private lands along the 'Kennedy Line' (for original comments, see complete letter in Appendix)	Comment noted; p. 48 specific standards / chapters cited from USFS and IMBA; Regional Trail standards revised (see comment note above);
Colleen Baker (SFCo)	p. 6 State Land Office Business Lease is for 320 acres; correct total acreage to 2,431 (round to 2,430); p. 9 side bar - strike Basin from Galisteo Basin Community Association; p. 10 History - verify 16,000 years (cultural reports state 10,500 B.C.); p. 16 - full name of the BLM SRMA is the Galisteo Basin - Cerrillos Hills / Burnt Corn SRMA which has a total acreage of 4,811 (Tans RMP n. 56, p. 74) The plan should encourage the development of the regional trail network and emphasize the need to create these connector trails in order to enhance the trails planned for the TROS. (for original comments, see complete letter in Appendix)	Text revised Comment noted
COLTPAC	COLTPAC recommends that all trails within TROS shall be multi-purpose, unless, during the process of trail design, it is determined that one or more types of use would adversely impact the resource. Add descriptive language that would address the following: - criteria that may be part of an analysis for sustainable multi-use trails; - how damage to trail / ecosystem can be mitigated or if not possible, why the plan should restrict multi-use; - how a multi-use trail in a certain location might impact staff maintenance time and resources. In the plan, please add descriptive language that calls for the phasing and redesign or realignment of a trail segment if it is determined that the planned location would be unsuitable for multi-use	Comment noted, management criteria addressed in management plan
COLTPAC	COLTPAC recommends that dogs are allowed on the property so long as they are on leash.	Comment noted, no change pending further investigation

Responses from Tribal Entities were recorded and are included in the Appendix. Responses were received from Santa Clara Pueblo, Santo Domingo Pueblo, Santa Ana Pueblo, Cochiti Pueblo, San Felipe Pueblo, Hopi Tribe, and the Comanche Nation.

From: **Tim Rogers** tim@sfct.org
 Subject: Comments on Draft Master Plan for Thornton Ranch Open Space
 Date: November 29, 2016 at 5:32 PM
 To: Claudia Horn chorn@do-designoffice.com, Psinnott psinnott@do-designoffice.com
 Cc: Maria E. Lohmann melohmann@co.santa-fe.nm.us, Paul Olafson POlafson@santafecountynm.gov, Info info@sfct.org



Hello: Thank you for the significant amount of work it has taken to get the Thornton Ranch Open Space planning process this far. This plan will lay a great foundation for mixing recreation with preservation of historic, cultural and natural resources, including providing some access to and interpretation of those resources.

I appreciate the wide variety of trails that are envisioned in the plan. Both the "regional trail" and the "multi-use trail" alignments will help create long-range links that are envisioned by various local partners, including Santa Fe County as well as various trail user groups, working together under the Grand Unified Trail System initiative. The trail on the Kennedy Line will also help celebrate our area's history through trails, another major objective of the Grand Unified Trail System initiative.

I would like to take this opportunity to comment further on the trail component of the plan:

Guidelines

The references to USFS and IMBA standards on p. 48 and elsewhere should be more specific citations of supporting documents rather than just the names of the organizations.

For a truly accessible multi-use trail, the reference should be to AASHTO guidelines for multi-use trails, which are found within AASHTO's bicycle guidelines (and referenced as such in AASHTO's pedestrian guidelines).

Regional Trail vs. Multi-Use Trail

I urge the County to re-consider requiring that "regional" (long-range) trails be equated with wide, expensive, and ultimately "engineered" trails. The "regional trail" specification in this Plan does not need to be so different from the "multi-use trail" specification, which describes the kind of simple, affordable, and enjoyable trail that local user groups are looking for in rural open spaces. Perhaps it is enough to say that the "regional trail" should be somewhat easier to use than the multi-use trail, and could be upgraded in the future if needed or desired.

In short, I don't think that this trail plan needs to, or should attempt to, determine specifications for County long-range trails that are yet to be determined by the County. The additional specifications for the regional trail above and beyond the multi-use trail are unnecessary and could be left out. At the very least, to avoid committing to a proliferation of over-engineered trails, and to avoid other problems with such trails described below, in the note on p 50 of this Plan, please change "shall be implemented" to "may be implemented."

By way of explanation: The specifications for the "Regional Trail" - that they shall be 6-10 ft. wide crusher fines - would appear to commit the County to spending millions of additional dollars in Thornton Ranch Open Space alone, and many millions of dollars more elsewhere in the County where "regional connections" are envisioned. What is the additional utility of this design over the design specifications of the (non-regional) multi-use trail, that justify the extra construction expense and future maintenance responsibility? What additional users will benefit, and is this worth the need to raise millions of dollars in bonds, etc., for regional trails over the coming decades?

This is not a long-range trail specification that is supported in USFS nor IMBA trail development guidelines, nor is it one that is favored by the people who build, maintain, and use soft-surface

trails in our area, including our local partners in the Grand Unified Trail System initiative. In order to drain properly without harmful erosion, this width of trail will likely require engineering a center "crown" from which drainage will flow to each side, into ditches along the sides, and through culverts draining across (under) the trail. This cross-section, more akin to a road, is far more expensive to design, build, and maintain. On the other hand, where wide, dirt trails are designed to drain via a cross-slope rather than a crown, as apparently specified in this plan, they inevitably experience significant problems with erosion, as experienced on the County Rail Trail, Spur Trail, and La Tierra Trails' designated "regional multi-use trail" (which we have helped maintain as "City Trail Volunteer Coordinator," see <http://www.sfct.org/trails/sfct-trail-events-in-2015/la-tierra-trails-work-days-december-2015>). If this kind of trail is to be maintained by volunteers, as most of our area's soft-surface trails are, it is not likely to remain as accessible and easy-to-use as originally envisioned and initially built.

The occasional short bridges and paved drainage crossings that are specified to go with this regional trail cross-section will also add significantly to the cost of such a trail, compared to the natural-surface drainage crossings (including sand in place) that function very well for hikers, cyclists, and equestrians using our broader regional trail system. For perfectly functional trails in a similar environment, see Galisteo Basin Preserve trails.

Finally, the statement about regional trails avoiding road crossings is puzzling since they will simply need to cross roads in order to make regional connections, while other kinds of trails may or may not need to cross roads.

Accessible Trail

The width of 6-10 ft. may be a better specification for the "accessible trail," which could even strive to meet AASHTO standards (10 ft.) for a multi-use path that serves users of various levels of ability and mobility. In order to expand the "somewhat accessible" experience which the current "Regional Trail" specification appears to desire to provide, perhaps this accessible trail loop could offer a short connection to the planned regional trail on its south end, so that users who are seeking to mix more accessible and slightly more rugged experiences can make that connection within a broader trip.

Trails on Old Abandoned Railbeds

The width of 6-10 ft. proposed for the Regional Trail is not appropriate for the section of trail that is envisioned on top of the long-ago-abandoned "Kennedy Line" railbed, as shown in Figure IV-5 ("Regional Trail Section"). The width of this trail, and the introduction of crusher fines or other foreign material, should be minimized in order to minimize alteration of the remaining historic railbed. A scaled-down trail can be built and maintained quite easily by your trail volunteer community, who represent many of your future users as well.

Echoing what our partners envision for long-range connections in the Grand Unified Trail System, and reflecting the plan for the Camino Real Retracement Trail (including where it will be built on top of a half-mile section of the Chili Line railbed), long-range trails in remote areas do not need to be wide trails. This "Regional Trail" need not be more than a few feet wide, otherwise it will either destroy the railbed or force the trail off of the railbed (as occurred for the ten-ft.-wide, paved "District Trail" in the Rancho Viejo subdivision). Given the rural, undeveloped nature of the site, lack of any significant "transportation" need (e.g. for commuters), and the Plan's proposal to provide a more accessible trail experience elsewhere, the 6-10 ft. width would be an over-specification that would defeat the purpose of the proposed rail-to-trail.

The Santa Fe Conservation Trust will not build wide trails on top of portions of the Kennedy Line that are found on conservation easements that we hold between Eldorado and Thornton Ranch

Open Space. But we agree with the idea that these alignments deserve consideration of (and investment in) bridges, trestles, or culverts where such structures can be used to reasonably preserve or re-establish the steady grade that the rail bed once offered to trains and now offers to trail users.

Please see attached photo of a local "rail-to-trail", albeit informal, that has developed purely through use. This trail re-purposes the abandoned railbed to non-motorized use, and given the properties of the rail grade, requires no construction, no cross slope, and no maintenance. It provides a very easy, high-quality, user-friendly trail experience and a very meaningful interpretive experience of the rail bed - increasing awareness and protection of the historical resource, and even celebrating it, with little or no adverse effect on it. I hope it can serve as a model for future rails-to-trails efforts in rural areas around Santa Fe.

Thank you for taking my comments on this plan. Regards, Tim

--

Tim Rogers

Trails Program Manager
Santa Fe Conservation Trust

tim@sfct.org

www.sfct.org

P.O. Box 23985
Santa Fe, NM 87502

505.989.7019 o

505.988.1455 f



The Land Beneath Our Feet, the Skies Above, and the Trails that Connect Our Communities.

Please consider the environment before printing this e-mail.





From: **Colleen Baker** CBaker@santafecountynm.gov
 Subject: FW: TROS Draft Master Plan
 Date: December 12, 2016 at 8:42 AM
 To: Claudia Horn chorn@do-designoffice.com, Patrick Sinnott (psinnott@do-designoffice.com) psinnott@do-designoffice.com



FYI

From: Nelson, David, NMDOT [mailto:David.Nelson@state.nm.us]
Sent: Monday, December 12, 2016 8:24 AM
To: Colleen Baker
Cc: Fine, Robert, NMDOT
Subject: TROS Draft Master Plan

Colleen,

Rob Fine asked me to submit comments for the Thornton Ranch Open Space master plan. Looking through the document, I appreciate the thoughtfulness and intent of the work done by SF County staff and consultants.

I noticed a few things in terms of our focus at the Rail Bureau:

- There is discussion of existing fencing and access control near Railroad ROW, but not a description of how those issues might be dealt with in the future. We'd like to see some language addressing possible trespassing remedies, particularly as open space use increases over time.
- We appreciate that SF County will notify NMRX of major breach points along the south property line and railroad right of way. A major breach might be considered any opening which allows access by vehicles, people, or livestock to the RR ROW.
- Please let us know where the locations for planned viewing of the Railroad ROW would occur.
- Will SF County need access to Railroad ROW for Open Space or other uses? We can set up licensing as appropriate for use of Railroad ROW along the northern boundary.
- We have addressed the trespassing issue at the southern boundary through the arroyo (fence repaired, boulders placed, and signage placed). Hopefully, those measures will prove effective in preventing trespassing there in the future.
- Some map graphics may benefit from increased resolution in the final product.

I understand some guidance regarding ROW issues will appear in the Master Plan, while other guidance may be present in licenses and permits. If SF County prefers to preserve the conciseness of the Master Plan, it would be helpful to outline policy which is not included in those types of documents into a separate document which describes fencing, access control, and trespassing remedies.

Thank You,
 David

David A. Nelson
Rail Planner
New Mexico Department of Transportation
 1350 Alta Vista St.
 Santa Fe, NM 87504
 505-995-7895

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1937-1987

Charles D. Olmsted
1925-1991

November 30, 2016

Via email: chorn@do-designoffice.com

Claudia Meyer Horn
Design Office
1300 Luisa Street, Ste. 24
Santa Fe, NM 87505

Re: Input and Comments to Draft Thornton Ranch Open Space Master Plan

Dear Claudia:

Below are the input and comments on behalf of our clients, La Jara Ranch, LLC ("La Jara") and a related limited liability company, SPDT, LLC ("SPDT"), which own several large pieces of property directly to the south of the proposed Thornton Ranch Open Space and hold State Land Lease No. GM-2740 (the "Land Lease").

1. All maps in the draft Thornton Ranch Open Space Master Plan ("the Plan") show the 6.95 acre northwest corner of La Jara Ranch LLC's Land Lease as part of the Open Space. Please correct the maps to indicate that the County has no real property interest in the 6.95 acres at this time.

2. On page 29, in the Trails Master Plan map, the parking lot and driveway appear to be on La Jara's current Land Lease or directly adjacent to it. They cannot be located on the leased land so long as La Jara has the lease. Additionally, the planned location for the parking lot and primary trailhead appears to be in close proximity to a large arroyo that runs under the NMRX tracks, through the Land Lease and directly into SPDT's and La Jara's property. La Jara and SPDT have had numerous issues with people trespassing on the ranch through that arroyo and want to avoid potential additional unlawful access by locating the parking lot and trailhead so near the arroyo. La Jara and SPDT prefer that the County locate a more suitable site for the parking lot and driveway than adjacent to their land. It is likely that it would be a huge burden to keep people from trespassing.

3. The Site Analysis Map on page 17 shows a potential open space corridor travelling south from the existing railroad through La Jara Ranch on the old Santa Fe Central rail bed. La Jara prefers that the County remove the reference to a potential Open Space Corridor south of the NMRX rail line from all of its maps and the text of the Plan. Barring that, La Jara requests that the County make it clear in the Plan that the County has no real property interest in the corridor and hence, without acquiring such an interest, such a corridor cannot become a reality.

4. Under Proposed Trails on page 14, the Plan says that Santa Fe County long range plans include a north/south regional trail along the abandoned NM Central railway. This is the rail bed that travels from Santa Fe to Torrance County, right through the middle of La Jara Ranch. La Jara prefers that the County remove the reference to potential Open Space Corridor south of the NMRX rail line from all of its maps and the text of the Plan. Barring that, La Jara requests that the County make it clear in the Plan that the County has no real property interest in the corridor and hence, without acquiring such an interest, such a corridor cannot become a reality.

5. We believe that the New Mexico Central rail bed has reverted to the adjacent landowners (e.g., La Jara's predecessor-in-interest). Therefore, the County may not simply create an open space corridor through that area. La Jara prefers that the County remove the reference to potential Open Space Corridor south of the NMRX rail line from all of its maps and the text of the Plan. Barring that, La Jara requests that the County make it clear in the Plan that the County has no real property interest in the corridor and hence, without acquiring such an interest, such a corridor cannot become a reality.

6. The County states at page 6 that the Thornton Ranch Open Space ("TROS") is bounded on the south by the NMRX railway and page 16 states "the NMRX ... railway forms a distinct southern boundary to the Thornton Ranch Open Space planning area." For those reasons, there are no potential corridors that expand south of those tracks.

7. The Plan refers to the east-west railroad tracks on the south boundary of the TROS as the NMRX Railway. Our understanding from reviewing the New Mexico Department of Transportation's State Rail Plan is that the NMRX is the Rail Runner Express commuter train that runs between Belen, Albuquerque and Santa Fe. Should the tracks that carry the BNSF and Amtrak trains east to west be more properly identified as NMDOT rail line or a similar designation rather than NMRX?

8. On page 16, under Land Ownership, the County suggests that a lease for seven acres of State Land Lease "is being negotiated to provide a contiguous planning area bounded on the south by the rail line", and page 65, Recommendations, the County states that it is exploring "a land trade/purchase with the State Land Office for State Trust lands within the project area". We believe the land to which the County refers is part of

Claudia Meyer Horn

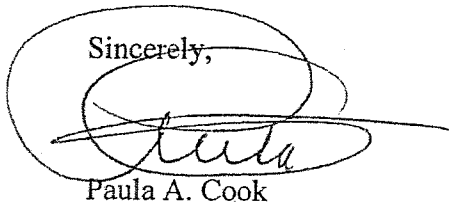
-3-

November 30, 2016

State Land Lease GM 2740. La Jara has given no indication that it will negotiate regarding that land.

If you have any questions, please contact me.

Sincerely,

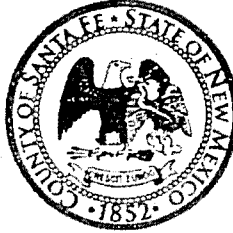
A handwritten signature in black ink, appearing to read "Paula", enclosed within a large, loopy oval. A horizontal line extends from the right side of the signature.

Paula A. Cook

Henry P. Roybal
Commissioner, District 1

Anna Hansen
Commissioner, District 2

Robert A. Anaya
Commissioner, District 3



Anna T. Hamilton
Commissioner, District 4

Ed Moreno
Commissioner, District 5

Katherine Miller
County Manager

September 22, 2017

Paula A. Cook, Esq.
Comeau, Maldegen, Templeman & Indall, LLP
Coronado Building, 141 E. Palace Avenue
Santa Fe, NM 87504-0669

Re: Response to "Input and Comments to Draft Thornton Ranch Open Space Master Plan."

Dear Ms. Cook:

Thank you for your letter of November 30, 2016, to Claudia Meyer Horn regarding the Santa Fe County ("County") Draft Thornton Ranch Open Space Master Plan ("Plan"). We understand that your clients, La Jara Ranch, LLC ("La Jara") and SPDT, LLC ("SPDT"), own several large tracts of land south of the NMRX rail right-of-way on the southern edge of the Thornton Ranch Open Space ("Open Space") planning area. We further understand that La Jara is the lessee under State Land Office ("SLO") Lease No. GM-2740 ("Land Lease"). The responses below correspond in number to your numbered comments.

1. Although currently subject to the Land Lease, we believe that the 6.95-acre tract of state land located in the northwest corner of Section 33 T14N R9E ("State Land") is properly included within the planning area. The State Land is clearly identified as such on the Plan maps. In order to implement the Plan on the State Land, the County would need to enter into a lease or other agreement with SLO, consistent with La Jara's rights under the Land Lease and the applicable statutes. Because the County intends to seek such an agreement with SLO, the County declines to make the proposed change.

2. The Trails Master Plan map on page 29 of the Plan shows a symbol for a trailhead and parking area north of the State Land. None of the proposed improvements will be on the State Land. We do not agree that implementation of the Plan as written will increase the risk of trespass. A well-maintained continuous fence along the railroad right-of-way should limit trespass, and a 15 ft. high elevated rail berm separates the proposed improvements from the rail line and obscures all views to the south. Furthermore, the stormwater drainage culverts are obscured by vegetation and too small to serve as convenient access points for trespassers. Accordingly, the County declines to make the proposed change.

3. The potential open space corridor shown on page 17 of the Site Analysis Map is part of the system of proposed County trails identified on the Official Map of the County, which the Board of County Commissioners adopted as part of the Santa Fe County Sustainable Land Development Code, Ordinance No. 2015-11. Therefore, because the potential corridor is consistent with the Official Map, the County declines to remove it from the Plan. The County acknowledges that it currently possesses no property interest in the potential corridor, and therefore, it would have to acquire rights-of-way from landowners to construct the corridor. In addition, in accordance with your alternative suggestion, the County will add language to the Plan clarifying that the County must acquire appropriate rights-of-way before any trail can be developed.

4. The abandoned New Mexico Central railroad grade is identified as a proposed County trail route on the Official Map, and therefore, the County does not agree to remove it from the Plan. The County acknowledges that it currently possesses no property interest in the proposed trail route, and therefore, it would have to acquire rights-of-way from landowners before constructing the trail. In addition, in accordance with your alternative suggestion, the County will add language to the Plan clarifying that the County must acquire appropriate rights-of-way before the trail can be developed.

5. The County agrees that it cannot "simply create an open space corridor" within the historic New Mexico Central rail bed. It would first need to obtain appropriate rights-of-way or other property interests. However, because the proposed trail is consistent with the Official Map, the County does not agree to remove it from the Plan. Consistent with your alternative suggestion, the County will add language to the Plan clarifying that the County must acquire appropriate rights-of-way before the trail can be developed.

6. The references on pages 6 and 16 of the Plan to the boundaries of the planning area pertain only to the planning and management of the Thornton Ranch Open Space. In contrast, the proposed County trail route depicted on the Official Map extends south of the NMRX Railway.

7. NMRX is the official rail line designation for the tracks owned by NMDOT that are depicted on the Plan maps. Accordingly, no change in the designation is required.

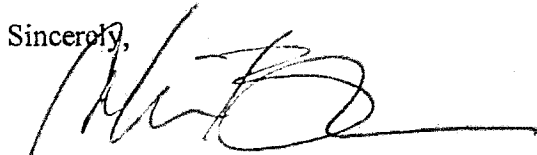
8. The text on page 16 in reference to the Land Lease will be amended, as follows: "*The lease of an additional approximate 7-acre tract of state land straddling along the rail line is being negotiated considered to provide a contiguous planning management area bounded on the south by the rail line.*" The text on page 65 outlining plan recommendations referring to the State Land is correct, and therefore, the County does not agree to the proposed change. Of course, any future lease between the County and SLO must be consistent with La Jara's rights under the Land Lease and the statutes and regulations applicable to state land.

In conclusion, the County agrees that the Plan cannot create or diminish rights in private property. The County uses it only as a planning tool.

Paula A. Cook, Esq.
September 22, 2017
Page 3 of 3

Thank you again for your comments. Please contact me or Assistant County Attorney Bruce Frederick if you have any questions regarding the above responses.

Sincerely,

A handwritten signature in black ink, appearing to read 'Colleen Baker', written over a horizontal line.

Colleen Baker
Project Manager
Public Works Department

cc: R. Bruce Frederick, Esq.

Memorandum

Date: 9 February 2017

To: Planning Team, TROS Master Plan
Colleen Baker, Santa Fe County Project Manager

From: Maria Lohmann, Santa Fe County Senior Planner
Paul Olafson, Planning Projects Manager
on Behalf of County Open Lands Trails and Parks Advisory Committee
(COLTPAC)

Re: Thornton Ranch Open Space (TROS)

COLTPAC has reviewed the draft Thornton Ranch Open Space (TROS) Master Plan and would like to share the following thoughts, comments and suggestions with the TROS Planning team.

In May of 2015, COLTPAC made a presentation to the Board of County Commissioners and outlined the goals for implementing the TROS Master Plan. These goals included:

- 1) Protecting the cultural resources present
- 2) Providing public access for recreation.

COLTPAC feels that careful execution of these two goals and completion of tangible milestones in a reasonable timeframe is a critical step in building public confidence in the Santa Fe County Open Space program. Positive progress on TROS will signal a shift in strategy in two important areas:

1. Thoughtful, active management and maintenance of the county's open space properties
2. Attention in developing new outdoor recreation.

COLTPAC recognizes the excellent work by county staff and the Planning Team in creating this draft TROS Master Plan Draft Document. COLTPAC has reviewed and discussed the TROS Master Plan Draft along with other topics related to the property. There are several particular topics of which we have additional and specific input.

Cultural Resource Protection

- The efforts related to development of a Resource Protection and Site Management Plan, in coordination with BLM and as a requirement of the Galisteo Basin Archeological Site Preservation Act (GBASPA), are particularly important and should be accelerated. This work should consider input and participation by affiliated tribal governments.
- Considering the sensitivity of the cultural resources present on the property, COLTPAC recommends that the property's management plan adopt an aggressive site security/monitoring policy, acknowledging the additional cost required. We feel that there are opportunities to educate the public on the history of the Galisteo Basin through signage and interpretive exhibits, however, there should be no intention to point out specific native cultural resources that may exist on TROS or at other locations within the region.
- The TROS Master Plan adequately addresses the importance of resource protection and sets a framework for participation by tribal governments and other interested parties in providing input on aspects of management, design and construction of trail corridors and publicly accessible areas in a way to avoid all impact on cultural resources.

Adequate Recreational Use

- The current master plan proposes a 16-mile trail system on the property. We feel that any reduction in the scope of the trail system will diminish the recreational value of the property and will not be favorably regarded by the public.
- The potential connector trail north along the old NM Central rail bed and proposed connection to the Galisteo Basin Preserve are important regional connections that will enhance recreation opportunities and should be maintained in the plan. The plan should encourage the development of the regional trail network and emphasize the need to create these connector trails in order to enhance the trails planned for the TROS.

Use Restrictions

- In general, recreational use of the property is an important component of TROS and trails should address the needs and wishes of hiker, bikers and equestrians equally. COLTPAC recommends that all trails within TROS shall be multi-purpose, unless, during the process of trail design, it is determined that one or more types of use would adversely impact the resource.
 - Documented reasons to restrict the use in some way might include but are not limited to one or more of the following
 - Public safety,

- Protection of nearby cultural resources,
 - Protecting natural resources and the environmental landscape.
- In the plan, please add descriptive language that would address the following:
 - criteria that may be part of an analysis for sustainable multi-use trail
 - How damage to trail/ecosystem can be mitigated or if not possible, why the plan should restrict multi-use.
 - How a multi-use trail in a certain location might impact staff maintenance time and resources
- In the plan, please add descriptive language that calls for the phasing and redesign or realignment of a trail segment if it is determined that the planned location would be unsuitable for multi-use.
- COLTPAC recommends that dogs are allowed on the property so long as they are on leash.
 - If the planning team feels that dogs should not be allowed, the TROS master plan should be supported by some sound rationale and science, along with considerations of the impacts of not allowing dogs. Prohibiting dogs is problematic in that it diminishes the recreational value of TROS for our many local dog owners. Prohibiting dogs on TROS will also create “no dogs allowed” gaps in the planned regional trail corridors.

Safety

- In order to provide adequate public safety along the BNSF rail corridor, COLTPAC notes that the management and construction plans are the appropriate documents to fully identify appropriate safety measures along this corridor.

