



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

OCTOBER 2017



ACKNOWLEDGMENTS

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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

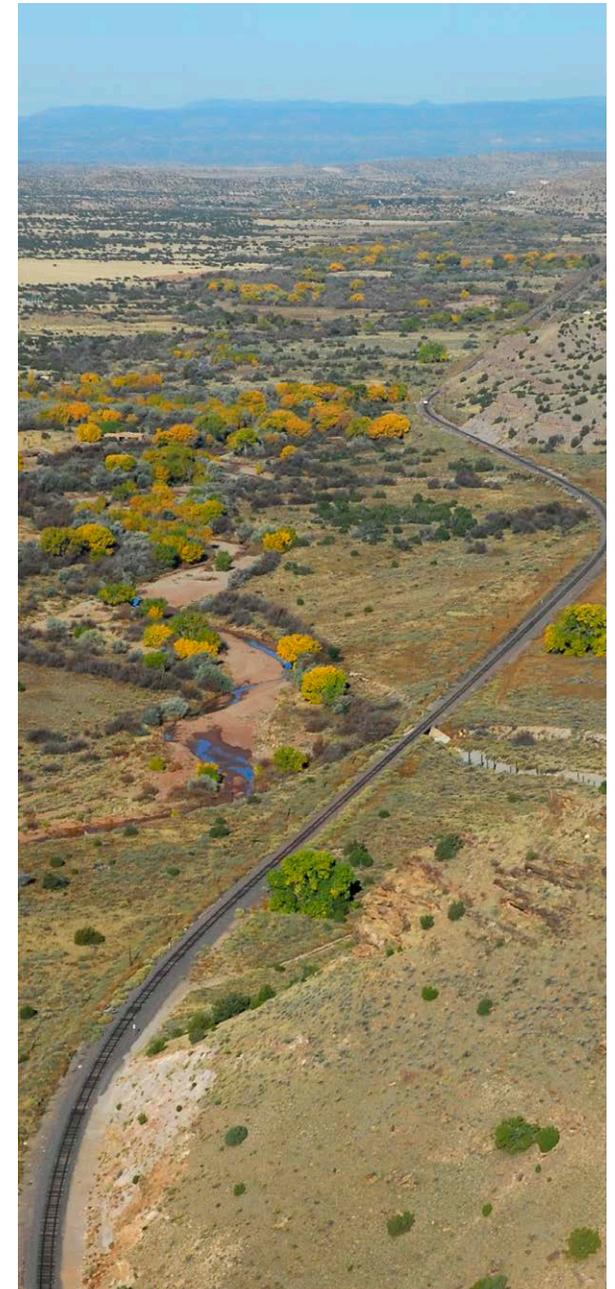
Ecologists/Natural Resources

Equestrians

Hikers/Runners

TABLE OF CONTENTS

1.0 INTRODUCTION	
1.1. Plan Purpose and Need	1
1.2. Property Description	2
1.3. Management Plan Development Process	4
2.0 THORNTON RANCH OPEN SPACE MANAGEMENT PLAN	
2.1. A Vision for Thornton Ranch Open Space	7
2.2. Projects	11
2.2.1 Master Plan Projects	11
2.2.2 Resource Management Projects	13
2.2.3 Key Planning, Research and Policy Development	14
2.2.4 Programming	16
2.3. Monitoring	17
2.4. Resource Management	21
2.4.1 Resource Management Activities and Policies	21
2.5. Communication	27
2.6. Plan Implementation	28
THORNTON RANCH OPEN SPACE APPENDICES	
APPENDIX A: Thornton Ranch Open Space Work Plan	





EXECUTIVE SUMMARY

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.

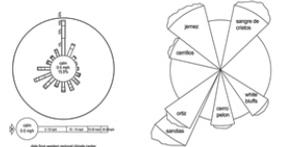
The Thornton Ranch Open Space Management Plan identifies short-term, mid-term, and long-term management priorities for the property. The short term phase focuses on land restoration and management to provide a stable landscape and protected environment. In the mid-to long term, Santa Fe County will work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



THORNTON RANCH OPEN SPACE MASTER PLAN

LEGEND