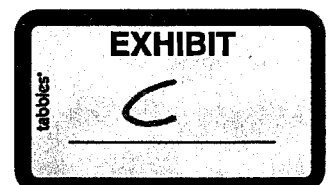
These comments were submitted on behalf of COLTPAC by Santa Fe County Staff:

Maria Lohmann
Paul Olafson

Galisteo Basin Archaeological Sites Protection Act Petroglyph Hill Management Plan

**Santa Fe County
102 Grant Avenue
P.O. Box 276
Santa Fe, New Mexico 87501
505-986-6200**

October 2017



EXECUTIVE SUMMARY

Petroglyph Hill (LA 148959) is an important archaeological site located in the center of the Galisteo Basin near the town of Galisteo, NM. It is one of 25 sites listed for protection in the Galisteo Basin Archaeological Sites Protection Act (Act). The Petroglyph Hill site boundary includes approximately 137 acres. The majority of the site, 129 acres, is on land owned by Santa Fe County as part of the Thornton Ranch Open Space. The remaining 8 acres is on Bureau of Land Management (BLM) lands in the Burnt Corn Special Recreation Management Area (SRMA) and Galisteo Basin Area of Critical Environmental Concern (ACEC). In May 2011 the BLM entered into a cooperative agreement with Santa Fe County to provide for the protection, preservation, maintenance, and administration of the Act sites that are wholly or in part on lands owned by Santa Fe County including Petroglyph Hill. In 2012, the BLM Taos Field Office completed a general management plan as directed by the Act for the identification, research, protection, and public interpretation of the archaeological sites listed in the Act that are on Federal Land and for sites on non-Federal lands (state, county, or private) which the BLM has entered into cooperative agreements with the owners for the protection of the sites. The General Management Plan calls for the development of site-specific management plans for each of the sites listed in the Act to identify and prioritize the resource management issues at the individual site and outline a specific management strategy. The Petroglyph Hill Management Plan is a site-specific management plan for Petroglyph Hill under the framework of the General Management Plan. The plan incorporates the concepts and guidance in the General Management Plan, but is tailored to the specific needs of the Petroglyph Hill site.

The Petroglyph Hill Management Plan established the following goals for management of the site:

1. Respect the Native American Tribes with ancestral ties to the Galisteo Basin and the Galisteo Basin Archaeological Sites Protection Act sites including Petroglyph Hill, their long term presence in the region, and their ongoing relationship with their ancestral lands.
2. Empower the Native American Tribes with ancestral ties to the Galisteo Basin to maintain their cultural identity, religious beliefs, customs and traditions.
3. Protect the intrinsic qualities of the Galisteo Basin that define its character.
4. Provide visitors with an experience of the Galisteo Basin that promotes greater understanding and appreciation of the intrinsic qualities of the landscape and inspires visitors to take personal responsibility for the care and preservation of these resources.

Each goal is followed by objectives and strategies for implementation of the plan. The strategies are incorporated into a work plan that identifies the agency that is responsible and the schedule and budget for implementation.

Santa Fe County developed the Petroglyph Hill Management Plan in consultation with the BLM Taos Field Office. The plan is intended to be a joint management plan by both agencies for the site. If and when the BLM decides to adopt the plan, Santa Fe County will work with agency staff to update the plan as necessary. Until then Santa Fe County will manage the site according to this plan and will continue to collaborate with BLM on the management of the site and implementation of the Galisteo Basin Archaeological Site Protections Act.

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- F Petroglyph Hill LA Form (Confidential)**
- G Petroglyph Hill Management Plan Meeting Documents**
- H Tribal Meeting Summaries (Confidential)**
- I Memorandum of Understanding between the State of New Mexico Historic Preservation Division, Department of Cultural Affairs and Santa Fe County (SiteWatch Program)**
- J Guided Tour Documents**

ACRONYMS/ABBREVIATIONS

ac	acres
ACEC	Area of Critical Environmental Concern
Act	Galisteo Basin Archaeological Sites Protection Act
ARARA	American Rock Art Research Association
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
County	Santa Fe County
COLTPAC	County Open Lands, Trails and Parks Advisory Committee
EA	Environmental Assessment
GBASPA	Galisteo Basin Archaeological Sites Protection Act
GMP	Galisteo Basin Archaeological Sites Protection Act General Management Plan
GPS	Global Positioning System
LA	Laboratory of Anthropology
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMDOT	New Mexico Department of Transportation
NMRX	Mexico Rail Runner Express
NRHP	National Register of Historic Places
OAS	Office of Archaeological Studies
RMP	BLM Taos Resource Management Plan
SGMP	Sustainable Growth Management Plan
SLO	New Mexico State Land Office
SRMA	Special Recreation Management Area
TAMARCH	TAMARCH Cultural Resource Management Services
TCP	Traditional Cultural Property
VRM	Visual Resource Management
UAS	Unmanned Aircraft Systems

1. INTRODUCTION

Petroglyph Hill (LA 148959) is an important archaeological site located in the center of the Galisteo Basin near the town of Galisteo, NM (Figure 1). In 2004, the United States Congress passed the Galisteo Basin Archeological Site Protection Act (Act) to protect the nationally significant archaeological resources in the Galisteo Basin. The Act designated 24 archaeological sites in the Galisteo Basin for protection, including Petroglyph Hill. Petroglyph Hill is a small volcanic hill overlooking Galisteo Creek. The site includes approximately 1,865 petroglyphs scattered across two prominent volcanic summits of naturally fractured grey rhyolite. Petroglyph Hill is considered an active sacred site by Native American Tribes that continue traditional use of the area (Figure 2).

The Petroglyph Hill site boundary includes approximately 137 acres. The majority of the site, 129 acres, is on land owned by Santa Fe County as part of the Thornton Ranch Open Space. The remaining 8 acres is on BLM managed lands in the Burnt Corn Special Recreation Management Area (SRMA) and Galisteo Basin Area of Critical Environmental Concern (ACEC).

In 2010 Santa Fe County entered into a cooperative agreement (MOA 2011-0193, renewed as MOA 2016-0059) with the Bureau of Land Management, as the agency designated by the Secretary of the Interior to implement the Galisteo Basin Archeological Site Protection Act (Act), to protect, preserve, maintain and administer the Petroglyph Hill site in accordance with the Act.

In 2012 the Bureau of Land Management (BLM) completed a general management plan as mandated by the Act to provide a framework for management of the archaeological sites listed in the act and set forth measures for implementation of the Act. The Galisteo Basin Archeological Site Protection Act General Management Plan (GMP) calls for the development of site-specific management plans for each of the sites listed in the Act to identify and prioritize the resource management issues at the individual site and outline a specific management strategy.

The Petroglyph Hill Management Plan is a site-specific management plan for Petroglyph Hill under the framework of the GMP. The plan incorporates the concepts and guidance in the GMP, but is tailored to the specific needs of the Petroglyph Hill site. The Petroglyph Hill Management Plan describes the existing conditions, identifies site-specific management issues, and outlines specific management strategies, including roles and responsibilities and a schedule and budget for implementation.

2. PETROGLYPH HILL (LA 148959)

2.1 Land Status

Petroglyph Hill is located within the Thornton Ranch Open Space. The Thornton Ranch Open Space is a 2,430-acre conservation area managed by Santa Fe County. The property consists of 1,904 acres purchased by the County under the Open Space and Trails Program, 320 acres of State Trust Land leased by the County from the New Mexico State Land Office (SLO), and approximately 207 acres of Bureau of Land Management (BLM) (Figure 2). The boundary for the Nationally-registered Petroglyph Hill (LA 148959) site covers 137 acres, including approximately 8 acres of BLM land on the western edge of the site.

The map displays the state of New Mexico with its major cities and geographical features. A star in the central region indicates the project location. Key cities labeled include Albuquerque, Santa Fe, Los Alamos, and Bernalillo. The Rio Grande is shown flowing through the western part of the state. A scale bar at the bottom indicates distances in kilometers and miles. A north arrow is located in the bottom right corner.

2

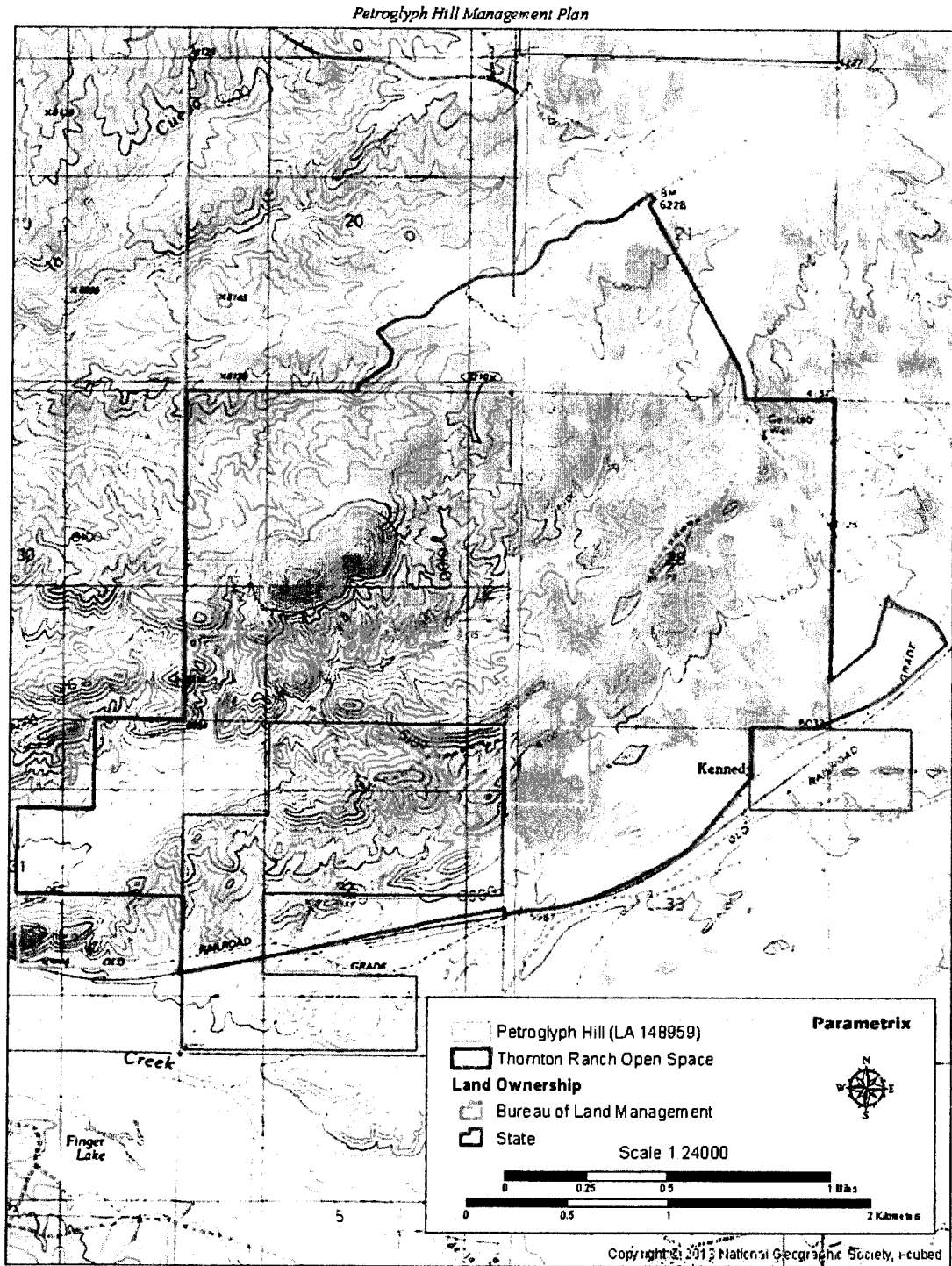


Figure 2. Project Area Map, Thornton Ranch Open Space and Petroglyph Hill

2.2 Environmental Setting

Petroglyph Hill includes approximately 1,865 petroglyphs on two prominent volcanic summits overlooking the western part of the Galisteo Basin in southern Santa Fe County (Figure 1). The site covers approximately 137 acres at an average elevation of 6,280 feet within the larger Thornton Ranch Open Space (Figure 2). The petroglyphs are scattered across two naturally-fractured summits of gray rhyolite joined by a low saddle, concentrated along the steeper slopes to the south. A sparse piñon and juniper woodland with adjacent grassland characterizes the vegetation. Expansive 360 degree views from the summit of Petroglyph Hill include the Sangre de Cristo Mountains, Cerro Pelon, Cerrillos Hills, and the Ortiz Mountains. There is a clear line of site between Petroglyph Hill and many of the other 23 sites named in the Galisteo Basin Archeological Site Protection Act. The site's central location in the basin contributes to its cultural significance.

2.3 Cultural Setting

Human use of the Galisteo Basin appears to have begun sometime during the Archaic period (ca. 5500 B.C. to A.D. 200); however, the site principally represents Coalition through Classic period (A.D. 1200 to 1600) ancestral Puebloan ceremonial use of the landscape. The greatest use of the site appears to have been during the Coalition period (A.D. 1200 to 1325), likely by neighboring Burnt Corn Pueblo inhabitants (about 2 miles northwest) and others from the greater Galisteo Basin (Snead 2001; Snead and Head 2005). A low-density ceramic and lithic artifact scatter and historic period images, initials, and ranching-related structures and artifacts have also been documented across the site (Munson 2005a, 2008; Munson and Head 2011).

Based on analysis of subject, style, degree of re-patination, and superpositioning, most of the petroglyphs at Petroglyph Hill date to the pre-contact period and were made by pecking with a stone tool. Post-contact examples constitute 40 percent of the images and were made by pecking, gouging, or scratching with a metal tool (Munson 2008). Almost all of the petroglyph panels (93 percent) are smaller than 3 square feet, and nearly all have five or fewer elements per panel. Unlike the petroglyphs of El Crestón/Comanche Gap in the southwestern Galisteo Basin, which are very large and visible from a distance, those at Petroglyph Hill are only visible up close, though the hills on which they are located can generally be seen across the western basin (Munson and Head 2011).

Only 3 percent of the rock art recorded at Petroglyph Hill, a total of 10 petroglyphs confined to one panel on the western summit, are classified as Archaic (Munson and Head 2008, 225; Snead 2008). These elements are heavily repatinated to a dark brown, or nearly completely repatinated. Most are moderately to deeply pecked with thick lines and are primarily geometric, including circles, zigzags, and curvilinear lines characteristic of the Archaic period (Munson 2008). Coalition period (A.D. 1200–1325) petroglyphs are well-represented by images of deer, deer tracks, and hunters, but at times can be difficult to distinguish from the later Classic period Rio Grande Style (Schaafsma 1992). In general, they constitute an estimated 50 percent of the site's petroglyphs, including images of deer, mountain sheep, lizards, birds, fish, stick figures, flute players, human and animal tracks, and abstract designs (Munson 2008).

Features dating from the post-Contact period include numerous undefined rock alignments and rock piles with adjacent cleared areas and stacked wall segments, presumably used to pen

livestock; wood and wire fencing; a possible water tank; and two hearths (Munson 2008). From 1886 to the 1950s, repeated visitors produced a variety of images on Petroglyph Hill such as Spanish and English inscriptions, a windmill, brands, hearts, a house, potted plants, and horses, among others. Written inscriptions include initials, phrases, and dates from 1886 to 1998, with repeated visits by named individuals from the late 1920s to the late 1930s when local ranchers and homesteaders frequently visited the site. From the 1960s on, inscriptions are more expediently made and tend to cover older rock art (Munson 2008).

Descendants of the ancestral Puebloans who created the site's petroglyphs, today's Pueblo people, maintain oral history about their association with Petroglyph Hill. For centuries, tribes periodically passed through the area on religious pilgrimages, plant collecting, trading, and on hunting expeditions. Ohkay Owingeh and the pueblos of Acoma, Santa Ana, Santa Clara, San Felipe, and Tesuque, have expressed that Petroglyph Hill is an 'active' site that is visited by tribal pilgrimages throughout the year for ceremonial purposes.

Jicarilla Apache representatives state that small bands of Apaches historically travelled through the area on hunting, trading, and warfare expeditions – particularly against the Comanche. Jicarilla Apaches therefore also maintain traditional connections with the site and the surrounding landscape, and traditional knowledge persists regarding the petroglyphs found there (Kelley and O'Meara 2011, 3–54).

2.4 Previous Research

Petroglyph Hill (LA 148959) was systematically recorded between 2004 and 2006 when archaeologist James Snead, then of George Mason University, undertook a survey of the site and approximately 486 ha (1,200 ac) of surrounding land, sponsored by the National Science Foundation and conducted for Santa Fe County (Snead 2010). Recording of the site was directed by Marit Munson of Trent University, Peterborough, Ontario. Munson and a small crew of archaeologists and trained volunteers used standard recording procedures that emphasize dating and context-related information (Munson 2005a). The site was mapped using a hand-held Global Positioning System (GPS) unit to pinpoint each locale and isolated panel, with detailed tape and compass maps of each locale to show panel locations and features (Munson 2005a). Ninety percent of the images were drawn, and other detailed information pertinent to relative dating methods was also recorded such as overlap of images (superpositioning), degree of patination, subject matter, and technique used (Munson 2005a, 2011). Parametrix archaeologists completed a cultural resources update of the Petroglyph Hill site in 2015, which included documenting previously unrecorded features and panels, and assessing the condition of a sample of previously recorded petroglyphs (Appendix F). During the site update, the site boundary was expanded to include three previously recorded sites located within, or immediately adjacent to, the larger Petroglyph Hill site, which resulted in a boundary that better conforms to the topography of the landform. Figure 3 shows the expanded archaeological site boundary in relation to the Act site boundary. The archaeological site boundary encompasses 61.7 acres within the larger 137 acre Act site boundary.

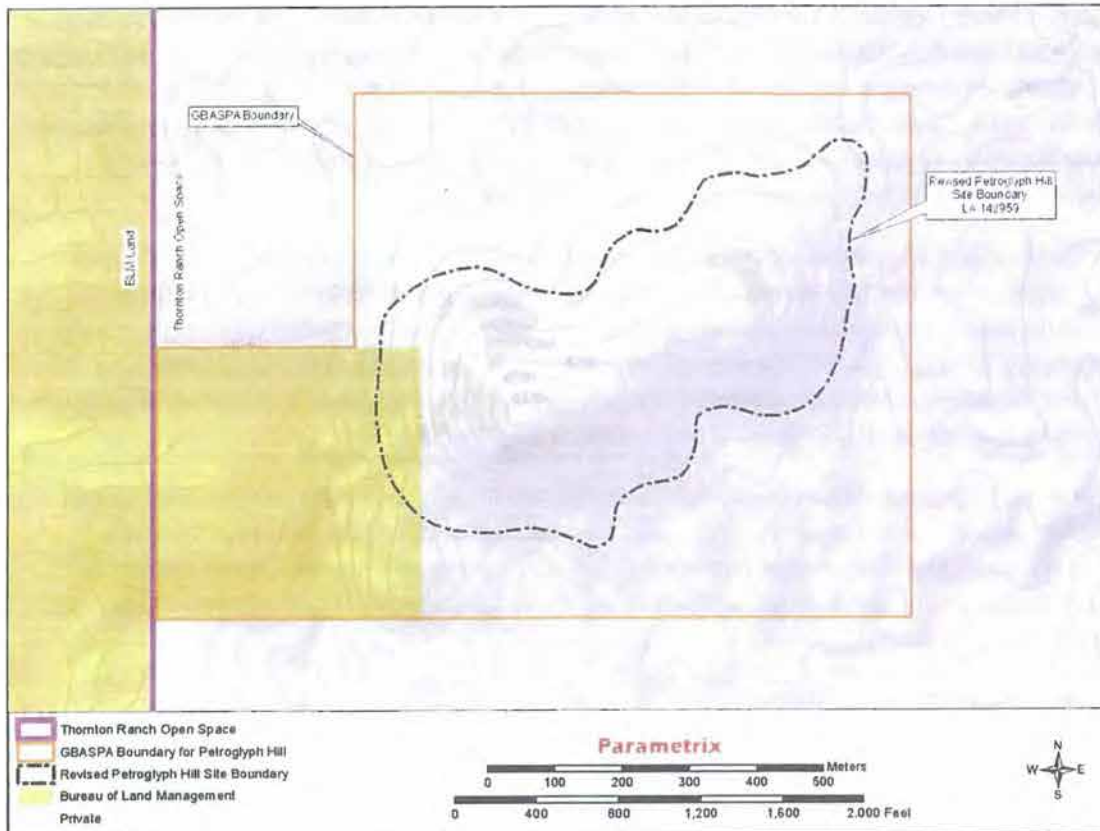


Figure 3. LA 148959 (Petroglyph Hill) archaeological site boundary in relation to GBASPA boundary for Petroglyph Hill

3. PLANNING PROCESS

3.1 Regulatory and Planning Framework

The Galisteo Basin Archaeological Sites Protection Act and the plans summarized below provide context and guidance for the development of a site-specific management plan for Petroglyph Hill.

3.1.1 Galisteo Basin Archaeological Sites Protection Act

The Galisteo Basin Archaeological Sites Protection Act (the Act) (Appendix A) was passed by the United States Congress in March 2004 to “provide for the preservation, protection, and interpretation of the nationally significant archaeological resources in the Galisteo Basin in New Mexico.” (Public Law 108-208). Petroglyph Hill is one of the sites named in the Act. The Act designated the Secretary of the Interior (the Secretary) with administration of the Act.

3.1.2 General Management Plan

The Galisteo Basin Archaeological Sites Protection Act (Act) directed the Secretary of the Interior to prepare a general management plan for the identification, research, protection, and

public interpretation of the archaeological sites listed in the Act that are on Federal Land and for sites on non-Federal lands (state, county, or private) which the Secretary has entered into cooperative agreements with the owners for the protection of the sites. The Secretary designated the Bureau of Land Management (BLM) Taos Field Office as the lead federal agency in the preparation of the General Management Plan. The BLM Taos Field Office completed the General Management Plan in December 2012 (Appendix C). The general management plan provides the cultural and historical context for the sites designated by the Act, summarizes the current conditions and challenges to preservation and protection for each site, and provides general management strategies for protection of the sites. The General Management Plan calls for the development of site-specific management plans for each of the sites listed in the Act to provide management strategies tailored to the specific needs of the individual site. The site-specific management plan for Petroglyph Hill follows the guidance in the General Management Plan.

3.1.3 Galisteo Basin Archaeological Sites Protection Act Site Assessment Project

In 2007 the State of New Mexico passed a Bill providing funding to complete systematic assessment of each of the archaeological sites listed in the Act. The New Mexico Department of Cultural Affairs, Office of Archaeological Studies (OAS) was tasked with completing the assessments. The assessments provide background information about each site from existing records, archaeological definition of the site boundary, and documentation of the existing conditions and threats to the site's integrity. A site assessment was completed for Petroglyph Hill as part of this project (Appendix D).

3.1.4 Galisteo Basin Archaeological Sites Protection Act – Ethnographic Study

In September 2009, the Taos Field Office of the Bureau of Land Management (BLM) contracted with Parametrix to conduct an ethnographic study of the Galisteo Basin. The purpose of this study was to gather information on the historical and contemporary relationships between modern Pueblo peoples and other Native American tribes and the 24 sites included in the Act. The ethnographic study was a key component of the BLM's efforts to include Native American perspectives and input in the general management plan for the Galisteo Basin Archeological Sites Protection Act sites (Kelley and O'Meara 2011).

3.1.5 Environmental Assessment for the Galisteo Basin Archaeological Sites Protection Act General Management Plan

The BLM prepared an Environmental Assessment (EA) for the Galisteo Basin Archaeological Sites Protection Act General Management Plan in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations found in 40 Code of Federal Regulations (CFR) 1500. The EA analyzed the impacts of the Proposed Action, implementation of the GMP, and a No Action alternative.

According to the EA, the site specific plans for each of the Act sites will need to undergo site-specific NEPA compliance prior to implementation.

3.1.6 Santa Fe County Sustainable Growth Management Plan

The Santa Fe County Sustainable Growth Management Plan (SGMP), adopted in 2010 and updated in 2015 is a comprehensive general plan for Santa Fe County that provides direction regarding land use, economic development, resource conservation, public facilities and services, fiscal planning, renewable energy, and governance. Chapter 5 “Resource Conservation” addresses the protection and preservation of archaeological resources throughout the County and specifically those recognized by the Galisteo Archaeological Site Protection Act. The SGMP directives from Chapter 5 that relate directly to the management of Petroglyph Hill are listed below.

- Goal 17 Protect and preserve the County’s archaeological, historic, cultural, community and scenic resources.
- Policy 17.1 Promote coordination with local, tribal, State and Federal agencies, including the Office of Cultural Affairs, New Mexico Historic Preservation Division, and State Historic Preservation Officer to preserve and manage archaeological, historic and cultural resources.
 - Strategy 17.1.2 Support the Galisteo Protection Act through coordination with the Galisteo Basin Archaeological Site Protection Act (GBASPA) Coordination Committee and participate in the development of a Galisteo Archaeological Site Management Plan.
 - Strategy 17.1.3 Coordinate project review with Tribal governments on archaeological sites.
- Policy 17.5 Support the ability of Native Americans to use the natural resources of the County for ceremonial or other purposes.
 - Strategy 17.5.1 Establish procedures for Tribal requests to use County open space for ceremonial or other purposes.

The SGMP identifies the Thornton Ranch Open Space as a priority open space project for the County. “This project involves the completion of a management plan for Thornton Ranch Open Space in coordination with the effort underway by the federal Bureau of Land Management to develop a management plan for the Galisteo Basin Archaeological Sites. It will include development of interpretive programming and construction of low impact visitor facilities for managed public access.” (2015, 119)

3.1.7 Santa Fe County Open Land and Trails Plan

The Santa Fe County Open Space and Trails Program was created by a voter referendum in 1998 to acquire and protect land for open space and trails using local tax dollars, in response to increasing growth and development in the County. The County Open Lands and Trails Planning and Advisory Committee (COLTPAC, subsequently renamed County Open Lands, Trails and Parks Advisory Committee) assisted County staff in developing the Open Lands and Trails Plan for the program. The County adopted the plan on May 22, 2000 as an element of the 1999 Growth Management Plan. The purpose of the plan is to establish long-term strategies for open

land and trails conservation in the County, and to guide the County in a program to evaluate, acquire, develop and manage parks, open lands and trails” (2000, v).

Santa Fe County purchased the Thornton Ranch Open Space under the guidance of the Open Lands and Trails Plan. One of the general goals of the plan is to, “Protect regionally significant natural and cultural resources in need of protection” (2000, 23). The plan states that “Protecting resources is the most important function of the program, which may mean that human access may need to be limited or restricted on some lands” (2000, 24).

3.1.8 Santa Fe County Resolution 2008-36

In 2008 Santa Fe County passed Resolution 2008-36 supporting the efforts of the Secretary of the Interior (Secretary) to implement the Galisteo Basin Archaeological Sites Protection Act and expressing its desire to enter into a cooperative agreement with the Secretary regarding the three sites listed in the Act that are located wholly or in part on land owned by the County to ensure that these sites are protected, maintained, administered and, if appropriate, interpreted.

3.1.9 Cooperative Agreement

The Galisteo Basin Archaeological Sites Protection Act (Act) authorizes the Secretary of the Interior (the Secretary) to enter into cooperative agreements with the owners of non-Federal lands that include all or a portion of the archaeological sites listed in the Act. The purpose of the cooperative agreement is to enable the Secretary to assist with the protection, preservation, maintenance, administration and, where appropriate, interpretation of the site. In May 2011 the Bureau of Land Management (BLM) entered into a Memorandum of Agreement (MOA 2011-0193) with Santa Fe County to provide for the protection, preservation, maintenance, and administration of the Act sites that are wholly or in part on lands owned by Santa Fe County (County), La Cieneguilla Petroglyphs, the Lamy Junction Site and Petroglyph Hill. Under the MOA, the BLM and the County agreed to strive to achieve the highest level of protection, preservation, maintenance and administration of these sites and to work jointly to prepare site assessments, a general management plan, and site-specific management plans. The BLM and the County renewed the MOA in 2015 (MOA 2016-0059) (Appendix B). The term of the MOA is 5 years. The MOA expires on July 31, 2020 at which time the BLM and the County may consider entering into a new cooperative agreement.

The Act does not give the Secretary of the Interior the authority to administer archaeological protection sites on non-Federal land except to the extent provided for in a cooperative agreement. The owners of non-Federal land on which protection sites are located are under no obligation to comply with the provisions of the Act. The County has voluntarily entered into a cooperative agreement (MOA 2016-0059) to allow the Secretary to assist County with administration of the site. Under the MOA, BLM and the County agreed to work to provide the highest level of protection, preservation, maintenance, and administration of the archaeological resources and that these efforts will be guided by the Act.

3.2 Stakeholder Input

Santa Fe County sent letters on November 3, 2014 to all of the 24 Native American Tribal Governments that the BLM consulted with in the development of the General Management Plan as well as an additional 5 tribal governments that Parametrix contacted for the GBASPA – Ethnographic Study, inviting them to consult with the County regarding the development of the Petroglyph Hill Management Plan and the Thornton Ranch Open Space Master Plan:

- Apache Tribe of Oklahoma
- Hopi Tribe
- Mescalero Apache Tribe
- Wichita and Affiliated Tribes
- Isleta Pueblo
- Laguna Pueblo
- Ohkay Owingeh Pueblo (San Juan)
- Pojoaque Pueblo
- Santa Ana Pueblo
- San Felipe Pueblo
- Kewa Pueblo (Santo Domingo)
- Zia Pueblo
- Acoma Pueblo*
- Ysleta del Sur Pueblo*
- Pawnee Tribe*
- Comanche Indian Tribe
- Jicarilla Apache Nation
- Navajo Nation
- Cochiti Pueblo
- Jemez Pueblo
- Nambe Pueblo
- Picuris Pueblo
- Sandia Pueblo
- Santa Clara Pueblo
- San Ildefonso Pueblo
- Tesuque Pueblo
- Zuni Pueblo
- Taos Pueblo*
- White Mountain Apache Tribe*

* From GBASPA – Ethnographic Study

The tribal governments that were consulted were selected based on geographic proximity and potential cultural affiliation with the archeological resources designated for protection by the Act. Native American consultation contact lists maintained by the State Historic Preservation Division, BLM and Parametrix were used in an effort to ensure that the appropriate current individuals were contacted within each tribal government.

The General Management Plan (GMP) outlines protocols for communication for implementation of the GMP. The GMP identifies the informal Galisteo Basin Archaeological Sites Protection Act Working Group as a forum for communication between the BLM and other Federal, State and local government agencies, Native American Tribes and other stakeholders to facilitate collaboration in implementation of the GMP, inter-governmental coordination, and future management efforts at the Act sites.

Santa Fe County and its consultants, Parametrix and TAMARCH Cultural Resource Management Services presented the planning process for the Petroglyph Hill Management Plan to the GBASPA Working Group on October 21, 2014 to begin to establish communication with stakeholders. Santa Fe County has attended the GBASPA Working Group meeting regularly throughout the planning process to provide updates to the stakeholders. Santa Fe County and its consultants presented a conceptual draft of the Petroglyph Hill Management Plan to the GBASPA Working Group on September 13, 2016.

To develop the management plan for Petroglyph Hill Santa Fe County and its consultants, TAMARCH Cultural Resource Management Services and Parametrix, identified key stakeholders, including the 29 tribal governments listed above, based on their knowledge and experience of Petroglyph Hill and/or similar rock art sites in the region. In addition to the tribal governments, the key stakeholders included cultural resource professionals, resource managers, SiteWatch Stewards, and government agency representatives.

Santa Fe County invited key stakeholders to attend a management plan meeting for Petroglyph Hill to identify site-specific management issues and strategies for protection, preservation and interpretation of the site. The meeting was held on Saturday December 6, 2014, from 12:30 to 4:00 pm, at the Galisteo Community Center in Galisteo, NM. TAMARCH led a site visit to Petroglyph Hill in the morning prior to the meeting for those who were interested. The list of key stakeholders, meeting invitation, agenda, sign-in sheet and transcript is included in Appendix D. Tamara Stewart of TAMARCH facilitated the meeting.

Following the meeting Tamara Stewart prepared the meeting drafted a management plan for Petroglyph Hill based on input from the meeting. Santa Fe County sent the draft management plan to the key stakeholders for comment on February 20, 2015.

Santa Fe County followed up with a series of meetings and site visits with tribal government representatives to get input in the development of the management plan (Appendix H).

- Tribal Input Meeting/July 8-9, 2015
- Santa Clara Pueblo Site Visit/August 31, 2015
- Kewa Pueblo Meeting/September 30, 2016
- Cochiti Pueblo Meeting/September 30, 2016
- Tribal Input Meeting/November 4-5, 2015
- Tribal Input Meeting/March 10-11, 2016
- San Felipe Pueblo Meeting/March 13, 2017
- Pojoaque Pueblo Meeting/May 19, 2017
- Cochiti Pueblo Meeting/June 20, 2017
- Tribal Input Meeting/July 12, 2017
- Tribal Input Meeting/August 9, 2017

Santa Fe County and BLM took the input from the meetings with key stakeholders into consideration in drafting the Petroglyph Hill Management Plan for final review and approval.

The following is an outline of the planning process up to and including formal approval of the plan:

- GBASPA Working Group Presentation of planning process for Petroglyph Hill Management Plan: October 21, 2014
- Tribal Consultation Letter: November 3, 2014
- Management Plan Meeting: December 6, 2014
- Stakeholder review of the draft Petroglyph Hill Management Plan: February 20 - March 20, 2015
- Tribal Input Meetings
 - November 4-5, 2014
 - July 8-9, 2015
 - March 10-11, 2016
 - July 12, 2017
 - August 9, 2017
- GBASPA Working Group Presentation of draft Petroglyph Hill Management Plan: September 13, 2016
- County Open Land, Trails and Parks Advisory Committee Presentation: August 2, 2017
- Tribal review of the final draft Petroglyph Hill Management Plan: July 1 - September 15, 2017
- Stakeholder review of the final draft Petroglyph Hill Management Plan: August 15 – September 15, 2017
- County Open Land, Trails and Parks Advisory Committee Recommendation: October 4, 2017
- Board of County Commissioners Approval: October 31, 2017

3.3 Relationship to Other Plans

The Petroglyph Hill Management Plan is one of four interrelated plans that will guide the land use and management of the Thornton Ranch Open Space. The plans are intended to complement each other and provide a comprehensive strategy for resource protection, public access and interpretation. The planning process for the development of these plans was conducted concurrently and stakeholder input was integrated into all of the plans. The plans are summarized below.

Petroglyph Hill Management Plan – a site-specific management plan for Petroglyph Hill in accordance with the Galisteo Basin Archaeological Sites Protection Act.

Thornton Ranch Open Space Management Plan – establishes goals and objectives for management of the property and identifies projects, routine maintenance activities and a monitoring program necessary to implement the plan.

Thornton Ranch Open Space Master Plan - identifies the program for the open space, physical improvements, and the process for implementation of the plan.

Galisteo Basin Interpretive Plan – establishes the interpretive goals and objective, themes, target audiences and media to guide interpretation at all County Open Space properties within the greater Galisteo Basin, including the Thornton Ranch Open Space.

3.4 Plan Update Process

Santa Fe County and BLM will review the site conditions and the status of the plan implementation with key stakeholders annually. The review will be recorded in an annual status report including any recommendations for changes to the plan. A work plan will be developed with a schedule and budget for implementation each year. Santa Fe County and BLM will update the plan every five years. The County and BLM may opt to update the plan in less than 5 years if they determine it is necessary.

4. EXISTING CONDITIONS

4.1 Resource Condition

The following description of the site condition is copied from the Galisteo Basin Archaeological Sites Protection Act Site Assessment Project for Petroglyph Hill.

Munson, Marit and Genevieve Head

2008 Petroglyph Hill (LA 148959). In: The Galisteo Basin Archaeological Protection Act Site Assessment Project, compiled by Wolcott Toll and Jessica Badner. Office of Archaeological Studies. New Mexico Department of Cultural Affairs, Santa Fe, NM.

“In general, the rock art of Petroglyph Hill appears to be in stable condition. The most prominent problems are panels that have moderate or severe breakage (26 percent of all panels) or that have spalling of the surface (24 percent of all panels). Most of this damage is the result of weathering along fracture planes and weathering rinds. Another 22 percent of the panels have moderate to heavy damage from abrasion, some of which is caused by rocks falling or sliding from above. A few panels have toppled completely from their original position on an outcrop, landing on the talus slope below (P6120017). Damage from lichens, plants, and animals is rare.

The major threat to Petroglyph Hill is from modern visitation. Although Petroglyph Hill has been drawing visitors for as long as people have lived in the Galisteo Basin, its use from the 1960s to the present has raised a new and significant threat to the site. The former Thornton Ranch parcel is unofficially used for hiking, mountain biking, partying, and other activities. Petroglyph Hill is a well-known site in the Santa Fe area, but even visitors who are unaware of the rock art often climb the hills for the view. Upon arriving on the higher west peak, they discover the rock art and inevitably search the immediate vicinity for more. The spatial distribution of damaged and endangered panels provides some insight into the threat that contemporary site visitation poses to Petroglyph Hill (Fig. 22). Many panels on the west hill have been inadvertently impacted by visitors; for example, bedrock petroglyphs at the top of the west hill show considerable abrasion and scuffing from foot traffic, while near horizontal panels just below on the southern slope are used as steps by visitors climbing down to other petroglyphs on the cliffs. Erosion of casual visitor trails at the base of the cliffs indicates the large numbers of visits that the site receives.

In addition to these inadvertent impacts, some visitors also actively damage the rock art. Instances of vandalism range from scratches over existing rock art or the addition of inscribed names and dates to panels to serious cases of panels that have been defaced, split, or largely destroyed by individuals wielding chisels or other metal tools (P6210055). Although some vandalism dates back to the early twentieth century, the majority occurred from the 1960s to the present. Recent visitors have become increasingly inclined to add expedient, crudely scratched words or to vandalize the rock art. Even the most elaborate of these recent inscriptions, like those of Onesimo Montoya (P6300066), are created with expedient techniques that minimize the labor involved. This suggests that most recent inscriptions are more akin to graffiti, or marks made without much deliberation or investment. As with inadvertent impacts, most vandalism is concentrated along the informal visitor's trail that leads to the crest of the west hill and on the most prominent outcrops directly below.

Most alarmingly, some panels have fallen victim to attempted and successful theft. For example, in one of the rare cases of vandalism on the east hill, thieves used a pry bar and other metal tools to try to move a large petroglyph slab; as they propped it up with cobbles, it broke in two (P6240042). After dragging one heavy portion of the panel about 1 m up the hill, they abandoned it. Presumably, this panel was targeted because of its proximity to the jeep trail that leads to the saddle between the two hills.

Unfortunately, damage to the rock art at Petroglyph Hill is ongoing. At the beginning of fieldwork in early June, recorders noted a fresh hole near the crest of the west hill where a small boulder had recently been pried up out of the ground and removed (P6210063). Because the rock is missing, it is impossible to know what was on that particular boulder; it seems likely, however, that it included rock-art elements. In addition, the site was vandalized in the midst of fieldwork; individuals who visited the site on a Sunday, when no researchers were present, scratched a hunting scene, birds, and a pentagram onto boulders on the crest of the west hill (P6220019). Although the images are faintly scratched and likely to fade quickly, their presence nevertheless indicates an interest in marking the rock and serves as encouragement for others to try their hand at it in the future" (Toll and Badner 2008).

There have not been any new instances of theft or vandalism documented since SiteWatch began monitoring the site in 2008.



P6120017. This panel fell down the talus slope of the west hill, coming to rest with the petroglyph facing down.



P6210055. This boulder was slit by vandals with a chisel or other metal tool: when found it was lying in several pieces.

LA148959
Petroglyph Hill

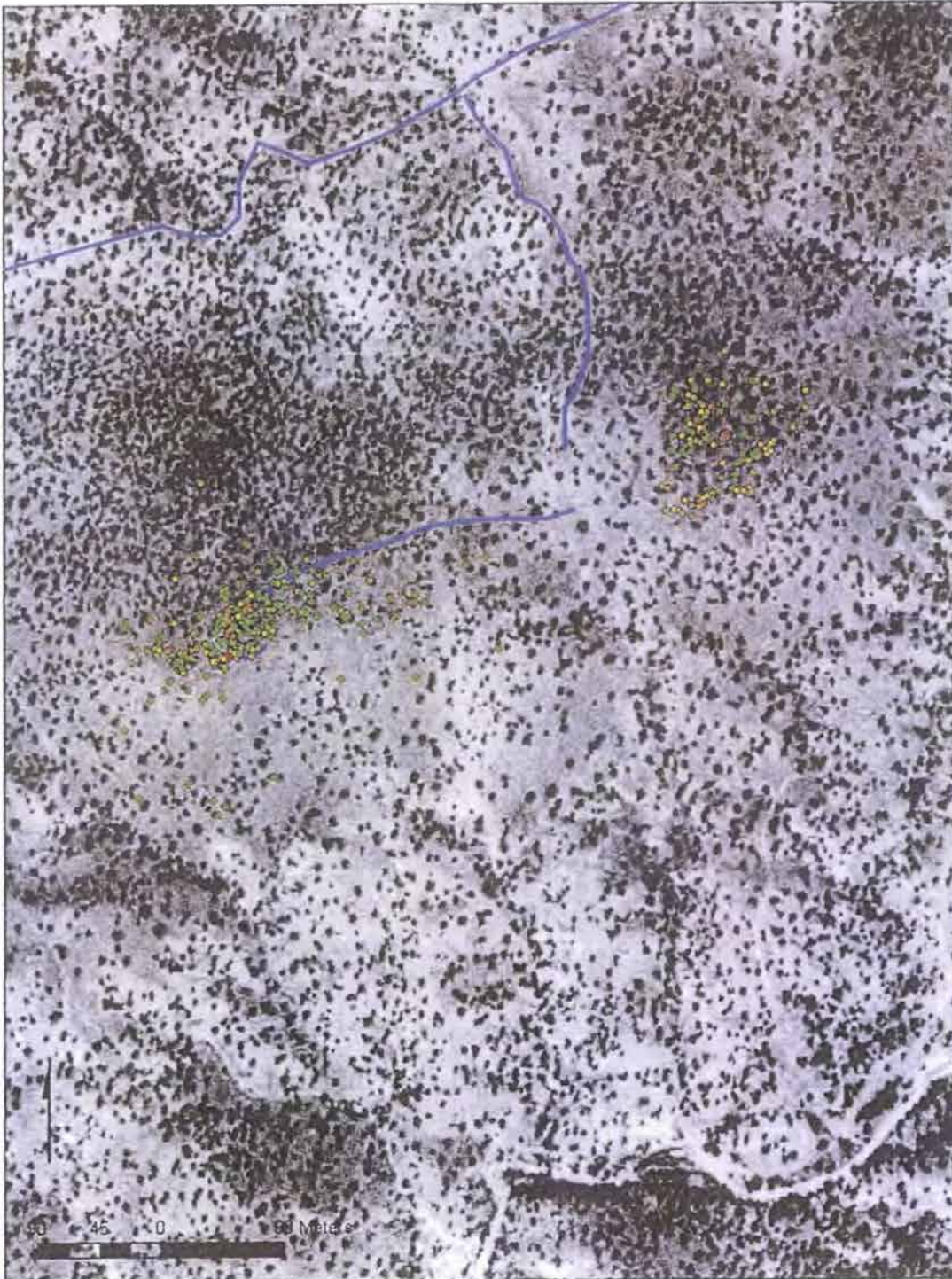


Figure 22. Map showing the condition of panels by location; colors reflect current damage, with green representing the least threatened and red the most endangered.



P6300066. Roughly scratched inscriptions, 1998.



P6240042. A large panel split in two during an attempted theft. The light scar in the upper left is the former position of the large slab in the foreground.



P6210063. An empty hole (center right) attests to the theft of a small boulder. Note the trampling of the surrounding ground surface.



P6220019. Images faintly scratched by visitors to the site on June 19 or 20, 2005.

4.2 Site Name

The name Petroglyph Hill is in common use; however it is not an official name. The name is unfortunate because it draws attention to the cultural resources on the hill. Petroglyph Hill is listed in a number of published guide books. The descriptive name and its publication in the Galisteo Basin Archaeological Site Protection Act and in guide books have increased public awareness of the site.

4.3 Traditional Use

Petroglyph Hill is an active sacred site to the Native American tribes that continue traditional use of this area as their ancestral lands. These tribes regularly make pilgrimages to the site.

4.4 Access

Santa Fe County has kept the Thornton Ranch Open Space closed to the public since acquiring it in order to develop a management plan and the staff capacity to protect the cultural and natural resources. The County plans to open portions of the property to public access once a management plan has been adopted by the Board of County Commissioners.

Since 2009, Santa Fe County has periodically led guided tours to Petroglyph Hill in response to public demand. The tours were limited to no more than 6 tours per year, generally offered once per month during the spring and fall. The tours were limited to 20 participants per tour on a first come, first served basis. The tours were advertised through the County website. Staff kept a waiting list of people who contacted the County interested in participating in a tour and filled the tours from this list. The tours were led by at least two docents, typically SiteWatch volunteers, and/or County staff. Staff worked with SiteWatch volunteers to flag a route for the tours in order to minimize resource damage. Santa Fe County required each tour participant to sign a waiver form, acknowledging the risks associated with taking the tour and releasing the County from liability for injury since the tour required walking up to a mile on an undeveloped route over rough and uneven terrain. The docents and staff provided basic information about the site to tour participants. The information varied depending on the knowledge and expertise of the personnel leading the tour. County staff also provided participants information on etiquette and safety with confirmation of their registration as well as in an introductory briefing at the beginning of the tour (Appendix J).

Even with limited visitation, the tour route was clearly visible after one tour season due to the foot traffic trampling the vegetation. The County suspended the tours after the 2014 season to allow the vegetation to recover and while the County is in the process of developing a management plan for the property.

The GMP states that non-pedestrian uses are generally not compatible with the Act's primary objective of site protection and therefore pedestrian travel is the only use or mode of transportation allowed within all of the protection sites. (BLM 2012a, 49) The BLM Burnt Corn area of the Galisteo Basin- Cerrillos Hills/Burnt Corn SRMA is closed to motorized vehicles. Access is limited to foot, horseback, or bicycle to protect cultural resources and to provide for back-country recreation. The BLM portion of the Act site is not closed to public access; however BLM does not actively encourage or facilitate public access to the site.

4.5 Fencing

The Thornton Ranch Open Space is partially fenced along the property boundaries to control unauthorized access to the site. The eastern property boundary along County Road 42 is fenced with a 5-strand barbless wire fence and is marked periodically with “No Trespassing” signs. Two locked ranch gates along CR 42 that are controlled by Santa Fe County provide access to the property.

The entire southern edge of the property is bounded by an old barbed wire fence along the New Mexico Rail Runner Express (NMRX) Railway right of way, parallel to the tracks. This fence is well maintained by the New Mexico Department of Transportation (NMDOT) to restrict public access to the high-speed railway ROW. There are no gates along the NMRX railway ROW. However there are two large arroyos spanned by railroad trestles, where there are breaks in the ROW fence that allow access to the property from the south.

There is an old barbed-wire fence along the shared border with BLM on the west, but some sections of the fence are dilapidated, allowing access into the property from the west. There is a locked ranch gate at the border between the County property and BLM land on an old ranch road that provides access to the BLM lands.

The majority of the boundary between the County property and the private properties to the north is not fenced. Access to these private properties is from West Basin Ridge Road. West Basin Ridge Road is a private, gated road off of County Rd. 42 with a key pad lock. Santa Fe County owns one of the parcels in the West Basin Ridge subdivision and has access along this private road. West Basin Ridge Road is the most direct access to Petroglyph Hill. There is an old ranch road off of West Basin Ridge Road that goes around the base of the hill and heads west onto BLM land. A branch of the ranch road leads up to the saddle on Petroglyph Hill. Santa Fe County worked with the other West Basin Ridge owners to install and maintain the gate on West Basin Ridge Road to discourage unauthorized access to Petroglyph Hill.

4.6 Monitoring

In 2008, Santa Fe County entered into a Memorandum of Understanding (MOU) with the New Mexico Historic Preservation Division Department of Cultural Affairs to implement a SiteWatch Program for Santa Fe County (Appendix I). SiteWatch is a state-wide program run by the New Mexico Historic Preservation Division and funded by the Historic Preservation Fund, that trains citizen volunteers to assist land-management agencies in the protection of New Mexico's cultural resources. Volunteers with the Santa Fe-Galisteo Basin/Pecos SiteWatch Chapter routinely monitor the cultural resources at Petroglyph Hill and report any unauthorized visitation or site disturbance to the SiteWatch Chapter Coordinator and to Santa Fe County. Currently SiteWatch Stewards visit the site once per month depending on weather. Fewer visits are made during winter and early spring out of sensitivity to site erosion and continued degradation of the access road. Generally there are two to four site stewards on each monitoring visit. SiteWatch set up photo points to monitor site conditions. The site stewards fill out an online report after each visit to record their observations regarding the condition of the site, changes in vegetation, indications of erosion and any evidence of vandalism and/or trespass. The MOU is in effect until February 2018, at which point a new agreement will be required in order to continue the program.

4.7 Law Enforcement Patrol

Santa Fe County does not currently have law enforcement patrols at the Thornton Ranch Open Space. The Santa Fe County Sheriff's Office patrols County Rd 42. The Bureau of Land Management (BLM) Law Enforcement Officer for the Taos Field Office periodically patrols the neighboring BLM lands. The County Sheriff's Office or BLM Law Enforcement Officer will respond to illegal activity reported by SiteWatch volunteers or staff.

4.8 Minerals

The mineral rights associated with the Thornton Ranch Open Space are a split estate. Most of the subsurface minerals are owned by the federal government and managed by the Bureau of Land Management. The BLM Taos Resource Management Plan (RMP) placed 5 of the 9 sites listed in the Galisteo Basin Archaeological Sites Protection Act that are wholly or in part on BLM managed lands, including Petroglyph Hill, in the Galisteo Basin Area of Critical Environmental Concern (ACEC). The other 4 are in the La Cienega ACEC. The sites within the Galisteo Basin ACEC are closed to leasable (carbon dioxide, coal, geothermal, and oil and gas), locatable (mica, diatomite, perlite, gold, silver, copper, lead, zinc, molybdenum, turquoise, silica sand, and uranium) and salable (sand, gravel, stone, pumice, clay, rock and petrified wood) minerals exploration and development. The BLM Taos Resource Management Plan (RMP) also closed the Galisteo Planning Unit to mineral leasing to protect sensitive resources. Locatable and saleable minerals exploration and development is permitted in the Galisteo Planning Unit outside of the Galisteo Basin ACEC.

Santa Fe County Ordinance 2001-1 "Rules and Regulations for County Parks, Trails and Open Space Areas" prohibits the unauthorized removal or collection of all natural materials, including rocks, from County Parks, Trails and Open Space Areas.

4.9 Livestock Grazing

When Santa Fe County purchased the property from Mr. Gene Thornton, Mr. Thornton transferred the leasehold interest in the BLM Kennedy Allotment 926 to the County. The County maintained the grazing lease on the Kennedy Allotment since acquiring the property and managed it as part of the Thornton Ranch Open Space. The County has managed the property as a natural and cultural resource conservation area and has not grazed livestock on the property.

In 2012 the BLM Taos Resource Management Plan (RMP) removed the sites within the Galisteo Basin ACEC from livestock grazing. The RMP also removed all of allotments 926 and 917 (the adjacent Cuerva Allotment in the Burnt Corn SRMA) from livestock grazing to protect cultural resources. BLM terminated the County's grazing lease on the Kennedy Allotment 926 in accordance with the RMP.

4.10 Firearms

Santa Fe County has identified evidence of people shooting firearms within the County property, particularly in the southern portion of the property along the railway. Firearms and other projectile weapons pose a threat to the cultural resources, particularly the petroglyphs. Santa Fe County Ordinance 2001-1 "Rules and Regulations for County Parks, Trails and Open Space

Areas” makes it unlawful to carry or discharge firearms or projectile weapons or explosives of any kind into any County park, trail or open space. The Galisteo Basin Archaeological Sites Protection Act sites on BLM managed lands within the Galisteo Basin ACEC are closed to target shooting.

5. MANAGEMENT

The following are general management strategies identified by the Galisteo Basin Archaeological Sites Protection Act General Management Plan (GMP) with site-specific strategies for Petroglyph Hill. These management strategies apply only to the County managed portion of the site (129 acres), unless specifically noted otherwise. BLM will follow federal regulations on the BLM managed portion of the site (8 acres).

5.1 Protection and Preservation

5.1.1 Cooperative Agreements

See 3.1.9

BLM and Santa Fe County will update the MOA to incorporate provisions for implementation of the site-specific management plan.

5.1.2 Acquisition

The General Management Plan identified property acquisition as the land protection measure that provides the greatest flexibility for site management. In this case the property was acquired from a private landowner by a local government agency, rather than the Federal government, to protect the cultural resources from development.

Santa Fe County purchased the Thornton Ranch Open Space from a private land owner under its Open Space and Trails Program. The primary purpose for the acquisition was to preserve the significant archaeological sites on the property including Petroglyph Hill. The following is an excerpt from the application submitted to the County for acquisition under the Open Space and Trails Program.

“Because of its large size and proximity to other public lands a low-impact trail system in the area seems feasible. There may also be an opportunity for an interpretive trail discussing the archaeological resources of the Basin as well as the unique geologic formations in the area. ...

The overriding goal of this project should be the preservation of the significant archaeological sites on the property. However, because of the limited public access to the Galisteo Basin an interpretive trail system would be an incredible resource to the community.”

To date, Santa Fe County has purchased a total of 1,904 acres from private land owners over a period of several years from 2001 to 2009 to protect the landscape around Petroglyph Hill. The County purchased the properties with General Obligation Bonds approved by voters and paid for by County property taxes. The total cost of the property acquisitions is \$6,062,500.

The County and BLM have begun discussions regarding a potential collaborative agreement to allow the County to continue to manage the Kennedy Allotment 926 and a portion of the Cuerva Allotment 917 as part of the Thornton Ranch Open Space.

5.1.3 State and National Register Nominations

The State Register of Cultural Properties is the official list of historic properties worthy of designation in New Mexico. The New Mexico Historic Preservation Division administers the State Register.

The National Register of Historic Places (NRHP), authorized under the National Historic Preservation Act in 1966, is the official list of the nation's historic places worthy of preservation. The National Register is administered by the National Park Service under the Secretary of the Interior.

Petroglyph Hill and the supporting Multiple Property Documentation Form: Ancestral Puebloan and Spanish Colonial Landscapes of the Greater Galisteo Basin, North-Central New Mexico were listed on the State Register of Cultural Properties on August 7, 2015 and on the National Register of Historic Places on November 16, 2015 (Appendix E).

Listing of a property that is on public land, on the NRHP does not impart any additional restrictions for the site than what is required for a site that is already considered eligible for listing on the NRHP. Federal agencies are required by the Section 106 process to consider the effects of their undertakings on historic properties listed on or eligible for listing on, the NRHP and consult with the State Historic Preservation Officer.

5.1.4 Site Documentation

Petroglyph Hill was recorded by Marit Munson in 2004. Ms. Munson also prepared the site assessment for Petroglyph Hill under contract with the New Mexico Department of Cultural Affairs, Office of Archaeological Studies (OAS) as part of the Galisteo Basin Archaeological Sites Protection Act Site Assessment Project. Santa Fe County has a copy of Ms. Munson's report and the field records from the site survey. Santa Fe County's copy of the field records does not include detailed maps for 29 of the 180 petroglyph locales that the survey recorded. Santa Fe County will contact Ms. Munson to obtain copies of the missing locale maps if they are available, or if the maps were not completed during the site survey, the County will contract with a qualified professional to map these locales. The County will review and update the site field records and photographs to provide a complete record of the petroglyphs and site features, and their current conditions. These field records will provide a baseline for monitoring the site conditions over time.

5.1.5 Site Name

In order to avoid attracting unwanted attention to the site, use of the name Petroglyph Hill will be discontinued in all subsequent public documents and publications. Santa Fe County will encourage tribes with cultural ties to the site to identify appropriate Native American place name(s) for the hill. Santa Fe County will work proactively with publishers to remove the name Petroglyph Hill or the site altogether as appropriate from future editions of guide books.

5.1.6 Access Restriction

According to the General Management Plan, public visitation will not be actively encouraged or facilitated at a majority of the Act sites in order to reduce the potential for potential adverse impacts to the resources from visitation and to be sensitive to Native American concerns (BLM 2012a, 49). Petroglyph Hill is identified in the GMP as a site to be considered for closing to the public (BLM 2012a, 51).

Native American Tribes have expressed concern about the potential degradation to the site resulting from public visitation including the cumulative impact of pedestrian foot traffic, casual artifact collection, and vandalism. They have also expressed concern that the petroglyph images are sacred in nature and are not meant for everyone to see.

Closing the site to the public may protect the site from some of the potential impacts associated with public visitation, but it does not allow the land managers to engage the public in a conversation about what it means to respect places and cultures, and ultimately change public attitudes and behaviors to support cultural resource protection everywhere. The County will consult with affiliated Native American Tribes about the possibility of providing a limited number of carefully conducted, small group tours of Petroglyph Hill and other cultural sites within the Thornton Ranch Open Space, in a way that is culturally sensitive and creates an opportunity to shift public perceptions and expectations of cultural resource protection and management away from “for public use and enjoyment” to showing respect for people and place.

If, in consultation with affiliated Native American Tribes, the County decides to allow public access to the site, the County will work with the tribes to develop a visitor management plan. Petroglyph Hill will remain closed to the public until a visitor management plan has been approved by the Board of County Commissioners.

The visitor management plan will establish the policies and procedures for managing public visitation in order to minimize the potential impacts on the cultural resources and avoid interfering with Native American Traditional Use. Public access to the site will be limited to guided tours on a defined tour route. The tour route will be carefully selected in consultation with Native American Tribes and the State Historic Preservation Office to avoid the most sensitive areas within the site and to minimize visitor impact on the cultural resources. The County plans to map the tour route digitally and have tour guides navigate the route with a GPS unit rather than constructing a trail for the tour route in order to minimize the physical and visual impacts on the site. However, the county may consider constructing a single track (6”-18” wide) natural surface trail along the tour route, using sustainable trail design principles and in consultation with Native American Tribes and the State Historic Preservation Office, if necessary to minimize erosion and to control where visitors walk. Any markers installed along the tour route to assist the tour guides in way finding will be unobtrusive and easily removed. Specifically, rock stacks or cairns made from rocks collected from the local area are prohibited. No other visitor or interpretive amenities will be constructed within the site boundary. All access to the Petroglyph Hill will be restricted to foot traffic. The site will be closed to motorized vehicles. Tour participants will be required to meet at the trailhead off of County Rd 42. The County will shuttle participants to a designated shuttle stop off of West Basin Road. Participants will be required walk approximately one mile from the shuttle stop to the site.

The General Management Plan recommends that the site-specific management plans define a carrying capacity for visitor use to minimize degradation resulting from visitor use. The GMP cautions that, "Casual collection of surface artifacts, although illegal on public lands and proactively discouraged at archaeological sites open to public visitation, is a common occurrence at such places. Over time, the cumulative impacts of foot traffic, casual artifact collection, litter, and even oils from the skin on visitors' hands can negatively affect site integrity" (BLM 2012a, 51). There is no guidance on how to establish the carrying capacity and what level of impact for visitation is acceptable. Santa Fe County will develop criteria, parameters and a protocol for monitoring visitor impact on the site conditions as part of the visitor management plan. The carrying capacity will initially be set at the level of visitation that Santa Fe County permitted by guided tour between 2009-2014; 120 visitors per year. The carrying capacity only applies to the number of public visitors. It does not apply to Native American Tribes, SiteWatch, law enforcement patrol and other official site visits. Santa Fe County will adjust the carrying capacity annually based on the results of the site monitoring.

In the Thornton Ranch Open Space Master Plan the area around Petroglyph Hill is treated as a Preserve in the land classification system for management of Santa Fe County Open Space. The purpose of a Preserve is to protect the underlying natural or cultural resources of the land. Public access to Preserves is limited to protect the resources. Public access to the Thornton Ranch Open Space will be limited to designated trails and guided hikes. Vehicle access will be restricted to the trailheads with the exception of trail and fence maintenance equipment and emergency vehicles. The proposed public trails at the Thornton Ranch Open Space are concentrated on the south of the main drainage and on the south side of the ridge. There are no trails to, or in the immediate vicinity of Petroglyph Hill. The Master Plan uses distance and terrain to create a physical and visual barrier between Petroglyph Hill and the trails in the southern portion of the open space to deter unauthorized access to the site.

Santa Fe County proposes to use a combination of design elements and management practices to instill in visitors to the open space respect for culture and place. These include designing a threshold at the trailhead that visitors must cross in order to enter the property to capture their attention and make them aware of the fact that they are entering a sacred landscape and of the proper etiquette for being a guest in this landscape; and using management practices such as having uniformed, fully commissioned law enforcement officers trained as interpretive rangers on site to interact with and educate visitors.

5.1.7 Fencing

Santa Fe County will maintain the fence along County Rd 42 and the NMRX Railway ROW to control access to the property. The County will explore options to control access through the arroyos under the railroad trestles along the southern boundary of the property. The County will evaluate the west and north property boundary to determine where fencing and signage is necessary to control unauthorized access. Any new fencing that the County installs will be constructed with similar materials to the historic ranch fences (barbed-wire and wood posts) so that it blends in and does not detract from the historic landscape. The fence will be constructed to wildlife friendly specifications. Where fencing is not necessary to control access along the western and northern boundaries, the County will install boundary markers to delineate the

property boundary. The County will install No Trespassing and relevant regulatory signage at appropriate intervals along the property boundaries, as necessary.

The Petroglyph Hill site boundary will not be fenced because the fence will detract from the visual quality of the site and may attract unwanted attention to the site.

5.1.8 Erosion Control

In order to minimize erosion, access to the Petroglyph Hill site will be restricted to foot traffic. Vehicles will be prohibited within the site boundary. Santa Fe County will close the ranch road to the saddle on the hill and revegetate it to restore the native vegetation and minimize runoff and soil erosion. Santa Fe County will use the best management practices identified in the General Management Plan that involve the least amount of ground disturbance possible to reclaim the road such as; seeding native vegetation, mulch, straw wattles and erosion control blankets. Santa Fe County will also work proactively to improve the ground cover on the site to reduce erosion by seeding native vegetation.

5.1.9 Monitoring

Santa Fe County would like to collaborate with interested tribes and/or a tribal SiteWatch Chapter to monitor the condition of the cultural resources at Petroglyph Hill. Santa Fe County will continue to work with the Santa Fe-Galisteo Basin/Pecos SiteWatch Chapter to monitor the cultural resources at the site and will incorporate tribal monitoring into the protocol as the capacity is developed. Santa Fe County will develop a baseline and monitoring protocol for the site.

5.1.10 Law Enforcement Patrol

Santa Fe County will collaborate with BLM and interested Tribal law enforcement to provide regular law enforcement patrols at Petroglyph Hill to prevent cultural resource theft and vandalism. Santa Fe County proposes to hire fully commissioned law enforcement officers to patrol the Thornton Ranch Open Space full time, year round, by foot, horseback and/or mountain bike in order to educate the public and insure compliance with rules and regulations. The County will pursue interagency agreements with BLM and tribal governments and cross-deputization of officers to facilitate cooperation and coordinate law enforcement efforts. The County plans to use wireless cameras to monitor access to Petroglyph Hill and alert law enforcement officers of unauthorized activity.

5.1.11 Minerals

The General Management Plan “calls for BLM parcels directly adjacent to protection sites to be subject to internal review by BLM cultural resources staff prior to finalization, allowing the BLM to impose conditions of approval for minerals leasing and sales that would avoid or minimize indirect effects to the integrity of protection sites.” (BLM 2012a, 41) Santa Fe County hired a consultant to prepare a mineral assessment of the locatable minerals for the Thornton Ranch Open Space. The mineral assessment concluded that “The probability of extraction or removal of minerals by any surface mining method or drilling method from the subject property is so remote as to be negligible” (RT Hicks Consultants 2015, 1). Santa Fe County will work

with BLM to restrict the development of the Federal locatable and saleable minerals underlying the County property. The County will research the ownership of the subsurface mineral estate underlying approximately 350 acres of the surface estate that the County owns and investigate the possibility of acquiring the mineral estate in order to protect the surface resources.

5.1.12 Livestock Grazing

In 2012 the BLM Taos Resource Management Plan (RMP) removed the sites within the Galisteo Basin ACEC, including Petroglyph Hill, from livestock grazing. Santa Fe County will adopt the same protection measure on County property and will not permit livestock stock grazing within the Petroglyph Hill site boundary or on the Thornton Ranch Open Space.

5.1.13 Firearms

Santa Fe County and BLM will work to improve enforcement of BLM and County regulations regarding firearms and target shooting within the Petroglyph Hill site boundary and the surrounding Thornton Ranch Open Space.

5.1.14 Visual Resource Management

BLM has assigned Petroglyph Hill to Visual Resource Management (VRM) Class II. The objective of VRM Class II is to, "Retain the existing character of the landscape. The level of change should be low and can be seen but should not attract the attention of the casual observer" (BLM 1986). Santa Fe County will follow BLM guidance for visual resource management for the County managed portion of the site.

5.1.15 Geocaching

Geocaching and similar activities are prohibited within the Petroglyph Hill site boundary. To facilitate identification of the site boundary in the field since it is not fenced or otherwise marked; such activities will be prohibited within 2,000 feet of the base of the hill defined as the 6200 foot topographic contour.

5.1.16 Unmanned Aircraft Systems (UAS)

Unmanned Aircraft Systems (UAS), commonly known as drones, are prohibited from operating within the Petroglyph Hill site boundary, unless authorized by Santa Fe County as part of an adopted best management practice for monitoring cultural resources and site conditions.

5.1.17 Non-Tribal Offerings

Visitors are prohibited from leaving objects or offerings of any kind within the Petroglyph Hill site boundary.

5.1.18 Human and Pet Cremains

Placing or scattering human or pet cremains within the Petroglyph Hill site boundary is prohibited.

5.1.19 Memorials

Memorials of any kind are prohibited within the Petroglyph Hill site boundary.

5.2 Research

According to the General Management Plan, “All proposed research efforts focused on the designated sites should be consistent with general principals outlined in this management plan, as well as with BLM 8100 series manual guidance, and should be either non-invasive or designed to minimize ground disturbance, indirect effects, and visual impacts. Furthermore, research proposals should be consistent with Native American concerns and recommendations for each site and compliant with all applicable laws” (BLM 2012a, 43).

5.2.1 Coordination of Research Efforts

The GMP states that, “The BLM, in collaboration with other agencies, heritage resource professionals, and other interested stakeholders, will serve as the clearing house for future research efforts at protection sites on BLM lands or with cooperative agreements in place. The BLM will be responsible for coordinating research efforts, reviewing and approving research designs and proposals, and compiling the results of research projects with support from its collaborators as appropriate” (BLM 2012a, 43). Santa Fe County will coordinate all research requests and approvals on the County managed portion of the site with BLM.

5.2.2 Types of Research

The General Management Plan limits research at the Act sites to methods that are non-invasive or designed to minimize ground disturbance, indirect effects, and visual impacts, in order to be consistent with the primary mandate of the Act to protect the sites. The GMP states that, “Archaeological excavation is destructive, and the primary objective of the Act and this management plan is to provide for the protection of the listed resources” (BLM 2012a, 45).

Santa Fe County will further limit research on the County managed portion of the site to non-ground-disturbing methods. The County will not allow artifact collection on the County – managed portion of the site. Santa Fe County will consult with the State Historic Preservation Office and Native American Tribes to return collections from previous research projects to the site.

5.2.3 Permitting

Research activities on the BLM managed portion of the site will require a Statewide Cultural Resources Use Permit and a project-specific fieldwork authorization from the Taos Field Office. Santa Fe County will develop a procedure for permitting cultural research on County property consistent with BLM and the State Historic Preservation Office. County property is considered state land under the Cultural Properties Act. Any archaeological fieldwork on the County managed portion of the site would require a permit issued by the Cultural Properties Review Committee. In addition to BLM and SHPO approval, the County will require any research to be conducted on the County managed portion of the site to be approved by the appropriate affiliated

tribes. Santa Fe County will develop a procedure for tribal review and approval of research proposals. Santa Fe County will handle requests to photograph the site as research requests, with the same review and approval procedures.

5.3 Interpretation

One of the stated purposes of the Galisteo Basin Archaeological Sites Protection Act is interpretation of the nationally significant archaeological resources in the Galisteo Basin. The General Management Plan indicates that interpretation should be sensitive to Native American concerns. Native American tribal representatives have expressed concern that interpretation of Native American cultural sites co-opts their culture. Santa Fe County will focus initially on interpretation of the geology, ecology, Spanish and Mexican period, ranching, and railroad history of the area. The County will acknowledge the long history of Native Americans in the Galisteo Basin, but will not provide interpretation of the cultural history of the Galisteo Basin prior to Spanish contact without first consulting with Native American Tribal Governments. The County will encourage the tribes to provide interpretation of the Galisteo Basin from their perspective in a way that is culturally appropriate. This might be done using traditional media such as storytelling and art, or by providing Native American perspectives on contemporary issues such as climate change, natural resource use and environmental protection. In order to facilitate this discussion, the County will initiate a collaborative planning process with Native American Tribal Governments to develop a plan for interpretation of Petroglyph Hill and the cultural history of the Galisteo Basin prior to Spanish contact.

The GMP recommends that the interpretive themes conveyed to the public through interpretive materials should be broadly cohesive across the Act sites. Santa Fe County developed the Galisteo Basin Interpretive Plan for County open space properties within the Galisteo Basin as an initial effort to coordinate interpretation across the Act sites. The County will work to develop an interpretive program in order to inspire respect, understanding and appreciation of the importance of the area and to encourage appropriate visitor behavior at the Thornton Ranch Open space and Petroglyph Hill.

The GMP also recommends that signage and interpretive exhibits have a consistent appearance across the Act sites. Santa Fe County will coordinate with BLM on signage for the Galisteo Basin and the Act sites. No signage or interpretive exhibits will be installed within the Petroglyph Hill Site Boundary.

5.3.1 Off-Site Interpretation

The GMP recommends off-site interpretation of the majority of the Act sites in order to protect the sites from pedestrian traffic, illicit artifact collection, vandalism, and visual impacts.

The GMP identified Thornton Ranch Open Space as a potential location for off-site interpretation of the entire Galisteo Basin and the sites designated by the Act, including the Petroglyph Hill, in light of Santa Fe County's plan to facilitate public access to the property through a system of sustainably developed trails. Santa Fe County plans to provide interpretation of the Galisteo Basin with the visitor facilities at the Thornton Ranch Open Space.

Santa Fe County also plans to develop other venues and media for off-site interpretation of the Galisteo Basin including; Visitor Information Centers, Driving/Bicycling Tours, Traveling Exhibits, Mobile Apps, Web-Based Media, Guided Tours, school curriculum and lesson plans. The County is currently working in partnership with New Mexico State Parks to provide interpretive information about the Galisteo Basin at the Cerrillos Hill State Park Visitor Center in Cerrillos, NM. The County has long-term plans to develop a visitor center in Lamy, NM. The County's plans for off-site interpretation of the Galisteo Basin and the Act sites are described in more detail in the Galisteo Basin Interpretive Plan.

5.4 Native American Concerns

The General Management Plan states, "Communication and collaboration with Native American entities, including both government officials and cultural resource specialists within pueblos and tribes, are essential prerequisites for the successful long-term management of the archaeological resources designated by the Act. Beyond formal consultation required by Section 106 of the NHPA and other Federal mandates, the BLM seeks to establish long-term, working partnerships with interested pueblos and tribes" (BLM 2012a, 63). Santa Fe County is also interested in long-term partnerships with Native American Tribes for the management of cultural resources.

The GMP directs the site-specific management plans to list the pueblos and tribes specifically affiliated with each site (BLM 2012a, 70).

The following Native American Tribes have expressed interest in continuing discussions with Santa Fe County and the BLM regarding the management of Petroglyph Hill:

- Cochiti Pueblo
- Kewa Pueblo (Santo Domingo)
- San Felipe Pueblo
- Hopi Tribe
- Pojoaque Pueblo
- San Ildefonso Pueblo
- Santa Clara Pueblo
- Tesuque Pueblo

Santa Fe County will work with BLM to identify the affiliated tribes through the agency's formal consultation process.

The GMP recommends incorporating Tribal recommendations regarding the relative sensitivity of different features within each site into the site-specific management plan (BLM 2012a, 70). Parametrix mapped culturally sensitive features identified by tribal representatives during the planning process for management purposes.

5.4.1 Formal Consultation (BLM)

Pursuant to Section 106 of the NHPA, BLM will consult with tribal organizations regarding any proposed action on the BLM managed portion of the site.

5.4.2 Collaboration/Co-management

Santa Fe County believes traditional tribal knowledge is critical to the protection and management of the Galisteo Basin Archaeological Site Protection Act sites. Native American Tribal Representatives have expressed interest in co-management, sharing authority and responsibility for management, of the Act sites. The County is interested in collaborating with Native American Tribal governments that have traditional knowledge of this area to manage Petroglyph Hill and other important cultural resources within the Thornton Ranch Open Space in order to insure their protection and continued cultural relevance. Santa Fe County will work with interested tribes to develop a collaborative agreement for management of Petroglyph Hill and other important cultural resources within the Thornton Ranch Open Space.

5.4.3 Place Names

The GMP recommends that Keres, Tewa and other Native American place names replace or coincide with Spanish and English names. Santa Fe County fully supports the use of Native American place names and encourages tribal representatives to identify appropriate names for places and landscape features in and around the Thornton Ranch Open Space.

5.4.4 Tribal Access/Traditional Use

The General Management Plan recommended that the site-specific management plans address the need for Native American access to the Act sites for pilgrimages and other religious purposes, for cultural education and intergenerational learning programs, and to collect natural resources (i.e. plants, minerals and animals) used for traditional purposes. Santa Fe County supports Native American access to Petroglyph Hill and the Thornton Ranch Open Space to carry out traditional cultural practices and to collect natural resources used for traditional purposes. Santa Fe County is interested in developing agreements with Native American Tribes to facilitate tribal access and collection. The agreements will include protocols to ensure that Native Americans can carry out traditional cultural practices in private and to minimize potential conflicts with the public; such as temporary closures of certain areas of the property. The agreements will also contain provisions to support Native American intergenerational cultural preservation programs including accommodations for “overnight visits to culturally significant places, providing a traditional timeframe for the transmission of oral history about the region to tribal youth” (Parametrix 2011, 4-4).

5.4.5 Protection of the Galisteo Basin Landscape

According to the General Management Plan, “The ethnographic study revealed the interconnectedness of sites and natural features in the Galisteo Basin, as viewed and understood by the tribal representatives involved. Two specific recommendations stem from this widely shared view that a broader, cultural-landscape model should be developed for the holistic understanding and protection of the Galisteo Basin:

1. Nomination of the Galisteo Basin as a Cultural Landscape, and
2. Designation of the basin as a National Heritage Area (Parametrix 2011)” (BLM 2012a, 69).

BLM and Santa Fe County are committed to the protection of the Galisteo Basin cultural landscape and will work with Native American Tribes and other stakeholders to implement these recommendations.

5.4.6 Traditional Cultural Properties (TCP)

The General Management Plans states, “Traditional resource procurement areas, landforms of religious significance, and other TCPs should be considered for protection in the Act. The importance of such TCPs to contemporary pueblos and tribes and the associations of such TCPs with archaeological sites in the Galisteo Basin represent important connections between the past and present. A number of culturally sensitive and sacred sites were identified during the course of the ethnographic study and other consultation efforts, but these places have not been formally evaluated, nominated, or designated as TCPs at this time” (BLM 2012a, 67). The GMP recommends that, “Sites should be evaluated as potential TCPs during the site-specific management planning process, utilizing the results of the ethnographic study (Parametrix 2011), recommendations from Native Americans or groups with an affiliation to the site in question, and other sources of information, as appropriate” (BLM 2012a, 76).

Santa Fe County will continue to work with Native American Tribes to assess the presence of TCPs within the Thornton Ranch Open Space and will support the tribes in nominating TCPs for listing in the National Register of Historic Places (NRHP) at their discretion.

5.4.7 Discovery of Human Remains

The General Management Plan cautions that, “Many of the designated sites comprise villages where people lived, died, and were buried. As such, it is highly likely that human remains will be encountered at one or more designated sites in the future. Treatment of human remains discovered at designated sites will be largely dictated by the ownership of the land on which the discovery is located. Discoveries on BLM lands must be handled in accordance with NAGPRA and ARPA (16 USC 470ee)” (BLM 2012a, 70). Discoveries on BLM lands must be handled in accordance with NAGPRA and ARPA (16 USC 470ee). Discoveries on state, county, or private land must be treated in accordance with Section 18-6-11.2 of the Cultural Properties Act, NMSA 1978.

The General Management Plan recommends that the site-specific plans include burial treatment plans and protocols for determining ancestral affiliation based on archaeological and osteological evidence for sites where we might expect human remains to be present (BLM 2012a, 70-71).

Based on the cultural resource investigations at Petroglyph Hill, it is not likely that the site contains human remains.

6. PLAN IMPLEMENTATION

The following goals, objectives, management strategies and work plan for implementation of the Petroglyph Hill Management Plan apply only to the County managed portion of the site (129 acres). Unless otherwise specifically noted, BLM will follow federal regulations on the BLM managed portion of the site (8 acres).

6.1 Goals, Objectives and Strategies

Goal 1: Respect the Native American Tribes with ancestral ties to the Galisteo Basin and the Galisteo Basin Archaeological Sites Protection Act sites including Petroglyph Hill, their long term presence in the region, and their ongoing relationship with their ancestral lands.

Objective 1.1: Promote respect for Native American cultural ties to the Galisteo Basin and the cultural diversity of the region.

Strategy 1.1.1 Develop a public education campaign to create awareness and appreciation of the cultural heritage of the Galisteo Basin.

Objective 1.2: Encourage open dialog with Native American Tribal Governments regarding the preservation and protection of Petroglyph Hill and the cultural resources within the Thornton Ranch Open Space.

Strategy 1.2.1 Develop a communications plan for the management of Petroglyph Hill.

Strategy 1.2.2 Consult with tribes early in the planning process for projects.

Strategy 1.2.3 Schedule critical meetings and reviews around tribal calendars to facilitate tribal participation.

Strategy 1.2.4 Allow a longer period for tribal review, preferably 45-60 days, to accommodate tribal calendars and facilitate tribal input.

Strategy 1.2.5 Send communication regarding projects or issues that involve multiple Pueblos to the All Pueblo Council of Governors, Eight Northern Indian Pueblos Council, and the Ten Southern Pueblo Governor's Council in addition to the individual tribal governments.

Objective 1.3 Avoid the disturbance of human remains, funerary objects, sacred objects, or objects of object of cultural patrimony.

Strategy 1.3.1 Develop burial treatment plans and protocols for determining ancestral affiliation based on archaeological and osteological evidence for sites where human remains are likely to be present.

Objective 1.4 Extend the cultural resource management strategies in the Petroglyph Hill Management Plan to the Thornton Ranch Open Space and adopt policies and procedures for all County properties that address: human remains avoidance,

inadvertent discoveries, tribal access and collection, cultural research and photography, unmanned aircraft systems, geocaching, non-tribal offerings, cremated remains and memorials.

Strategy 1.4.1 Incorporate the cultural resource management strategies from the Petroglyph Hill Management Plan in the Thornton Ranch Management Plan.

Strategy 1.4.2 Include policies regarding human remains avoidance, inadvertent discoveries, tribal access and collection, cultural research and photography, unmanned aircraft systems, geocaching, non-tribal offerings, cremated remains and memorials in the county-wide Open Space and Trails strategic plan that Santa Fe County is currently developing and is expected to be completed in 2018.

Goal 2: Empower the Native American Tribes with ancestral ties to the Galisteo Basin to maintain their cultural identity, religious beliefs, customs and traditions.

Objective 2.1: Provide unrestricted tribal access to the site for religious purposes and to continue cultural traditions and pass on traditional knowledge to their youth.

Objective 2.2: Allow tribal members to collect plants and minerals for traditional use.

Strategy 2.2.1 Develop agreements with Native American tribes to facilitate tribal access and collection for traditional purposes.

Objective 2.3: Support tribes in identifying and listing Traditional Cultural Properties in the National Register of Historic Places (NRHP).

Objective 2.4: Collaborate with Native American Tribal governments to manage Petroglyph Hill.

Strategy 2.4.1 Develop co-management agreement with a tribe or group of tribes to manage Petroglyph Hill.

Goal 3: Protect the intrinsic qualities of the Galisteo Basin that define its character.

Objective 3.1: Restrict access to the Petroglyph Hill site.

Strategy 3.1.1 Restrict vehicle access within the Thornton Ranch Open Space to the trailheads, with the exception of limited trail and fence maintenance equipment and emergency vehicles.

Strategy 3.1.2 Close the ranch road to the saddle of the hill and revegetate it to restore the native vegetation and minimize runoff and soil erosion.

Strategy 3.1.3 Limit public access to the Thornton Ranch Open Space to designated trails and guided hikes. Concentrate public trail access to the Thornton Ranch Open Space on the south side of the ridge. Use distance and

terrain to create a physical and visual barrier between Petroglyph Hill and the trails in the southern portion of the open space.

- Strategy 3.1.4 Treat the area around the hill on the north side of the arroyo as a Preserve.
- Strategy 3.1.5 Restrict access to the site with fencing and other access control measures along the property boundaries as necessary. Evaluate the west and north property boundaries in consultation with BLM to determine where fencing and signage is necessary to control unauthorized access. If the County determines that it is necessary to fence the western boundary of the open space the County will consult with BLM regarding fencing the boundary of the NW1/4 of the SW1/4 of Section 29 of BLM Allotment 926. Investigate options to control access through the arroyos under the railroad trestles along the southern boundary of the property.
- Strategy 3.1.6 Post appropriate signage to inform the public of the laws and penalties for violating the laws and enforce the laws. Place the signs so that they don't detract from the visual quality of the site or draw unwanted attention to the cultural resources.
- Strategy 3.1.7 Change the name of Petroglyph Hill to an appropriate Native American place name. Discontinue the use of the name Petroglyph Hill from this document forward.
- Strategy 3.1.8 Work proactively with publishers to remove the name Petroglyph Hill or the site altogether as appropriate from future editions of guide books.

Objective 3.2: Actively monitor the site conditions and adapt management to prevent damage to the cultural resources.

- Strategy 3.2.1 Continue to partner with the New Mexico SiteWatch Program to monitor the site. Update the Memorandum of Understanding with the New Mexico Historic Preservation Division Department of Cultural Affairs as necessary to continue the SiteWatch Program for Santa Fe County.
- Strategy 3.2.2 Seek partnerships with interested tribes and/or a tribal SiteWatch chapter to monitor the site.
- Strategy 3.2.3 Review and update the site field records and photographs to provide a complete record of the petroglyphs and site features, and their current conditions in order to create a baseline for monitoring the site conditions.
- Strategy 3.2.4 Develop a cultural resource monitoring protocol for the site.

- Strategy 3.2.5 Improve the ground cover on the site by seeding native vegetation to reduce erosion.
- Objective 3.3 Patrol the site on a regular basis to prevent cultural resource theft and vandalism.
 - Strategy 3.3.1 Hire fully commissioned law enforcement officers to patrol the Petroglyph Hill site on a regular basis to insure compliance with all applicable rules and regulations.
 - Strategy 3.3.2 Pursue interagency agreements with BLM and interested tribal governments and cross-deputization of officers to provide law enforcement patrols for the site.
 - Strategy 3.3.3 Use wireless cameras with internet connection and the capacity to generate cell phone alerts, to monitor the site and access points and alert law enforcement officers of unauthorized activity.
- Objective 3.4 Limit public access to the site to guided tour only.
 - Strategy 3.4.1 Collaborate with interested tribes to develop small group, guided tours of Petroglyph Hill and other cultural sites within the Thornton Ranch Open Space, in a way that is culturally appropriate and creates an opportunity to shift public perceptions and expectations of cultural resource protection and management away from "for public use and enjoyment" to respect for people and place.
 - Strategy 3.4.2 Allow tribes to manage/lead the tours if they choose to do so.
 - Strategy 3.4.3 Limit group size (recommend 4-6).
 - Strategy 3.4.4 Limit number of tours per year.
 - Strategy 3.4.5 Ensure there are two tour guides per group, one in front to lead, one in back to monitor the group.
 - Strategy 3.4.6 Restrict access to the site to foot traffic. Require tour participants to meet at the trailhead off County Rd 42, shuttle participants to a designated shuttle stop off of West Basin Road, and have participants walk to the site from there.
 - Strategy 3.4.7 Plan the tour route to avoid shrines and sensitive petroglyph images and to avoid disturbing cultural resources.
 - Strategy 3.4.8 Limit public access to the site to the defined tour route.
 - Strategy 3.4.9 Map the tour route digitally and have tour guides navigate the route with a GPS unit rather than constructing a trail for the tour route in order to minimize the physical and visual impacts on the site.
 - Strategy 3.4.10 Focus the tour on the views of the Galisteo Basin.

- Strategy 3.4.11 Create a “threshold” experience before tour participants enter the site to prepare their mind set, such as requesting a moment of reflection.
- Strategy 3.4.12 Remind visitors that this is a scared place and not a place to recreate.
- Strategy 3.4.13 Instruct tour participants in appropriate etiquette.
- Strategy 3.4.14 Require tour participants to sign a code of conduct/non-collection agreement that states the penalty for violations.
- Strategy 3.4.15 Require tour participants to walk in silence in the vicinity of the petroglyphs or other sensitive cultural sites.
- Strategy 3.4.16 Prohibit visitors from taking photographs during the tours. Consider providing professional photographs of select petroglyph images and views as post cards with tribal permission. Handle requests for permission to photograph the petroglyphs as research requests.
- Strategy 3.4.17 Monitor and request removal of photographs of the petroglyphs at the site from the internet.
- Strategy 3.4.18 Schedule tours around native calendar so that the tours will not interfere with tribal visitation.
- Strategy 3.4.19 Develop a protocol with criteria and parameters for monitoring visitor impact to the site. Monitor the impact of visitors (erosion, damage to petroglyphs) and take appropriate action to mitigate the impact up to and including suspending the tours.
- Strategy 3.4.20 Require tour participants to sign liability waivers.
- Objective 3.5 Restrict research to noninvasive research approved by the Native American Tribes with cultural ties to the site.
 - Strategy 3.5.1 Develop a procedure for tribal review and approval of research proposals.
 - Strategy 3.5.2 Prohibit artifact collection.
 - Strategy 3.5.3 Return any artifacts collected by previous research projects to the site in consultation with the State Historic Preservation Office and Native American Tribes.
- Objective 3.6 Restrict mining within the boundaries of the Thornton Ranch Open Space.
 - Strategy 3.6.1 Work with the Bureau of Land Management to restrict the exploration and development of the locatable and saleable Federal minerals within the boundary of the Thornton Ranch Open Space.
 - Strategy 3.6.2 Research the ownership of the subsurface mineral estate underlying approximately 350 acres of the surface estate that Santa Fe County

owns and investigate the possibility of acquiring the mineral estate in order to protect the surface resources.

Objective 3.7 Avoid disturbance of cultural resources.

- Strategy 3.7.1 Require staff, contractors and volunteers, who will be on the property for any reason, to attend a cultural etiquette training and sign a code of conduct/non-collection form.
- Strategy 3.7.2 Develop a procedure for handling inadvertent discoveries during construction or routine maintenance.
- Strategy 3.7.3 Prohibit livestock grazing within the site boundary.
- Strategy 3.7.4 Prohibit geocaching and similar activities within the site boundary.
- Strategy 3.7.5 Prohibit Unmanned Aircraft Systems (UAS), commonly known as drones, from operating within the site boundary.
- Strategy 3.7.6 Prohibit the placing or scattering human or pet cremains within the site boundary.
- Strategy 3.7.7 Prohibit memorials of any kind within the site boundary.
- Strategy 3.7.8 Prohibit non-tribal members from leaving object or offerings of any kind at the site. Develop a procedure for identifying, removing and disposing of non-tribal offerings. Amend Santa Fe County Ordinance 2001-1 Section 4 to include leaving object or offerings on County parks, trails and open space.

Objective 3.8 Collaborate with Native American Tribes, landowners, government agencies, private and non-profit organizations to protect the cultural, natural and scenic resources of the Galisteo Basin.

- Strategy 3.8.1 Develop an MOU between BLM and Santa Fe County to allow the County to manage the Kennedy Allotment 926 and a portion of the Cuerva Allotment 917 as part of the Thornton Ranch Open Space.
- Strategy 3.8.2 Collaborate with Native American Tribes and other stakeholders to prepare National Register of Historic Places Nomination Form for the Galisteo Basin as a Cultural Landscape.
- Strategy 3.8.3 Collaborate with Native American Tribes and other stakeholders to pursue designation of the Galisteo Basin as a National Heritage Area.
- Strategy 3.8.4 Continue to collaborate with the Bureau of Land Management on management of the site an implementation of the Galisteo Basin Archaeological Sites Protection Act (GBASPA). Update and maintain the Memorandum of Agreement (MOA) between BLM and Santa Fe County for the protection, preservation, maintenance, and

administration of the Act sites that are wholly or in part on lands owned by Santa Fe County.

Strategy 3.8.5 Continue to collaborate with the GBASPA Working Group on the implementation of the Act and the General Management Plan.

Goal 4: Provide visitors with an experience of the Galisteo Basin that promotes greater understanding and appreciation of the intrinsic qualities of the landscape and inspires visitors to take personal responsibility for the care and preservation of these resources.

Objective 4.1 Provide interpretation that respects the culture and traditions of the Native American Tribes with ancestral ties to the Galisteo Basin.

Strategy 4.1.1 Do not provide interpretation of the cultural history of the Galisteo Basin prior to Spanish contact without first consulting with Native American Tribal Governments. The County will initiate a collaborative planning process with Native American Tribal Governments to develop a plan for interpretation of Petroglyph Hill and the cultural history of the Galisteo Basin prior to Spanish contact.

Strategy 4.1.2 Encourage Native American Tribes to provide interpretation of the Galisteo Basin from their perspective in a way that is culturally appropriate.

Strategy 4.1.3 Create a "threshold" at the trailhead to draw visitors' attention to the fact that they are entering a sacred place and make them aware of the proper etiquette as a guest in this place.

Strategy 4.1.4 Focus on interpretation of the geology, ecology, astronomy, Spanish and Mexican period, ranching, and railroad history of the area.

Strategy 4.1.5 Interpret the history and development of American archaeology and how Native Americans have been treated as the subjects of research.

Strategy 4.1.6 Allow visitors to experience the physical attributes that make the site significant without interpreting Native American culture: views, landmarks, contemporary places (towns), stars, edible and other uses of plants, geology, water sources, wildlife.

Strategy 4.1.7 Relate the historical timeline for the Galisteo Basin to what was going on in other parts of the world, Europe, China, Central America.

Strategy 4.1.8 Develop a map and panorama of Galisteo Basin similar to the map of the GBASPA Sites but with natural landmarks (mountains, etc.) and current towns.

Strategy 4.1.9 Coordinate the design of signage and interpretive exhibits with BLM so that they have a consistent appearance across the Galisteo Basin and the Act sites.

Strategy 4.1.10 Develop off-site interpretation.

Strategy 4.1.11 Develop process for tribal review of any interpretive media that will be provided to the public.

6.2 Work Plan

This work plan is intended to be used a tool to implement the plan. Staff will monitor progress on the implementation of the plan and update the work plan annually.

Petroglyph Hill Management Plan Work Plan

Strategy	Action	County	BLM	FY	Budget
1.1.1	Develop a public education campaign to create awareness and appreciation of the cultural heritage of the Galisteo Basin.	X		19	TBD
1.2.1	Develop a communications plan for the management of Petroglyph Hill.	X		18	Staff
1.3.1	Develop burial treatment plans and protocols for determining ancestral affiliation based on archaeological and osteological evidence for sites where human remains are likely to be present.	X		19	Staff
1.4.1	Incorporate the cultural resource management strategies from the Petroglyph Hill Management Plan in the Thornton Ranch Management Plan.	X		18	Staff
1.4.2	Include policies regarding human remains avoidance, inadvertent discoveries, tribal access and collection, cultural research and photography, unmanned aircraft systems, geocaching, non-tribal offerings, cremated remains and memorials in the county-wide Open Space and Trails strategic plan that Santa Fe County is currently developing and is expected to be completed in 2018.	X		18	Staff
2.2.1	Develop arrangements with Native American tribes to facilitate tribal access and collection and to minimize public interference with traditional cultural practices.	X		19	Staff
2.4.1	Develop co-management agreement with a tribe or group of tribes to manage the Petroglyph Hill site and the cultural resources within the Thornton Ranch Open Space.	X		19	Staff
3.1.2	Close the ranch road to the saddle of the hill and revegetate it to restore the native vegetation and minimize runoff and soil erosion.	X		20	TBD

Strategy	Action	County	BLM	FY	Budget
3.1.5	Evaluate the west and north property boundary to determine where fencing and signage is necessary to control unauthorized access. Investigate options to control access through the arroyos under the railroad trestles along the southern boundary of the property.	X		18	Staff
3.1.6	Post appropriate signage to inform the public of the laws and penalties for violating the laws and enforce the laws.	X		20	TBD
3.1.7	Change the name of Petroglyph Hill to an appropriate Native American place name.	X		19	Staff
3.1.8	Work proactively with publishers to remove the name Petroglyph Hill or the site altogether as appropriate from future editions of guide books.	X		19	Staff
3.2.1	Renew Memorandum of Understanding with the New Mexico Historic Preservation Division Department of Cultural Affairs for the SiteWatch Program. Expires February 2018.	X		18	Staff
3.2.2	Seek partnerships with interested tribes and/or a tribal SiteWatch chapter to monitor the site.	X		19	Staff
3.2.3	Review and update the site field records and photographs to provide a complete record of the petroglyphs and site features, and their current conditions in order to create a baseline for monitoring the site conditions.	X		18	Staff
3.2.4	Develop a cultural resource monitoring protocol for the site.	X		18	Staff
3.2.5	Improve the ground cover on the site by seeding native vegetation to reduce erosion.	X		20	TBD
3.3.1	Hire fully commissioned law enforcement officers to patrol the Petroglyph Hill site on a regular basis to insure compliance with all applicable rules and regulations.	X		20	TBD
3.3.2	Pursue interagency agreements with BLM and interested tribal governments and cross-deputization of officers to provide law enforcement patrols for the site.	X		19	Staff
3.3.3	Purchase and install wireless cameras to monitor the site and access points.	X		19	TBD

Strategy	Action	County	BLM	FY	Budget
3.4.1	Collaborate with interested Native American Tribes to develop a visitor management plan for providing a limited number of carefully conducted, small group tours of Petroglyph Hill and other cultural sites within the Thornton Ranch Open Space.	X		19	Staff
3.4.14	Develop a pledge to respect/non-collection agreement.	X		19	Staff
3.4.17	Monitor and request removal of photographs of the petroglyphs at the site from the internet.	X		19	Staff
3.4.19	Develop a protocol with criteria and parameters for monitoring visitor impact to the site.	X		19	Staff
3.5.1	Develop a procedure for tribal review and approval of research proposals.	X		19	Staff
3.5.3	Return any artifacts collected by previous research projects to the site.	X		20	Staff
3.6.1	Work with the Bureau of Land Management to restrict the exploration and development of the locatable and saleable Federal minerals within the boundary of the Thornton Ranch Open Space.	X		19	Staff
3.6.2	Research the ownership of the subsurface mineral estate underlying approximately 350 acres of the surface estate that Santa Fe County owns and investigate the possibility of acquiring the mineral estate in order to protect the surface resources.	X		19	Staff
3.7.1	Develop cultural etiquette training.	X		19	TBD
3.7.2	Develop a procedure for handling inadvertent discoveries during construction or routine maintenance.	X		19	Staff
3.7.8	Develop a procedure for identifying, removing and disposing of non-tribal offerings. Amend Santa Fe County Ordinance 2001-1 Section 4 to include leaving object or offerings on County parks, trails and open space.	X		19	Staff
3.8.1	Develop an MOU between BLM and Santa Fe County to allow the County to manage the Kennedy Allotment 926 and a portion of the Cuerva Allotment 917 as part of the Thornton Ranch Open Space.	X		18	Staff

Strategy	Action	County	BLM	FY	Budget
3.8.2	Collaborate with Native American Tribes and other stakeholders to prepare National Register of Historic Places Nomination Form for the Galisteo Basin as a Cultural Landscape.	X		21	Staff
3.8.3	Collaborate with Native American Tribes and other stakeholders to pursue designation of the Galisteo Basin as a National Heritage Area.	X		21	Staff
3.8.4	Update the Memorandum of Agreement (MOA) between BLM and Santa Fe County for the protection, preservation, maintenance, and administration of the Act sites that are wholly or in part on lands owned by Santa Fe County to incorporate provisions for implementation of the Petroglyph Hill Management Plan. Expires 7/31/20.	X		21	Staff
4.1.1	Initiate a collaborative planning process with Native American Tribal Governments to develop a plan for interpretation of Petroglyph Hill and the cultural history of the Galisteo Basin prior to Spanish contact.	X		19	Staff
4.1.10	Develop off-site interpretation.	X		20	TBD
4.1.11	Develop process for tribal review of any interpretive media that will be provided to the public.	X		19	Staff
4.1.2	Encourage Native American Tribes to provide interpretation of Galisteo Basin from their perspective in a way that is culturally appropriate.	X		19	Staff
4.1.3	Create a "threshold" at the trailhead to draw visitors' attention to the fact that they are entering a sacred place and make them aware of the proper etiquette as a guest in this place.	X		20	TBD
4.1.7	Create a historical timeline for the Galisteo basin in relation to what was going on in other parts of the world: Europe, China, and Central America.	X		20	TBD
4.1.8	Develop a map and panorama of Galisteo Basin similar to the map of the GBASPA Sites but with natural landmarks (mountains, etc.) and current towns.	X		20	TBD
4.1.9	Coordinate the design of signage and interpretive exhibits with BLM so that they have a consistent appearance across the Galisteo Basin and the Act sites.	X		20	Staff

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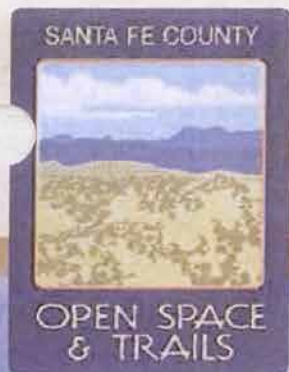
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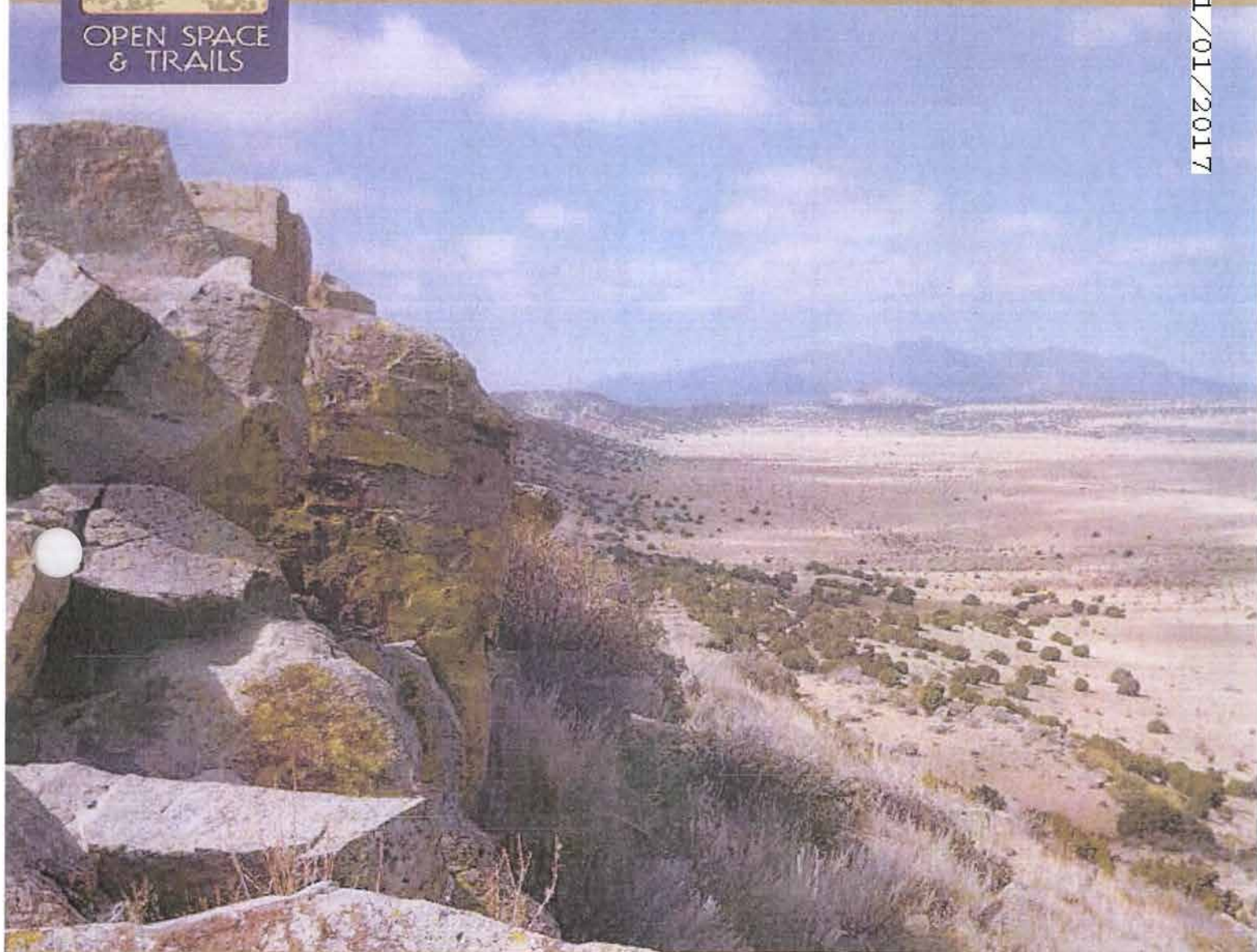
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GALISTEO BASIN

OPEN SPACE PROPERTIES



Interpretive Plan
October 2017



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SECTION 1 — INTRODUCTION

GALISTEO BASIN CONTEXT AND LEGISLATIVE FRAMEWORK

The Galisteo Basin is celebrated as a region rich in scenery, cultural heritage and wildlife habitat. The Galisteo Basin as a watershed encompasses 730 square miles south of Santa Fe, NM, and is a rural landscape of rolling grasslands punctuated by volcanic uplifts and ringed by prominent peaks, mesas and escarpments. Expansive views give way to historic towns and villages tucked next to creek bottoms, while remains of prehistoric pueblos and historic railroad and ranching infrastructure dot the landscape.

The Basin is primarily in private ownership, with conservation easements protecting much of that acreage. Publicly held land includes acreage owned by Santa Fe County, the Bureau of Land Management and the State of New Mexico. As of May 2016, Santa Fe County holds approximately 2,100 acres of land within the Galisteo Basin watershed as part of its Open Space, Trails and Parks Program. Several other Open Space properties lie just outside the boundaries of the Galisteo Basin watershed, and because of their relevance to the interpretive program, are included in this analysis. While many of these Open Space properties are not yet open to the public for general recreation access, master and/or management plans for several are currently underway. A key challenge is determining appropriate public access in the face of resource management concerns, including significant archaeological protection needs.

Open Space is defined by Santa Fe County as open spaces, parks, recreation areas, trails, scenic lands and vistas. Open Space conservation meets the needs of County residents, supports a healthy natural environment, and preserves the rural, agricultural and scenic character of the County. In addition, Open Spaces:

- Enhance the quality of life and economic values in the county
- Attract sustainable and low-impact businesses and ecotourism
- Strengthen the county's communities by providing opportunities for residents to recreate and connect with the landscape and nature

In 2004, Congress passed the Galisteo Basin Archaeological Sites Protection Act. The act provides for preservation, protection, and interpretation of the significant archaeological resources located throughout the greater Galisteo Basin and covers a region beyond the Galisteo watershed boundaries to an area of approximately 1,500 square miles.

The County Open Space properties are some of the only places in the Basin that are truly open (or have the potential to be open) to public access. But because they are covered under the Archaeological Protection Act, managers are obligated to reduce and/or limit public knowledge of protected site locations. In the County Open Space Properties, the Act's provision to interpret the archaeological resources could be fulfilled in concert with interpretation of the other significant natural and historic resources associated with the Galisteo Basin. In keeping with the management plan for the Archaeological Protection Act, we anticipate that most interpretation of the archaeological sites will occur in a centralized location away from the resources themselves.

What Is Interpretation?

"a mission-driven communication process that forges intellectual and emotional connections between the interests of the audience and the inherent meanings of the resource."

—National Association for Interpretation

¹ Santa Fe County Sustainable Growth Management Plan 2010

The expansive vistas of the Galisteo Basin can be seen from many vantage points, and the high peaks of the Ortiz Mountains serve as a common landmark. Running through the Basin, the Turquoise Trail National Scenic Byway offers a scenic alternate route for travel between Albuquerque and Santa Fe. The variety of historic communities and a growing network of recreational trails make the Galisteo Basin perfect for a "get-out-of-town" day trip for local Santa Fe residents and visitors.



SECTION 1 — INTRODUCTION

WHY DO WE NEED AN INTERPRETIVE PLAN?

As the County considers how and where to open public access to its Galisteo Basin properties, it will factor in how visitor communication and programs can best support the mission of the County's Open Space, Trails and Parks Program. The purpose of this interpretive planning process and resulting document is to assess interpretive needs, inventory existing offerings, identify the challenges and opportunities, and provide recommendations for ongoing and future interpretive media products and programs.

This plan provides a guide for interpretive decision-making about Santa Fe County Open Space properties in the Galisteo Basin, including priorities for design, funding, and implementation. We identify overarching goals, objectives, and a thematic message structure for interpretation across the Basin. Working from these larger ideas, we then consider the unique qualities of and visitation at each site selected for interpretive development, and identify "sub" goals, objectives, and themes relevant to that particular site. While the overarching goals and themes create consistency, each site's unique features and relationship to the larger theme are emphasized so that interpretation is both site-specific and theme-based, and each site is tied to its sense of place in the larger whole.

BENEFITS OF THE PLAN

The plan presents a framework for developing a well-thought-out palette of opportunities and strategies to preserve, protect and interpret the significant resources of the Galisteo Basin. The planning process provides a lens through which to evaluate effectiveness and mission alignment for interpretive efforts in the Galisteo Basin. It helps managers make decisions about how interpretation can be best used to support the goals and priorities of the County's Open Space, Trails and Parks Program.

It also provides ideas that help facilitate relationships and partnerships between Santa Fe County and stakeholders in the protection of Galisteo Basin resources.

Why Interpret the Basin?

The overall purpose of interpretation in the Galisteo Basin is to broaden awareness of human connection and interdependence within this landscape through fostering understanding of its natural, cultural, and archaeological resources. Planned interpretation engages visitors and locals by telling these stories in a unified and compelling way, and stimulating both a deep sense of place and stewardship of the resources that make the Galisteo Basin exceptional.

Interpretation will help to preserve cultural resources, scenic vistas and diverse ecosystems by inspiring people about the significance of the Galisteo Basin through time. Through offering a deeper understanding of its unique qualities, interpretation will enhance the experience of those who visit the area, as well as those who make their home there.



SECTION 1 — INTRODUCTION

Interpretation's Five Essential Qualities

Purposeful: Interpretation's ultimate goal is engagement with and stewardship of our natural and cultural resources. Interpretation bears in mind what we want the audience to learn, feel, and (most importantly) do as a result of their experience in the Galisteo Basin.

Enjoyable: Visitors are not captive audiences and are known for voting with their feet. In the Galisteo Basin, recreational opportunities as well as historical and archaeological tourism are what pulls people in to the experience. Good interpretation provokes curiosity and presents information in an enjoyable, interactive and positive context. This, then, captures a visitor's imagination and inspires return visits, longer visits, and word-of-mouth marketing, increasing the opportunity for the County to achieve its purpose for interpretation (page 6).

Relevant: What we want visitors to know about the Galisteo Basin is not necessarily what the arriving visitor wants to learn. All human communication is received through the filters of prior experiences, attitudes, intrinsic motivators, existing knowledge levels (and misconceptions), beliefs, and cultural influences. Therefore, interpretation takes the audience's perspective and captures interest by understanding, respecting, and engaging the

audience's point(s) of view. Interpretation of archaeological resources, for example, must be done in ways that provide direct linkage to modern visitors' lives.

Organized: Interpretation throughout the Galisteo Basin is structured to maximize learning and enjoyment, minimize demands on the audience, and produce a positive visitor experience from beginning to end. Interpretation should deliver memorable, coordinated, consistent, and effective messages over time and across the entire visitor experience. Individual sites should be treated as just one part of a larger whole.

Thematic: Interpretation conveys a theme—a central take-home message that moves beyond facts and figures to reveal the deeper meaning of heritage resources, rather than a piecemeal series of interesting facts. Themes help us tell a compelling story that will resonate with the audience long after the experience is over.

Sites across the Galisteo Basin should tell the unique stories associated with each location in ways that support the overall thematic message of the entire greater Galisteo Basin.



SECTION 1 — INTRODUCTION

This document captures the analysis undertaken during the interpretive planning process. It takes into account management guidance for interpretive media in the Galisteo Basin as well as previously documented suggestions for interpretive products and programs to provide Santa Fe County with a rationale and a road map for cost-effective, visitor-relevant and theme-driven interpretation that adds value to the quality of the visitor experience in the Galisteo Basin.

WHO WILL USE THIS PLAN?

Santa Fe County staff, advisors and partners will refer to this plan, use it and adapt it as conditions evolve and projects are funded and get underway.

The plan also provides guidelines for the writers, interpreters, landscape architects, exhibit developers, graphic designers, multimedia producers and exhibit fabricators who are responsible for its implementation.

WHAT INTERPRETIVE GOALS AND OBJECTIVES DO

Goals and objectives provide guidelines for developing interpretive products and services. They also provide metrics with which to evaluate their effectiveness. They address both the values guiding the interpretation, and the impacts that interpretation can have on visitors and the Open Space, Trails and Parks Program.

This interpretive plan is guided by the Galisteo Basin Open Space Goals and Objectives established herein. We recommend a variety of interpretive techniques and delivery systems to meet the needs of different audiences.

Interpretive Opportunities in the Galisteo Basin

- Ranching landscapes and artifacts (structures, fences, windmills, etc)
- Historic mining sites and associated artifacts (equipment, waste piles, structures)
- Railroad beds and associated artifacts (culverts, berms, rail alignments)
- Pueblo structures and associated artifacts (gardens, pottery, tools and weapons)
- Rock art
- Diverse wildlife habitat
- Wildlife corridors
- Water resource and conservation sites
- Links between natural lands, sustainability and quality of life



SECTION 1 — INTRODUCTION

GALISTEO BASIN OPEN SPACES INTERPRETIVE GOALS & OBJECTIVES

In order to ensure that interpretation serves the interests of the Santa Fe County Open Space, Trails and Parks program, while complying with the intent of the Galisteo Basin Archaeological Sites Protection Act, we drew the following interpretive goals from relevant management documents as well as interactions with interested parties: staff, partners and community stakeholders.

Interpretive Goals and Objectives

Interpretive goals and objectives are statements that articulate the intended purposes and objectives of interpretive activities. Goals encompass what management wants interpretation to do for a site, its visitors, and the community. Goals should guide the planning process from the outset. Objectives describe the specific desired changes we wish to inspire in our visitors. Objectives, therefore, should describe visitor behavior and be expressed in measurable terms.

Goals:

- State what it is you expect interpretation to do for the organization
- May be short-term or long-term
- Are stated using terms like "enhance understanding," "increase awareness," "foster stewardship" that are generally not easy to measure

Objectives:

- Are clear statements that describe the objective of the interpretive product or program

INTERPRETIVE GOAL 1: Increase public knowledge and appreciation of the natural and cultural resources of the Galisteo Basin.

INTERPRETIVE GOAL 2: Increase awareness of and appreciation for the significance of the Galisteo Basin to American Indian cultures over time.

INTERPRETIVE GOAL 3: Increase understanding of the dynamic relationship between humans and the environment, and the impacts of human activity on the highly sensitive natural and cultural resources of the Galisteo Basin Open Space properties.

INTERPRETIVE GOAL 4: Develop and strengthen support for the conservation, management, and restoration of open space lands in the Galisteo Basin, including the protection and restoration of biodiversity, native habitats, wildlife corridors, and soil resources.

INTERPRETIVE GOAL 5: Increase public knowledge and appreciation of Santa Fe County's leadership in community-based resource conservation and sustainable design.

INTERPRETIVE GOAL 6: Provide an improved visitor experience by strengthening the bonds between Galisteo Basin residents and visitors and the past that surrounds them.

INTERPRETIVE GOAL 7: Promote respect by strengthening stewardship values and increasing compliance with regulations

DEVELOPING LOCATION-SPECIFIC OBJECTIVES

Measurable objectives, describing site-specific objectives linked to the seven goals, are included in the site plan for each open space property.

SECTION 2 — STAKEHOLDER ENGAGEMENT

PARTICIPATION OPPORTUNITIES

A variety of opportunities for stakeholder involvement were included in the interpretive planning process, and input received was used at every level of development of this document.

Workshop Series – March 1-2, 2016

During this series, workshops were held with community members, volunteers, agency and partner organization staff, and other interested individuals. During each workshop, the consultant provided background information on the principles of interpretation, and facilitated a discussion about the significant stories, target audiences and goals for interpretation in the Galisteo Basin.

In addition to the workshops, the consultant toured the Basin and met with other consultants and specialists working on Open Space projects in the Galisteo Basin, assessing existing interpretation as well as interpretive opportunities at County-owned sites.

COMMUNITY PARTNERS

Volunteer site stewards, tribal representatives and partner organization staff and board members provided valuable information regarding target audiences for interpretation and spoke to the overall significance of the Galisteo Basin as a place of continuous human occupation. Participants emphasized that any public access must be balanced with protection of the cultural resources, and that biodiversity and the Basin's role as a significant wildlife corridor should be highlighted.

AGENCY STAFF

This group included representation from New Mexico State Parks and Santa Fe County. Participants suggested that the region's geology play an important part of the overall story to be told in the Galisteo Basin, and offered the perspective that consistent marketing and messaging will be key to successful interpretation throughout the Galisteo Basin. It was also suggested that current events be incorporated into interpretation where appropriate.

ORTIZ DOCENTS

This group provided information specific to the Ortiz Mountains Educational Preserve, discussing audience segments that have attended the group tours and docent-led hikes at the site in the past. Participants suggested that interpretation at this site should emphasize the mining reclamation process and the importance of the preserve to wildlife, particularly bear. The gold mines connection to the Santa Fe Trail was also highlighted. It was agreed that docents should be cross-trained in all subject areas of significance to the preserve, and that any future access improvements should be to scale with the expected increase in visitor numbers that would occur through any such work.

Galisteo Basin Archaeological Sites Protection Act Working Group – June 7 & July 28, 2016

An initial presentation at this group's regular meeting revealed the need for a second, more in-depth presentation and discussion of the interpretive plan foundations. Input was received that resulted primarily in revisions to the theme structure and refinement of the Basin-wide recommendations.

Tribal Consultation – 2016-2017

This plan was sent out for review by tribal entities in November 2016 and from July 1 - September 15, 2017.

Public Comment – 2017

The public comment period was from August 15 - September 15, 2017.

SECTION 3 — SIGNIFICANCE OF THE BASIN

Much has been written about the significant resources and character of the Galisteo Basin. A suggested reading list is included in Appendix _____. Here, we present a brief overview of the nature of those resources.

ABOUT THE AREA

With a dry, high-elevation climate, the Galisteo Basin experiences chilly winters and hot summers. Bounded by the high peaks of the Sangre de Cristo Mountains to the northeast, the Galisteo Basin receives on average 12-14 inches of precipitation annually. The heaviest rainfall occurs in July and August during summer monsoons. The region has a history of conserving water and looking to its future; the 1912 City Plan for Santa Fe considered water scarcity and recognized the prospects for suburban development on the outskirts of town. Housing developments within the Basin are predicated on water conservation.

GEOLOGICAL RESOURCES

More than 60 million years ago, the landscape of northern New Mexico was covered by a vast inland sea. After the sea retreated, a period of uplifts, faulting and volcanic eruptions began approximately 30 million years ago, creating numerous peaks and ridges. Erosion by wind and water continues to shape the landscape.

As the volcanic events subsided, hot mineralized water filled cracks and crevices in the cooling rock, forming deposits of minerals like galena, gold and turquoise that have been sought after by different cultures throughout history.

WATER RESOURCES

The Galisteo Basin watershed drains 730 square miles stretching from the highest point of Thompson Peak in the Sangre de Cristo Mountains to the north, to where Galisteo Creek, the central tributary draining the Basin, joins the Rio Grande at Kewa Pueblo along the Basin's western edge.

Galisteo Creek supports a lush riparian corridor in the Village of Galisteo, while a rich array of springs, meadows and wetlands occur throughout the Basin.

BIOLOGICAL RESOURCES

In the Galisteo Basin, grasslands transition to piñon-juniper forest. Arroyos and mesas punctuate the terrain, and high peaks and rocky escarpments provide a high-elevation container for the vastness of the Basin. This varied terrain lies at the intersection of four continental ecoregions¹, and serves as a critical travel corridor for mammals like cougar, black bear, mule deer, and elk, as well as many species of birds as they migrate north and south along the "spine of the continent" between Canada and Mexico. The Galisteo Basin's waterways and lush grasslands in an otherwise arid landscape provide a critical stopover and re-fueling location for hundreds of animal species on the move.

The Galisteo Basin has always been a region rich in wildlife. During the Ice Ages, large mammals such as mammoth, musk ox and bison are thought to have grazed here.

CULTURAL RESOURCES

The greater Galisteo Basin contains an incredible concentration of cultural resources and landscapes. More than 3,000 archaeological sites and some 160 historic structures have been recorded here, with the likelihood of many more as-yet-unrecorded sites. Significant sites include the largest ruins of Pueblo Indian settlements in the United States, spectacular examples of Native American rock art, and ruins of early Spanish Colonial settlements. As stated by non-profit The Archaeological Conservancy, which owns many of the sites protected by the Act, "these sites hold important information about Ancestral Puebloan origins, migration, demography, changing land use, subsistence strategies, alliances and possible conflict, the florescence of the Classic period, and world view and changing ceremonial practices in the greater Galisteo Basin."

¹ Southern Rockies, Southwestern Tablelands, Rio Grande Delta and New Mexico-Arizona Plateau

SECTION 3 — SIGNIFICANCE OF THE BASIN

HISTORICAL RESOURCES

Mining, ranching, and railroad transportation all have left their mark on the Basin's landscape.

The Basin's mineral resources have been the source of varied mining ventures through time. Prehistoric people mined galena in and around the Cerrillos Hills, valuing the material for a highly specialized pottery glaze. Turquoise extraction dates back more than a thousand years. In historic times well-known jewelers from far away, Tiffany and Co., for example, focused attention and resources on the area. An extensive coal operation once operated in Madrid, and developed the infrastructure from which the community still benefits. The first placer gold in New Mexico was found in the Ortiz Mountains, and a series of "ghost towns" (including Dolores, Golden, San Pedro, Waldo, Carbonateville, Rogersville, Bonanza City and Hagan) all sprung up in support of mining ventures in the Basin.

The railroad first arrived in the Basin in 1880, and facilitated a great increase in economic activity. Goods could be imported, and mined products had a direct route to larger markets. With a spur line up to Santa Fe, tourism, too, became an industry. A total of sixteen different railroad companies have had financial interest in the City and County of Santa Fe. Santa Fe historian Fred Friedman summed up the influence of the railroad well when he wrote, "the steam locomotive irreversibly altered local economies, land values, jobs, and long-established ways of life with its ability to move tons of freight and thousands of people in any weather, quickly and easily. The railroad helped to build some towns, and destroyed others."

Over the last couple of hundred years, ranching has been a significant land use in the Basin. First with sheep and then cattle and horses, the ranching industry has worked the land and some ranches remain active operations today.

SCENIC RESOURCES

With its outstanding views, expansive vistas, and vast areas of undeveloped open space, the Basin is a place to find quiet solitude. At night, dark skies arc from one horizon to another, allowing for awe-inspiring stargazing. Sparsely populated historic towns and villages offer a relaxed, rural character hard to find in an increasingly populated world.

The core open space "hub" of the Galisteo Basin lies in the large open "bowl" at its center. This bowl contains approximately 150,000 acres whose borders are the Ortiz Mountains at the south, Cerrillos Hills to the west, Lamy at the northern edge, and, to the east, Rowe Mesa that trends south from Lamy.

The Basin's vastness and undeveloped character are valued for more than their intangible benefits. The film industry relies on the Galisteo Basin and surrounding lands for movie locations, becoming a significant economic force in this region. Several film ranches are located in the Basin.

Efforts to maintain and communicate the value of these characteristics have widespread support by public and private landowners. Whether by easement or outright ownership, more than a third of the Galisteo Basin is protected from development.

RECREATIONAL RESOURCES

Nearly 80 miles of non-motorized trails create an interconnected network for hiking, running, biking and horseback riding throughout the Basin. Agencies and housing developments have collaborated to create a functional trail system that crosses jurisdictions while maintaining connectivity.

2. Of these 80 miles, 29 are National Forest, 13.5 are Bureau of Land Management, 12.4 are within the community of El Colorado, 5.8 are a Santa Fe Rail Trail (as built through section 4), 5.5 are located in Cerrillos Hills State Park, and 13 are located within the Galisteo Basin Preserve.

SECTION 4 — OUR VISITORS

SANTA FE COUNTY TOURISM PROFILES

According to the Santa Fe Convention & Visitors Bureau, more than a million tourists visit Santa Fe each year. In a 2010 survey of visitors to Santa Fe, travelers indicated that driving and sightseeing were a major activity, and visiting a historic site was reported by nearly two-thirds of respondents. More than 20% of visitors went hiking, while biking was reported as an activity by only 2-4% of the respondents.¹ Age breakdowns provide additional insight; travelers over 40 engaged in visiting a historic site more often than other age groups, while travelers under the age of 60 went hiking more frequently than older visitors. Scenic beauty, historic sites, Indian culture, outdoor adventure recreation and communing with nature are the top reasons people choose to visit Santa Fe. Two-thirds of respondents have a college degree; one-third have a graduate degree. Respondents also stated that their preferred method of receiving travel advice and suggestions while in Santa Fe was via word of mouth.

SANTA FE DEMOGRAPHICS

Because Galisteo Basin Open Space properties are located just south of Santa Fe, it is believed that the majority of local visitors are, and will continue to be, residents of Santa Fe. It is unknown if Turquoise Trail National Scenic Byway travelers are likely to engage in hiking and biking activities, or other activities at open space properties. Additional details regarding Santa Fe demographics can be found in Appendix

VISITOR NEEDS AND EXPECTATIONS

When planning and designing visitor experiences, it is important to remember that visitors need to know where they are and what's expected of them. As Abraham Maslow outlined in 1954, people need to have their basic physical needs met — food, water, safety and security — before they can attend to personal growth or take in new information. Restrooms, wayfinding and orientation, and etiquette information all play into creating an environment where visitors are relaxed and able to receive information. Visitors need to feel welcome, comfortable, and clear about how they should interact with the site.

¹ Mountain hiking, though a very popular Santa Fe sport, is equipment intensive, so it's no surprise that it ranks low with tourists.

Maintenance, Sanitation and Security

Basin-wide, anywhere interpretation is developed, it is important that facilities are maintained, sanitary, and safe.

Consistency

Messaging and design of interpretive and orientation products should be consistent across the visitor experience. Multiple partners and agencies are involved in using theme-based interpretation to fulfill management goals in the Galisteo Basin. We recommend that the messaging and design guidelines presented in this document be consistently followed across the Basin, allowing, of course, for some flexibility and customization.

VISITATION PATTERNS

With a few notable exceptions, few official opportunities exist for public access and recreation in the Galisteo Basin. The Santa Fe Rail Trail and the publicly accessible trails of the Galisteo Basin Preserve enjoy the highest use.² The Galisteo Basin Preserve estimates that approximately 13,000 trail users visit the Preserve trails each year, with some of those visitors visiting more than once and some using the trail system more than once per week.

Because visitor analysis is not possible within the scope of this project, we have drawn primarily on anecdotal information provided by stakeholders, as well as census data. Further study of user populations and patterns is needed in order to fully understand expectations and meet the diverse needs of visitors.

- ² Hiking trails in the community of Eldorado are also popular, but are not open to the public.
- ³ Personal communication with Gretchen Grogan, Continental Conservancy Project Manager, 2016.

SECTION 4 — OUR VISITORS

TARGET AUDIENCES FOR INTERPRETATION

Visitors to the Galisteo Basin enjoy the area's unique shops, cafés, and artist studios and galleries. A spectrum of recreational options are available to visitors at County Open Space properties. Both local residents and tourists have opportunities for hiking, biking, sightseeing, learning about local natural and cultural heritage, and participating in programs and special events.

Guided by our experience developing interpretive products, we used anecdotal information, census statistics, and visitor data commissioned by the local convention and visitor's bureau, to develop recommendations that align the characteristics, needs, expectations, and opportunities of a number of different target audiences.

Local Trail Users

Local hikers, bike riders, and equestrians rely on the trail systems of the Galisteo Basin for regular and semi-regular recreation. Dog walking and trail running are also common activities. The trails appeal to mountain bikers seeking a medium to high mileage route, and are a good option for winter recreation when trails in the Sangre de Cristo Mountains and foothills are covered in snow and ice. The Santa Fe Rail Trail probably sees the highest concentration of use of all trail segments within the Galisteo Basin. These repeat users would benefit from interpretation that extends their knowledge of the Galisteo Basin's exceptional environment, and helps them to become more conscious and conserving citizens of Santa Fe County.

Destination Travelers

This group includes tourists attracted to Santa Fe as a destination. They may hike, bike or run on the Basin's trail system, attend a docent-led tour of archaeological sites protected by the Galisteo Basin Archaeological Sites Protection Act, or go to visitor centers and museums. Interpretation should convey a sense of the Galisteo Basin as a landscape valued by and sacred to many people; the depth of time over which the Basin has provided sustenance and refuge for both people and animals; the threats to its environment; and the specific practices that provide for contemporary sustainable living. It should encourage responsible recreation and strengthen a stewardship ethic

among visitors. Successful interpretation of conservation practices will inspire these individuals to incorporate actions into their own home and benefit their home communities.

Basin Residents and Neighbors

Although this group may already fit under the auspices of the local trail users discussed above, they would benefit from a deeper sense of place of their home and community. Opportunities to see the Basin from different perspectives, gain information about pre-historic and historic residents, and learn about the importance of the Basin as wildlife corridor and habitat will deepen their sense of regional identity and promote a protective instinct. Residents and neighbors represent a pool of potential site stewards, as well as volunteer docents.

Scenic Drivers & Commuters

While these individuals may not stop to experience the trails and open spaces outside of their car, they still appreciate the scenic vistas of the Galisteo Basin. This group would benefit from awareness of where they are and that there are opportunities to explore the landscape more fully, rather than just passing through. They may also stop in at a visitor center or developed trailhead to use the restroom or stretch their legs.

Day-Trippers

Whether touring the length of the Turquoise Trail National Scenic Byway, lunching in Madrid, or attending a program at Corralitos Hills State Park, these regional residents may not be aware of the significant resources located in the Galisteo Basin. They may see the Basin's trails as a recreation destination for a day, and may participate in special events or programming, or join a friends group.

Information Buffs

These special interest visitors are aware of and interested in the special resources of the Galisteo Basin, and include those with an amateur or professional interest in the area's geology, mining history and archaeology. These visitors will be interested in personal interpretation and guided tours, and will likely seek social settings where they may share and deepen their knowledge with others. This group also represents potential volunteer docents.

SECTION 4 — OUR VISITORS

Students

Groups of university and local elementary school students utilize sites in the Galisteo Basin for field trips to historically and archaeologically significant sites in the Basin. Additional groups of students could be targeted. All students would benefit from interpretation of conservation and sustainable living practices, presented within the context of prehistoric populations and the future habitability of the Basin.

To help protect these fragile and irreplaceable resources, all interpretation should convey a strong stewardship message, focusing on the unique story they tell.

A caveat. Stewardship messaging is critical to the future of the Basin. Equally critical is remembering that interpretation is enjoyable. It inspires, not lectures, and never takes on a propaganda-like or regulatory tone.

SECTION 5 — INTERPRETIVE THEMES

Picture the Santa Fe County Open Space, Trails and Parks Program properties in the Galisteo Basin as embodying a compelling story, and the process of interpretation as a storytelling art. Because interpretation is purposeful, we set interpretive goals to describe what we want these stories to do—both for the resource and the visitor. Measurable objectives tell us how well our storytelling is working to help us achieve those goals.

Themes are where the art comes in. They are the core messages behind a story's facts. Their job is to highlight the deeper meanings of heritage resources, helping the visitor not only understand their importance, but see themselves as part of their ongoing story. A well-thought-out thematic structure, therefore, forms a unifying foundation for successful interpretation.

A good interpretive theme is expressible in a single, powerful sentence that contains only one idea—an idea that weaves the tangible aspects of the resource (the facts) with their intangible meaning(s). Themes are compelling and memorable. However, a theme isn't necessarily repeated verbatim in any particular story; instead, it forms the framework around which a story is built. Think of a theme as the "take-away" that you want visitors to remember, absorb, care about, and incorporate—not only into their knowledge base, but their lives. Themes answer the all-important question, "So what?" or "Why would our visitors want to know this—why would they care?"

A landscape as vast and old as the Galisteo Basin holds many stories¹, creating the opportunity to develop several strong themes. As varied as they are, though, these themes are still organized into a unified message hierarchy that works as a system: one central, overarching theme capturing the significance of the Galisteo Basin as a whole, and three to five supporting sub-themes. Sub-themes are just like themes—single, compelling statements of meaning—but their job is to expand on and illustrate the central theme by organizing the area's storylines into meaningful categories. We limit sub-themes to no more than five (three is ideal) because of the way the human mind uses memory and assigns meaning.

Every story told on behalf of the County's Galisteo Basin properties, therefore, can stand alone yet can (and should) illustrate one or more sub-themes. This is how interpretation works its magic. By framing all stories around a thematic structure, every interpretive experience in the Basin will, in the visitor's mind, connect to a growing and very personal understanding of—and appreciation for—this special place. Over time, each linked experience builds toward a stewardship ethic for the resource, respect for the County's mission, and advocacy for open space in general.

The central theme and sub-themes developed for this plan apply across the entire inventory of Santa Fe County Open Space, Trails and Parks Program properties in the Galisteo Basin (and perhaps beyond). As preserve-specific interpretive strategies are developed, location-specific storylines will tie to the following sub-themes.

¹ It is the intention of the County that stories related to spiritual connections and tribal histories in the Galisteo Basin are best told by tribal members. Archaeological history and evidence are topics that the County will include in interpretive programs and products throughout the Basin, as appropriate at each of the various Open Space locations.

SECTION 5 — INTERPRETIVE THEMES

CENTRAL THEME

The Galisteo Basin is an inspirational and fragile landscape, shaped by many processes and cultures, and imbued with a deep sense of time and place.

SUB-THEMES & STORYLINES

1. The Galisteo Basin is a confluence of cultures through time.
 - a. Archaeological evidence indicates human presence in the greater Galisteo Basin for more than 7,000 years.
 - b. Spanish exploration and missions in the Basin had a profound impact on ancestral pueblo cultures.
 - c. Active trade routes in the region attracted European exploration of the Basin.
 - d. Evidence of historic ranching and mining efforts can be seen throughout the Basin today.
 - e. The railroad created new opportunities for trade and transportation beyond the Basin.
 - f. The Galisteo Basin is a landscape sacred to more than a dozen American Indian tribes—including those in the Rio Grande valley, the southern Plains, and as far away as Hopi.
 - g. Prehistoric, historic, and sacred sites and artifacts are fragile, valuable, irreplaceable, and worthy of our respect and protection.
2. The Galisteo Basin landforms, lifeforms and ecosystems reflect the unique and fragile geography of the Basin.
 - a. Ancient seas and swamps once covered this landscape, leaving behind many traces of life.
 - b. Geological uplifts, faulting and volcanic eruptions formed much of the terrain we see in and around the Basin. Erosion continues to shape the landscape today.
 - c. The Galisteo Basin is important habitat and a migration corridor for hundreds of wildlife species of regional, national and international significance, including top predators, threatened and endangered species, and migratory birds.
3. The Galisteo Basin is a place for exploration, conservation and discovery.
 - a. Archaeological research in the Galisteo Basin has helped define the profession and knowledge of archaeology in the Southwest, and many research opportunities remain.
 - b. People today value the Galisteo Basin for open spaces, scenic vistas, spiritual reflection, recreation, archaeology, and continued traditional use by native peoples.
 - c. Recreation opportunities in the Basin promote exploration, learning, stewardship, and reflection.
 - d. Because people care, important areas throughout the Galisteo Basin are being protected for future generations.

SECTION 6 — RECOMMENDATIONS

CONTEXT FOR RECOMMENDATIONS

This plan considers the significance of the natural and cultural resources of the Galisteo Basin. Recommendations for interpretation are focused on the Santa Fe County Open Space properties; however, Basin-wide suggestions included here may be appropriate for implementation by other Basin management partners, or as a joint effort.

The overall goal of this interpretive planning process is to provide the County with a palette of visitor experiences that communicate the significance of Galisteo Basin resources and support management goals while appealing to the target audiences in cost-effective and relevant ways.

BASIN-WIDE RECOMMENDATIONS

The following recommendations apply both off-site and throughout the Galisteo Basin.

Highway Signs

Iconic signage should be installed at all highway entrance points leading into the Galisteo Basin. Similar to the watershed boundary signs commonly seen across the state, this signage would strengthen the identity of the Basin by helping visitors understand where they are and that they are entering a special place.

In addition, Santa Fe County should also coordinate with the NM Highway Department to develop and install road signage identifying County Open Space properties and publicly accessible trailheads (at the entrance to Thornton Ranch Open Space, for example).

Consider using a new, professionally designed logo on all highway signs that is both simple and unique to the Galisteo Basin.

Traveling Exhibit(s)

One or more temporary/traveling exhibits—designed to provide an overview of the Galisteo Basin and its recreational opportunities—should be developed and located in high-traffic areas in town. Possible hosting locations could include the Public Lands Information Center, the visitor center at the Santa Fe Railway, the Vista Grande Public Library in Eldorado, festivals and street fairs such as Spanish and Indian markets,

and other places, especially those where locals and tourists go to learn about recreation opportunities.

Online Presence

The Galisteo Basin is a source of inspiration for many, and has a social network presence. An Instagram search for #galisteobasin reveals more than a hundred images posted by the public, with shots featuring scenic landscapes, recreation activities, creative pursuits, flora and fauna, and archeological resources.

Santa Fe County should consider capitalizing on this and participating in the existing #galisteobasin feed with announcements. The County's official Instagram account could also feature special events and program schedules related to the Galisteo Basin, as could the County's various Facebook pages.

The Santa Fe County tourism web page (<http://santafenmtrails.com/outdoor-adventures>) lists outdoor recreation opportunities in the Santa Fe area and features the County's new interactive trail map.

Consider working with partner landowners to create a geo-referenced, downloadable pdf map of the trail system in the Basin (Avenza Maps is being used by increasing numbers of federal, state and local land managers for both paid and free distribution of maps to users). A QR code or web address should be posted on orientation panels at trailheads to provide a clear link for downloading. Where cell phone service is not available, visitors may still scan the code for later follow-up.

This downloadable, geo-referenced map should include icons for attractions or features of interpretive interest.

Mobile App

Explore the development of a new app or tapping into an existing app that would allow for the digital delivery of interpretive content such as geo-referenced historic photos and multimedia content, along with brief interpretive text. Such an app could incorporate a method for reporting a problem (such as vandalism or a trail outage), and allow the visitor to sign up for a descent route or other event. The user could also submit their best photos through the app, which would post to social media after being cleared by a digital curator for appropriate content.

SECTION 6 — RECOMMENDATIONS

Visitor Information Hubs

Two hubs for information about the significance of and opportunities in the Galisteo Basin are recommended. Lamy Open Space is well positioned to serve as the primary visitor hub for Galisteo Basin recreation information and interpretation. A facility with indoor amenities would need a staffing plan, likely comprised of volunteers or an agreement with a non-profit organization. A facility at this location featuring restrooms, picnic and shade opportunities, and outdoor orientation and interpretive information would not need staffing other than maintenance and patrol, yet could still offer a public gathering space and focal point for the Galisteo Basin. An interpretive trail might be considered for the visitors who picnic, but it is not likely to receive much traffic without the more significant draw of the amenities already discussed.

A partnership with the existing visitor center at Cerrillos Hills State Park may also provide a satellite hub for visitor information about the significance of and opportunities in the Galisteo Basin. Exhibits here already relay the storylines of geology and mining history. An overview of the Galisteo Basin, along with highlighted opportunities, would help reinforce the role of this site in the larger story. This could occur inside (in the lobby or hallway near the restrooms) or outside (on the covered porch or in the open area currently being designed).

Docent Training & Toolkits

Trained staff and volunteer docents should conduct all guided tours and visitor interactions. Docent toolkits should be developed for each location that offers visitor contact, including guided tours. Each site's docent toolkit will incorporate site-specific background information, along with the interpretive goals and theme structure adopted by the County. Tips and tricks for program delivery, and sample program outlines should also be included. In addition to the toolkit, attendance at an annual training workshop sponsored by the County (and/or a "friends group," see next section) should be required of each docent.

To ensure that the County's goals and objectives are being met, communication focuses on thematic messages, and that quality visitor experiences are being offered, it's important that a substantial portion of each training be devoted to interpretive principles and techniques, not just content.

Citizen Participation

Creation of a "friends group" should be pursued as a method of attracting and coordinating volunteer efforts to patrol, maintain, and otherwise have a presence on Open Space properties in the Basin. This group could also fundraise for site enhancements and coordinate and/or sponsor annual docent trainings, as well as conduct outreach and marketing of opportunities in the Basin.

As with all volunteer partnerships, relationship management is important and should not be neglected. If a large volunteer group is developed, the County's Volunteer Coordinator staff would manage the docent program as well as friends group relationships.

Trail Signage

Trailhead signage should be located at all entrances to County maintained trails, and include map resources and etiquette and safety information. Consider providing trail etiquette in multiple languages to reach international travelers, as well as local Spanish-speaking and Pueblo visitors. Multiple languages could also be supported in print and electronic materials (easily updateable) and in a more comprehensive exhibit installation at the primary visitor hub (whether interior or exterior).

Trail connections among multiple land owners (Santa Fe County, Galisteo Basin Preserve, Bureau of Land Management) necessitate clear boundary marking so visitors have a clear understanding of where they are. Any special expectations or activity constraints must also be clearly marked. It would also be helpful to trail users to see reassurance markers periodically, and estimated mileages and elevations whenever possible. These amenities help keep down the number of lost-user incidents.

Remote Interactive Panoramas

New photographic technology makes it possible to experience a 360 degree view of the Basin remotely. Used as an alternative visitor experience for sites that are not open to regular public access, like Placer Peak, or protected archaeological sites, these remote photographic experiences could be made available on a web site, in the mobile app, or in an exhibit hall environment. This would allow visitors to enjoy the view without the possibility of physical resource damage or the necessity of guided access.

SECTION 6 — RECOMMENDATIONS

PARTNERS IN INTERPRETATION

A number of organizations and land management agencies share a stake in the management and interpretation of Galisteo Basin resources:

- **Tribes** - More than a dozen tribes have a sacred connection to the landscape and resources of the Galisteo Basin. Interpretive products and programs that discuss those connections must be developed in partnership with the tribes. Ideally, interested members would deliver programs as well.
- **BLM** - The Bureau of Land Management has been designated as the lead federal agency responsible for implementation of the Galisteo Basin Archaeological Sites Protection Act ("the Act"), the purpose of which is to "provide for the protection, preservation, and interpretation of the nationally significant archaeological resources in the Galisteo Basin in New Mexico." The 2012 General Management Plan for the Act provides guidance for the identification, research, protection, and public interpretation of the 24 nationally significant archaeological sites protected by the Act within and adjacent to the Galisteo Basin. The BLM office in Santa Fe also houses the Public Lands Information Center, which sells maps, locally relevant publications and gift shop items for all of New Mexico. A similar facility is located in Albuquerque. The Santa Fe facility is open on weekdays only.
- **New Mexico State Parks** - Although Cerrillos Hills State Park is on land owned by the County of Santa Fe, the park is managed as a unit of the New Mexico State Park system. Interpretation tells the story of geology and mining history in the Galisteo Basin, occurring through visitor center exhibits, interpretive wayside panels located throughout the park, and an active program schedule.
- **Cerrillos Hills Park Coalition** - This non-profit organization has facilitated the acquisition and transfer of lands in the Cerrillos Hills to Santa Fe County for education, conservation and public recreation (where compatible).
- **National Park Service** - A spur of El Camino Real de Tierra Adentro National Historic Trail, administered by the National Park Service, passes through the Basin. Themes interpreted along publicly accessible sections of the NHT along the Santa Fe River center largely on transportation along this important route, trade, and its influence on local community and culture.
- **GBASPA Working Group** - The Galisteo Basin Archaeological Sites Protection Act Working Group consists of a consortium of federal, state and local partners. This group has the potential to implement interpretation that speaks to the Act itself, as well as messages that speak to the archaeological significance of the entire Basin. Development and implementation of interpretive products and programs brings the potential for increased collaboration amongst management partners in the Working Group. Management partners have the opportunity to work together to prioritize projects, pursue funding, leverage resources, and cross promote their partners through interpretation.
- **Galisteo Basin Preserve** - The Galisteo Basin Preserve is a conservation-based community development located in the Basin. A project of the non-profit Commonwealth Conservancy, this residential community will offer more than 50 miles of publicly accessible hiking, biking and equestrian trails at full build out, with multiple connections to Santa Fe County trails.
- **Santa Fe Conservation Trust** - This nonprofit land trust manages and monitors conservation easements on thousands of acres of lands in the Galisteo Basin, including acres owned by Santa Fe County. With an active trails stewardship volunteer program, they are also active partners in trail development and management in the Basin.

SECTION 6 — RECOMMENDATIONS

Location	Interpretive Media	Implementation Phase			Cost Estimate
		1 1-2 years	2 3-5 years	3 6-10 years	
All	Highway Signs		X		Consult with DOT regarding available resources and requirements
	Traveling Exhibit	X			\$4-6K to develop each, then fabricate at ~\$2K each
	Online Presence & Map	X			staff time or consultant
	Mobile App		X		Customize existing app = \$5-10K; Develop new app = up to \$80-100K depending on capabilities requested Both may have monthly service fees
	Docent Training (Certified Interpretive Guide)	X			~\$3,500 for a 4 day training, up to 15 participants. Individuals may opt to pay an additional \$150 to become NAI certified.
	Docent Toolkits	X			~\$3-5K per site
	Citizen Participation (Friends group)		X		staff time to coordinate
	Trail Signage	X			Trailhead Signage: \$3-4K each, including development & fabrication Trail Junction Signage: ~\$50-300/junction for fabrication
	Remote Interactive Panoramas	X			New technology; more info needed
Lamy	Visitor Information Hub • exhibits • gathering area for events & field trips • orientation/trip planning area			X	Highly variable, based upon structure available Interior-quality exhibits range from \$200-\$500/ sq ft
Santa Fe Rail Trail	Interpretive Orientation Triggers	X			\$1-2K each, when developed as a package, including development & fabrication
	Wayside Panels		X		At key trail junctions: \$3-4K each, including development & fabrication
Thornton Ranch	Trailhead Orientation Signs		X		Custom trailhead signage: \$5-8K, including development & fabrication
	Wayside Exhibits		X		At key railroad and ranching sites: \$3-4K each, including development & fabrication
	Docent-Led Hikes	X			staff and volunteer time
Ortiz Mountains	Docent-Led Hikes	X			staff and volunteer time
Madrid	TBD				
Cerrillos Hills State Park	Overview Exhibit	X			Highly variable, based upon desired elements and location (interior vs exterior)

SECTION 6 — RECOMMENDATIONS

The Visitor Experience Model

The visitor experience has five stages. The first actually begins at home, with the decision to visit the Galisteo Basin Open Space properties and any expectations that may arise from that decision. By the same token, the visitor experience ends after a return home, ideally with increased support of the Basin's unique heritage offerings. This "whole experience" model also works on the smallest scale: a visitor goes through similar mental stages each time he or she decides to read an interpretive panel.

Our planning process bears these important concepts in mind. As interpretive planners and Basin management partners work together to conceive interpretive media, each is examined for their fit within, and relationship to, the five stages of the visitor experience—ensuring a seamless, quality experience for everyone.

DECISION: The visitor experience begins when a visitor becomes aware of the opportunities that exist within the Basin. What do interpretive planners and Galisteo Basin management partners do to ensure that every visitor will have a rewarding experience, starting with that first discovery?

ENTRY: How do visitors locate and access the Galisteo Basin? How do they know they have arrived? How do they get oriented to what is (and isn't) offered? How easy is it for visitors to budget time

throughout the Basin and its publicly accessible sites and to navigate from one offering to another?

CONNECTION: The heart of the interpretive experience. In every visit, there are magical moments of discovery, in which the visitor can connect with the deeper meaning of the place. To what extent does interpretation focus on helping visitors develop personal connections and meaningful relationships with the Basin and its resources?

EXIT: When visitors prepare to leave, they reflect on and assign a "value memory" to their experience. Do Galisteo Basin management partners reinforce interpretive messages and make visitors glad they came? Are visitors provided with opportunities to expand their knowledge and solidify mental links formed during the "connection" stage (special events, guided tours, web-based follow-up activities, take-away publications, etc.)?

COMMITMENT: After visitors return home, what they do matters. Did their visit form an enduring connection and make a lasting difference—to them, the Basin, its resources, and communities of the Galisteo Basin? Are they returning for more? Becoming better stewards? Telling their friends and family about their experiences and sharing their insights?



LAMY OS INTERPRETIVE SITE PLAN

PROPERTY DESCRIPTION

The Lamy Open Space property consists of 91 acres located near the intersection of State Route 285 and County Road 33 (Lamy Junction¹), as well as an adjacent 50-acre park (Lamy Park). Currently, several picnic tables and associated shade structures are available for public use at the park, but the lack of landscaping and restrooms does not create a site welcoming to visitors. These parcels were added to the County's Open Space assets for the site's archaeological significance. There is currently no strong "sense of place" or interpretation at this site.

Because of its proximity to the Santa Fe Rail Trail and adjacency to the Santa Fe Southern Rail line, this property provides connectivity to the Thornton Ranch Open Space property and has the potential to serve as the main hub for visitor access and orientation to the entire Galisteo Basin, pending development of visitor facilities and related infrastructure at the park. Lamy community members expressed support for a visitor-focused interpretive facility in the Lamy area at a series of County-led site planning workshops in 2016.

In combination with a visitor hub facility and improved picnic settings, a short interpretive trail would provide an overview to the theme structure of the Galisteo Basin, while avoiding disclosing the location of any specific archaeological features. However, visitation would likely be sparse on such a trail unless a substantial orientation and interpretation facility were an attraction to visitors.

Located several miles east of the Lamy Open Space property in the village of Lamy, the historic Lamy Depot continues to serve as a stop for Amtrak on its cross-country Southwest Chief line. Other interpretive assets in Lamy include the grounds adjacent to the train depot where the Lamy Hotel once stood, as well as the Lamy Railroad Museum and History Museum (housed in the historic Legal Tender Saloon across the road from the train depot). Visitors would be introduced to the transportation-related subthemes of the Basin at Lamy and be inspired to seek out more detailed information at the railroad museum. They may even pursue Amtrak travel as an extension of their interpretive experience.



LAMY OPEN SPACE Site Map

Opportunity: This location can provide an overview of the overall Basin theme structure (sacred landscape, geology, archaeology and history, wildlife corridor, recreation opportunities, etc.). Due to its proximity to multiple highways traversing the Basin, it is a suitable and fitting location for off-site interpretation of the Basin's significant archaeological resources.

Challenge: The site has archaeological resources that would be damaged by public disclosure and access. Archaeological resources at the open space property may limit development and public exploration at this site. This constraint might provide further incentive to partner with one or more facilities in Lamy to host interpretive information and visitor facilities.

¹ Lamy Junction was recently added to the National Register of Historic Places for its significance as an early twentieth-century

LAMY OS INTERPRETIVE SITE PLAN

LOCATION-SPECIFIC AUDIENCE SEGMENTS

Current visitation is estimated to be very sporadic, if occurring at all, though archaeological site stewards have noted signs of trespass. Once developed as a visitor hub, this site has the potential to welcome:

- **Resident and Visiting Mountain Bikers** who access the trails of the Galisteo Basin Preserve, Santa Fe Rail Trail, and potentially, Thornton Ranch Open Space;
- **Destination Travelers** interested in historic sites and visitor-focused facilities, who will be attracted to the facility if marketed well;
- **Scenic Commuters** interested in restrooms and a short walking trail;
- **Day-Trippers** stopping in as part of a longer excursion who may gather information for a future day trip, program or special event;
- **Archaeology Buffs** interested in seeing archaeology-focused exhibits, and learning about and/or signing up for guided tours of archaeological sites;
- **Students** arriving at the property as part of a school field trip who may use the restrooms, picnic facilities and any sort of group gathering space.

INTERPRETIVE GOALS AND LOCATION-SPECIFIC OBJECTIVES

INTERPRETIVE GOAL 1: Increase public knowledge and appreciation of the natural and cultural resources of the Galisteo Basin.

Lamy Objective A: Visitors will understand the basic geography of the Galisteo Basin, and its main physical features

Lamy Objective B: Visitors will be able to cite something new they've learned about the natural and cultural resources of the Galisteo Basin

Lamy Objective C: Visitors will understand that federal, state, and county agencies, as well as private landowners, are working together to preserve open spaces and natural and cultural resources in the Galisteo Basin

Lamy Objective D: Visitors will know that archaeological sites and features in the greater Galisteo Basin are protected by the Galisteo Basin Archaeological Sites Protection Act.

Lamy Objective E: Visitors will express an interest in returning to Open Space, Trails and Parks Program properties and participating in another interpretive or recreational activity

INTERPRETIVE GOAL 2: Increase awareness of and appreciation for the significance of the Galisteo Basin to American Indian cultures over time.

Lamy Objective A: Visitors will understand that prior to Spanish-contact, more than 10,000 native people lived and farmed in several Basin pueblos, and the Basin served as a regional trade route

Lamy Objective B: Visitors will be able to describe, in general terms, why the mountains surrounding the Basin are sacred to American Indian tribes throughout the region.

Lamy Objective C: Visitors will be able to describe at least one Galisteo Basin mineral so valuable it was used as a trade good by native peoples (turquoise, malachite, lead).

LAMY OS INTERPRETIVE SITE PLAN

Lamy Objective D: Visitors will be able to describe one or more inter-cultural conflict(s) experienced by the native people of the Basin (Apache and Navajo raids, Spanish colonization).

INTERPRETIVE GOAL 3: Increase understanding of the dynamic relationship between humans and the environment, and the impacts of human activity on the highly sensitive natural and cultural resources of the Galisteo Basin Open Space properties.

Lamy Objective A: Visitors will understand that access to specific sites and features may be limited as a means of protecting archaeological resources.

Lamy Objective B: Visitors will understand the importance of the Galisteo Basin to Native American cultures through time, including the present.

Lamy Objective C: Visitors will understand how geographical features had and still have spiritual significance in Native American cultures and consider the significance of landscape features in their own lives as places of reflection, insight and respite.

Lamy Objective D: Visitors will know that there are a number of different sites encompassed by the Open Space Trails and Parks Program and that these provide a spectrum of recreational opportunities.

INTERPRETIVE GOAL 4: Develop and strengthen support for the conservation, management, and restoration of open space lands in the Galisteo Basin, including the protection and restoration of biodiversity, native habitats, wildlife corridors, and soil resources.

Lamy Objective A: Visitors will understand that open space properties in the Galisteo Basin are part of a nationally significant wildlife corridor and contribute to biodiversity.

INTERPRETIVE GOAL 6: Provide an improved visitor experience by strengthening the bonds between Galisteo Basin residents and visitors and the past that surrounds them.

Lamy Objective A: Visitors will know where to go and how to best experience the Open Space, Trails and Parks Program properties in the Galisteo Basin.

Lamy Objective B: Visitors will report learning about the Open Space, Trails and Parks Program properties in the Galisteo Basin through a network of marketing and promotional activities.

Lamy Objective C: Visitors will have all of the information they need to safely, legally, and responsibly recreate in the areas where managers allow use to occur.

Lamy Objective D: Visitors will complement their Santa Fe County Open Space, Trails and Parks Program experiences with other recreation and natural and cultural heritage experiences in the area and will feel an increased sense of place.

Lamy Objective E: Complaints regarding user conflicts will be minimal.

INTERPRETIVE GOAL 7: Promote respect by strengthening stewardship values and increasing compliance with regulations.

Lamy Objective A: Visitors will be able to cite at least one example of how to recreate responsibly.

Lamy Objective B: Visitors will feel an increased sense of responsibility for natural and cultural resource preservation, and a shared sense of stewardship.

Lamy Objective C: Visitors will understand that publishing photographs of archaeological resources contributes to their degradation.

Lamy Objective D: Reports of site vandalism will steadily decrease.

LAMY OS INTERPRETIVE SITE PLAN

LOCATION-SPECIFIC INTERPRETIVE MEDIA

Visitor Information Hub

As discussed previously, Lamy is well positioned to serve as the primary visitor hub for the Galisteo Basin. The location offers the highest level of visitor access, whether traveling by car, bike, horse or train.

If a staffed building is pursued here, interior exhibits could incorporate high quality imagery and text along with audio, multimedia, and interactive elements. These exhibits would explore the overarching significance of all sub-themes. A trip planning station would focus on orientation of the Basin and recreation opportunities available to visitors. Audio components should include different perspectives on the significance of the Galisteo Basin.

Alternatively, if an unstaffed facility with restrooms is pursued here, more extensive exterior exhibits would be called for. In that scenario, exhibits might not rely on electronic components, as this isolated location might be a target for vandalism. A cadre of dedicated community stewards who provide regular patrol and presence might offset this risk.

Consider how the railroad depot could be incorporated into the concept of a visitor information hub, at minimum providing trail connectivity between Lamy Open Space and the village of Lamy.

THEME DELIVERY @ LAMY

Interpretive Media @ LAMY	The Galisteo Basin is an inspirational and fragile landscape, shaped by many processes and cultures, and imbued with a deep sense of time and place.		
	A confluence of cultures through time	Landforms, lifeforms and ecosystems reflect the unique geography of the Basin	A place for exploration and discovery
VISITOR INFO HUB	exhibits (graphics and audio) present an overview of human presence and land uses in the Basin.	exhibits (multimedia) use flyover imagery with narration to offer visitors an aerial (bird's eye view) perspective of the Basin and its landforms.	- exhibits (graphics and possible artifacts) showcase the contributions of archaeological research in the Basin). - exhibits (interactive) invite visitors to share how the Basin is meaningful to them. - orientation/trip planning area provides an overview of recreation opportunities in the Basin, including trail map (panel, print and downloadable). - gathering area serves as a venue/staging area for field trips and events to showcase archaeological sites and features.

SANTA FE RAIL TRAIL INTERPRETIVE SITE PLAN

PROPERTY DESCRIPTION

When complete, this ___-mile long trail will serve as a direct connection between downtown Santa Fe (Railyard) and the Galisteo Basin (via Thornton Ranch). As of May 2016, approximately 18.1 miles of multi-use trail along the AT&SF Rail line¹ between the City of Santa Fe and Lamy are open to use, while another ___ percent is approved for trail design and construction (pending funding). Hiking, biking and equestrian use is permitted on this trail.

Opportunity: The trail can be seen as a "way in" to the Galisteo Basin, and is thus a fitting place to provide a "sense of place" overview of the Basin's exceptional qualities. The trail is used primarily by local residents. Consider incorporating changing interpretive components for these mostly repeat users.

Challenge: Trail users will be "moving through" and will need to be induced to stop at interpretive signage. Consider installing at naturally shady spots.

LOCATION-SPECIFIC AUDIENCE SEGMENTS

Currently and at full build-out, this asset has the potential to welcome:

- Primarily Resident and Some Visiting Mountain Bikers who access the trails of the Galisteo Basin Preserve and Eldorado.
- Primarily Resident and Some Visiting Hikers,
- Resident Equestrians

More information about how mountain bikers and equestrians use this trail is needed in order to more fully understand how interpretation might best relate to them.

¹ An excursion train had provided rail service between Santa Fe and Lamy in the past, but is no longer offered as of October 2014. When running, the train was a popular tourism asset. As of this writing, there are no plans to resume the service.



SANTA FE RAIL TRAIL Map

INTERPRETIVE GOALS AND LOCATION-SPECIFIC OBJECTIVES

INTERPRETIVE GOAL 1: Increase public knowledge and appreciation of the natural and cultural resources of the Galisteo Basin.

Rail Trail Objective A: Visitors will understand the basic geography of the Galisteo Basin, and its main physical features.

Rail Trail Objective B: Visitors will understand that federal, state, and county agencies, as well as private landowners, are working together to preserve open spaces and natural and cultural resources in the Galisteo Basin.

INTERPRETIVE GOAL 3: Increase understanding of the dynamic relationship between humans and the environment, and the impacts of human activity on the highly sensitive natural and cultural resources of the Galisteo Basin Open Space properties.

Rail Trail Objective A: Visitors will know that there are a number of different sites encompassed by the Open Space Trails and Parks Program and that these provide a spectrum of recreational opportunities.

SANTA FE RAIL TRAIL INTERPRETIVE SITE PLAN

INTERPRETIVE GOAL 4: Develop and strengthen support for the conservation, management, and restoration of open space lands in the Galisteo Basin, including the protection and restoration of biodiversity, native habitats, wildlife corridors, and soil resources.

Rail Trail Objective A: Visitors will understand that open space properties in the Galisteo Basin are part of a nationally significant wildlife corridor and contribute to biodiversity.

LOCATION-SPECIFIC INTERPRETIVE MEDIA

Interpretive Orientation Prompts

For users covering a lot of miles on this trail, interpretation should be succinct and packaged with orientation and wayfinding information. These trail users are primarily residents of Santa Fe and would benefit from interpretation that focuses on deepening their sense of regional identity. This "prompt" approach could be used to notify trail users they are entering the Galisteo Basin and provide an overview of the central theme. A QR code or a weblink could be included to



Example of trail junction along the SANTA FE RAIL TRAIL

encourage trail users to download a geo-referenced pdf map.

Wayside Panels

For short-distance trail users, consider installing interpretive wayside panels at key trail junctions, especially where seating is also available.

THEME DELIVERY @ SANTA FE RAIL TRAIL

Interpretive Media @ SANTA FE RAIL TRAIL	The Galisteo Basin is an inspirational and fragile landscape, shaped by many processes and cultures, and imbued with a deep sense of time and place.		
	A confluence of cultures through time	Landforms, lifeforms and ecosystems reflect the unique geography of the Basin	A place for exploration and discovery
INTERPRETIVE ORIENTATION PROMPTS	upright sign panels introduce visitors to the Basin, and briefly address all sub-themes. Emphasis is on the Basin being valued and considered as sacred ground, and orientation and etiquette, with minimal text		
WAYSIDE PANELS @ KEY JUNCTIONS	low profile signs present the various cultures that have appeared in the Basin	low profile signs introduce the Basin as an important corridor for migrating wildlife	

THORNTON RANCH OS INTERPRETIVE SITE PLAN

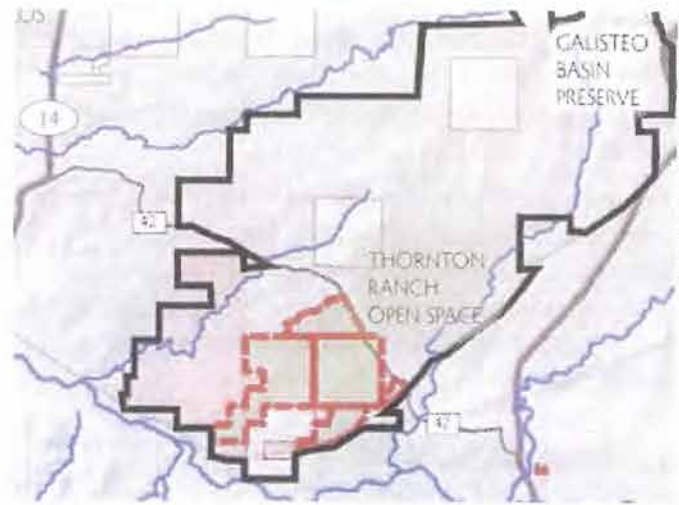
PROPERTY DESCRIPTION

This property was once part of the much larger 17,000-acre Thornton Ranch. The open space preserve includes a total of 2,600 acres, including 700 acres of BLM and State inholdings managed by the County. Pending the approval of a master plan (currently in development), the property will be open to public access on a new trail system providing connectivity between the Galisteo Basin Preserve (a conservation-minded housing development with a public trail network) to the north and BLM land to the west, as well as to the Santa Fe Rail Trail

The property includes a site protected by the Galisteo Basin Archaeological Sites Protection Act of 2004. While the site is closed to public access, the County has been offering up to six guided tours per year to this archaeological site and maintains an extensive list of interested individuals. The trail system proposed in the master plan for the property avoids these archaeological resources as a means of protection, while respecting the wishes of the tribes who, during discussions, have emphasized the sacred nature of this particular site.

While general public access to the archaeological site will never be permitted, guided access for small groups will continue to occur via seasonal docent-led hikes.

In addition to a focus on its archaeological and native significance, interpretive opportunities present at Thornton Ranch include historic ranching infrastructure such as windmills, fences, stone remains of shepherd shelters, and a ranch house, as well as historic railroad structures (including alignments and culverts). The abandoned Kennedy town site is also located adjacent to and within view of the proposed trail route. This settlement was located at a key juncture in the railroad where the New Mexico Central Railroad crossed the Atchison-Topeka & Santa Fe Railroad. Here, between 1903 and 1955, cattle, beans and passengers were unloaded from one train and put on the other. The original train depot building was moved to today's Eldorado, where it continues to serve as the community's activity center. The property also offers excellent views of the surrounding mountains.



THORNTON RANCH OPEN SPACE Site Map

Opportunity: Thornton Ranch Open Space provides an opportunity to compare and contrast different ways of living on the land. Wildlife living here or passing through, native people in Pueblo cultures, ranchers and railroaders all have experienced needs, impacts, and connections to a larger community. Understanding and picturing the day-to-day life of people who have come before us, as well as the lifeways of the non-human residents of the Thornton Ranch area, can inform what we do to sustain life for ourselves and for future residents of the Galisteo Basin.

Opportunity: The proposed trail system at Thornton Ranch has the potential to connect many miles of trails traversing the Basin, and provide a smaller, localized network of trails for deeper exploration of Thornton Ranch by foot, bike, or horseback. The site's proposed trails and amenities, as proposed in the master plan, create one of only two current recreation destinations in the Basin. Interpretive opportunities can take the emphasis off of the vulnerable archaeological and native resources by featuring stories of the Basin's geology, wildlife corridors, and railroad and ranching history.

Challenge: The property includes a federally-protected archaeological resource of cultural significance to more than a dozen Native American tribes. Integrity of the site's extensive rock art images and the site's overall sacred nature would be damaged by public disclosure and access. Discussion of the main visible geological feature from other areas of the

THORNTON RANCH OS INTERPRETIVE SITE PLAN

property may draw attention to this archaeological resource. Further, any interpretation of the archaeological resources must be developed only through input and consultation with tribal partners.

Challenge: By opening up Thornton Ranch to public access, there will be increased risk of vandalism to protected archaeological sites. Etiquette signs at the trailhead and key trail entrances should emphasize staying on the trail, and that remote video surveillance takes place at protected archaeological sites.

LOCATION-SPECIFIC AUDIENCE SEGMENTS

Thornton Ranch OS is currently closed to general public access. Docent-led tours of the archaeological resources occur periodically during the summer season. Once the trail system is constructed and open for public use, this site has the potential to welcome:

- Resident and Visiting Mountain Bikers who access the trails of the Galisteo Basin Preserve and Santa Fe Rail Trail;
- Destination Travelers interested in historic sites, who will be attracted to the property if marketed well;
- Day-Trippers who may make a special trip to experience the latest addition to the County's Open Space assets;
- Archaeology Buffs continuing to attend guided tours of the archaeological resources;
- Students arriving at the property as part of a school field trip to see the historic and pre-historic resources.

INTERPRETIVE GOALS AND LOCATION-SPECIFIC OBJECTIVES

INTERPRETIVE GOAL 1: Increase public knowledge and appreciation of the natural and cultural resources of the Galisteo Basin.

Thornton Ranch Objective A: Visitors will understand the basic geography of the Galisteo Basin, and its main physical features.

Thornton Ranch Objective B: Visitors will understand that federal, state, and county agencies, as well as private landowners, are working together to preserve open spaces and natural and cultural resources in the Galisteo Basin.

Thornton Ranch Objective C: Visitors will know that archaeological sites and features in the greater Galisteo Basin are protected by the Galisteo Basin Archaeological Sites Protection Act.

INTERPRETIVE GOAL 2: Increase awareness of and appreciation for the significance of the Galisteo Basin to American Indian cultures over time.

Thornton Ranch Objective A: Visitors will understand that prior to Spanish contact, more than 10,000 native people lived and farmed in several Basin pueblos, and the Basin served as a regional trade route.

Thornton Ranch Objective B: Visitors will be able to describe, in general terms, why the mountains surrounding the Basin are sacred to American Indian tribes throughout the region.

Thornton Ranch Objective C: Visitors will be able to describe at least one Galisteo Basin mineral so valuable it was used as a trade good by native peoples (turquoise, malachite, lead).

Thornton Ranch Objective D: Visitors will be able to describe one or more inter-cultural conflict(s) experienced by the native people of the Basin (Apache and Navajo raids, Spanish colonization).

THORNTON RANCH OS INTERPRETIVE SITE PLAN

INTERPRETIVE GOAL 3: Increase understanding of the dynamic relationship between humans and the environment, and the impacts of human activity on the highly sensitive natural and cultural resources of the Galisteo Basin Open Space properties.

Thornton Ranch Objective A: Visitors will understand that access to specific sites and features may be limited as a means of protecting archaeological resources.

Thornton Ranch Objective B: Visitors will understand the importance of the Galisteo Basin to Native American cultures through time, including the present.

Thornton Ranch Objective C: Visitors will understand how geographical features had and still have spiritual significance in Native American cultures and consider how landscape features have significance in their own lives as places of reflection, insight and respite.

Thornton Ranch Objective D: Visitors will know that the site was once part of an extensive ranching operation.

Thornton Ranch Objective E: Visitors will know that the Kennedy station was once bustling with activity, and a key location for railroad transportation through the region.

Thornton Ranch Objective F: Visitors will be able to describe how the steam locomotive irreversibly altered local economies, land values, jobs, and long-established ways of life.

Thornton Ranch Objective G: Visitors will be able to describe what was transported on the Thornton area railroads, and the network of trade of which this area was an integral part.

INTERPRETIVE GOAL 4: Develop and strengthen support for the conservation, management, and restoration of open space lands in the Galisteo Basin, including the protection and restoration of biodiversity, native habitats, wildlife corridors, and soil resources.

Thornton Ranch Objective A: Visitors will understand that open space properties in the Galisteo Basin are part of a nationally significant wildlife corridor and contribute to biodiversity.

Thornton Ranch Objective B: Visitors will be able to cite ways that availability of water affected land uses in the Basin.

INTERPRETIVE GOAL 6: Provide an improved visitor experience by strengthening the bonds between Galisteo Basin residents and visitors and the past that surrounds them.

Thornton Ranch Objective A: Visitors will have all of the information they need to safely, legally, and responsibly recreate in the areas where managers allow use to occur.

Thornton Ranch Objective B: Visitors will express an interest in returning to Open Space, Trails and Parks Program properties and participating in another interpretive or recreational activity.

INTERPRETIVE GOAL 7: Promote respect by strengthening stewardship values and increasing compliance with regulations.

Thornton Ranch Objective A: Visitors will cite at least one example of how to recreate responsibly.

Thornton Ranch Objective B: Visitors will feel an increased sense of obligation for natural and cultural resource preservation, and a shared sense of stewardship.

Thornton Ranch Objective C: Visitors will understand that publishing photographs of archaeological resources contributes to their degradation.

Thornton Ranch Objective D: Reports of site vandalism will steadily decrease.

THORNTON RANCH OS INTERPRETIVE SITE PLAN

LOCATION-SPECIFIC INTERPRETIVE MEDIA

Trailhead Orientation

Interpretive panels located at the trailhead will welcome visitors to the property, and convey what activities are allowed there and what is expected of visitors. Interpretation will establish Thornton Ranch as a place with a long history of human occupation.

Consider a thematic custom sign frame as a main feature in the entry area that evokes ranching heritage and introduces the importance of water as the key to human and animal habitation. Visitors would see interpretive and orientation panels mounted on all sides of the column, and a stylized windmill piece at the top of the column.

Interpretive Wayside Exhibits

Located along the proposed trail network will be a series of five to seven wayside exhibits. These exhibits will be located at or near historic assets and will tell the stories of ranching and railroad history on the property. Interpretive content will bring the past alive by describing the activities, sights, sounds and smells that occurred there in the past, and relate historical persons' lifestyles to those of today's visitors. Consider incorporating solar-powered audio elements into the wayside exhibits to bring in thematic narratives (such as cattle herds and steam engines). A QR code or mobile app icons could add multimedia and/or interactive content as well, although cell phone reception should be considered at each wayside location.

Docent-Led Hikes

Periodic docent-led hikes will provide guided visitor access to areas not accessible by trail. These cross-country, strenuous hikes will interpret the site in a holistic manner, weaving together the Basin's geology, role as wildlife corridor, and archaeological significance. A docent toolkit developed for the project site, along with periodic interpretive training, will provide a consistent resource for docents.

THEME DELIVERY @ THORNTON RANCH

Interpretive Media @ THORNTON RANCH	The Galisteo Basin is an inspirational and fragile landscape, shaped by many processes and cultures, and imbued with a deep sense of time and place.		
	A confluence of cultures through time	Landforms, lifeforms and ecosystems reflect the unique geography of the Basin	A place for exploration and discovery
TRAILHEAD ORIENTATION	• signage provides an overview of etiquette and orientation to the trails, while introducing the main sub-themes		
WAYSIDE EXHIBITS	• small (~18" x 24" max) wayside panels to be located within sight of Kennedy Station and ranching artifacts and features. Interpretation describes how the steam locomotive altered local economies, land values, jobs, and long-established ways of life, as well as highlights of the ranching lifestyle.		
DOCENT-LED HIKES	• docent-led hikes showcase thematic resources located off trail, including petroglyphs	• docent-led hikes showcase thematic resources located off trail, including prominent geological features and arroyos as important wildlife pathways	

ORTIZ MOUNTAINS EP INTERPRETIVE SITE PLAN

PROPERTY DESCRIPTION

The Ortiz Mountains Educational Preserve is a 1,350-acre property located in the Ortiz Mountains adjacent to an active gold mine reclamation site owned by LAC Minerals. The Open Space parcel includes the upper reaches of the Ortiz Mountains, including Placer Peak, the highest peak in the range at 8,897 feet. The property, originally donated to the Santa Fe Botanical Garden (SFBG) to manage the site as an educational preserve, was acquired by the County in 2007. SFBG continued to provide management of the property and guided tours through 2015, with approximately 300 participants annually.

Access to the property is via 2.5 unmaintained miles of road easement through the LAC Mineral property. The road is a concern due to its primitive, unmaintained status. While volunteer docents have led guided tours and hikes at the property in the past using the road, safety and liability concerns caused the SFBG to relinquish involvement. In 2015, County staff took over site tours, using County vehicles only. A management plan is currently underway for the property, and is considering access alternatives.

The property features a picnic area, kiosk, parking area, portable restroom, and several interpretive signs. Interpretive opportunities here include high elevation "Sky Island" ecology, geology, Native American, and mining history. Numerous historic mining artifacts are present on the property, and the visitor is rewarded with outstanding views of the entire Coliasedo Basin. Also within the viewshed is the historic mining community of Dolores, home to the first stamp mill in New Mexico.

Opportunity: A multilayered and nuanced story can be told of the many different ways people have responded to the Ortiz Mountains and the riches they offer. With a backdrop of historic mining artifacts and modern reclamation efforts, visitors have the opportunity to reflect on what we value for the long term, the costs and benefits of resource extraction, and stewardship of the things that sustain us.

Challenge: The road into the property is hazardous and there are significant liabilities associated with its use. Docents must be cross-trained in geology, history, mining methods and reclamation, and ecology.



ORTIZ MOUNTAINS EDUCATIONAL PRESERVE
Site Map

LOCATION-SPECIFIC AUDIENCE SEGMENTS

The site is currently closed to general public access. Docent-led hikes of the property occur periodically summer through fall. Through docent-led hikes, the site will continue to welcome:

- **Destination Travelers** interested in historic sites, who will be attracted to the property if marketed well;
- **Day-Trippers**, who may make a special trip to experience an exclusive Open Space asset;
- **Mining and Geology Buffs**, who will continue to attend guided tours of the historic mining area.

ORTIZ MOUNTAINS EP INTERPRETIVE SITE PLAN

INTERPRETIVE GOALS AND LOCATION-SPECIFIC OBJECTIVES

INTERPRETIVE GOAL 1: Increase public knowledge and appreciation of the natural and cultural resources of the Galisteo Basin.

Ortiz Objective A: Visitors will understand the basic geography of the Galisteo Basin, and its main physical features, including the geology of the Ortiz Mountains.

Ortiz Objective B: Visitors will be able to cite something new they've learned about the natural and cultural resources of the Galisteo Basin.

INTERPRETIVE GOAL 2: Increase awareness of and appreciation for the significance of the Galisteo Basin to American Indian cultures over time.

Ortiz Objective A: Visitors will understand that prior to Spanish contact, more than 10,000 native people lived and farmed in several Basin pueblos, and the Basin served as a regional trade route.

Ortiz Objective B: Visitors will be able to describe, in general terms, why the mountains surrounding the Basin are sacred to American Indian tribes throughout the region.

Ortiz Objective C: Visitors will be able to describe at least one Galisteo Basin mineral so valuable it was used as a trade good by native peoples (turquoise, malachite, lead).

Ortiz Objective D: Visitors will be able to describe one or more inter-cultural conflict(s) experienced by the native people of the Basin (Apache and Navajo raids; Spanish colonization).

INTERPRETIVE GOAL 3: Increase understanding of the dynamic relationship between humans and the environment, and the impacts of human activity on the highly sensitive natural and cultural resources of the Galisteo Basin Open Space properties.

Ortiz Objective A: Visitors will be able to cite how the gold mining economy was related to the development and decline of nearby towns.

Ortiz Objective B: Visitors will know that the early gold from the Ortiz Mountains was transported around the world via the Santa Fe Trail.

Ortiz Objective C: Visitors will understand that mining has long-lasting environmental impacts and will be able to describe reclamation efforts.

Ortiz Objective D: Visitors will understand in general terms the role of water in various mining activities, and the impacts of mining on water conservation and quality.

Ortiz Objective E: Visitors will understand and respect that certain areas of the OMEP (and other OS properties) are culturally sensitive and therefore closed to visitor use.

INTERPRETIVE GOAL 4: Develop and strengthen support for the conservation, management, and restoration of open space lands in the Galisteo Basin, including the protection and restoration of biodiversity, native habitats, wildlife corridors, and soil resources.

Ortiz Objective A: Visitors will understand the unique qualities of a Sky Island, the significance of dramatic elevation change to plant and animal life, and the importance of Sky Islands to migrating animals as well as the biodiversity of the region.

Ortiz Objective B: Visitors will be able to give several examples of the concept of life zones.

Ortiz Objective C: Visitors will express appreciation of and/or support for the County's conservation of key Open Space properties such as the OMEP.

INTERPRETIVE GOAL 5: Increase public knowledge and appreciation of Santa Fe County's leadership in community-based resource conservation and sustainable design.

INTERPRETIVE GOAL 6: Provide an improved visitor experience by strengthening the bonds between Galisteo Basin residents and visitors and the past that surrounds them.

INTERPRETIVE GOAL 7: Promote respect by strengthening stewardship values and increasing compliance with regulations.

ORTIZ MOUNTAINS EP INTERPRETIVE SITE PLAN

LOCATION-SPECIFIC INTERPRETIVE MEDIA

Docent-Led Hikes

Periodic guided tours of the property will continue, and will follow the guidelines established in the docent toolkit for the site.

THEME DELIVERY @ ORTIZ MOUNTAINS

Interpretive Media @ ORTIZ MOUNTAINS	The Galisteo Basin is an inspirational and fragile landscape, shaped by many processes and cultures, and imbued with a deep sense of time and place.		
	A confluence of cultures through time	Landforms, lifeforms and ecosystems reflect the unique geography of the Basin	A place for exploration and discovery
DOCENT-LED HIKES	• docent-led hikes showcase thematic resources related to historic and contemporary mining and reclamation, including: • miners had a hard life • who made the money? miners or storeowners and suppliers? • environmental effects of mining • colorful characters in the mining camps and communities	• docent-led hikes showcase the excellent view of the geography of the Galisteo Basin, including the geology of the Ortiz Mountains. Interpretation also correlates the increase in elevation while hiking to the effect of sky islands to plant and animal species.	

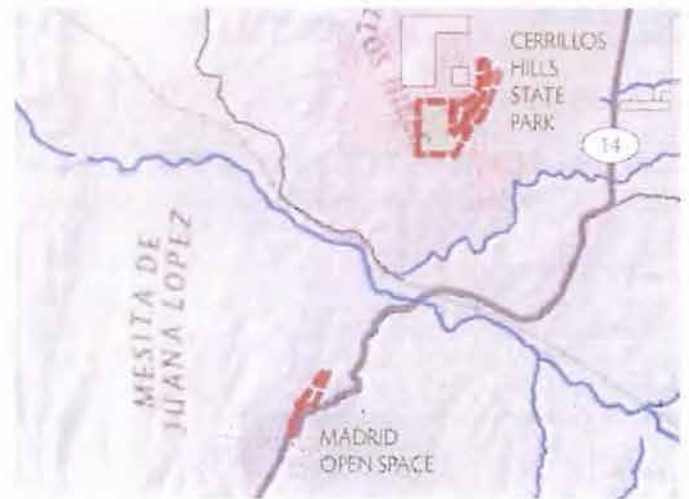
MADRID OS INTERPRETIVE SITE PLAN

PROPERTY DESCRIPTION

The Madrid Open Space property consists of approximately 55 acres located along the main drainage in the community of Madrid. This property includes remnants of the original coal mine and associated infrastructure. It was acquired for its recreational value, and is now in the midst of a management planning process. No interpretation currently exists on the property. Nearby interpretive assets include the Madrid Old Coal Town Museum.

Opportunity: Interpretation must be community driven. There is potential for interpretation of old coal mining equipment and historic properties.

Challenger: Site remediation and safety measures are necessary if the general public is invited to experience this site.



MADRID OPEN SPACE Site Map

LOCATION-SPECIFIC AUDIENCE SEGMENTS

The site is currently used regularly, and will continue to serve:

- Local Residents, who use the property for regular fitness and dog walking.
- Mining and Geology Buffs, who would be interested in seeing the coal mine.

INTERPRETIVE GOALS AND LOCATION-SPECIFIC OBJECTIVES

INTERPRETIVE GOAL 3: Increase understanding of the dynamic relationship between humans and the environment, and the impacts of human activity on the highly sensitive natural and cultural resources of the Galisteo Basin Open Space properties.

Madrid Objective A: Residents will retain a strong sense of the village's mining history.

Madrid Objective B: Residents will be able to cite how the mining economy was related to the development of this community.

INTERPRETIVE GOAL 6: Provide an improved visitor experience by strengthening the bonds between Galisteo Basin residents and visitors and the past that surrounds them.

Madrid Objective A: Visitors will know where to go and how to best experience the Open Space, Trails and Parks Program properties in the Galisteo Basin.

LOCATION-SPECIFIC INTERPRETIVE MEDIA

T&D - must be community driven

THEME DELIVERY @ MADRID

Interpretive Media @ MADRID	The Galisteo Basin is an inspirational and fragile landscape, shaped by many processes and cultures, and imbued with a deep sense of time and place.		
	A confluence of cultures through time	Landforms, lifeforms and ecosystems reflect the unique geography of the Basin	A place for exploration and discovery
T&D			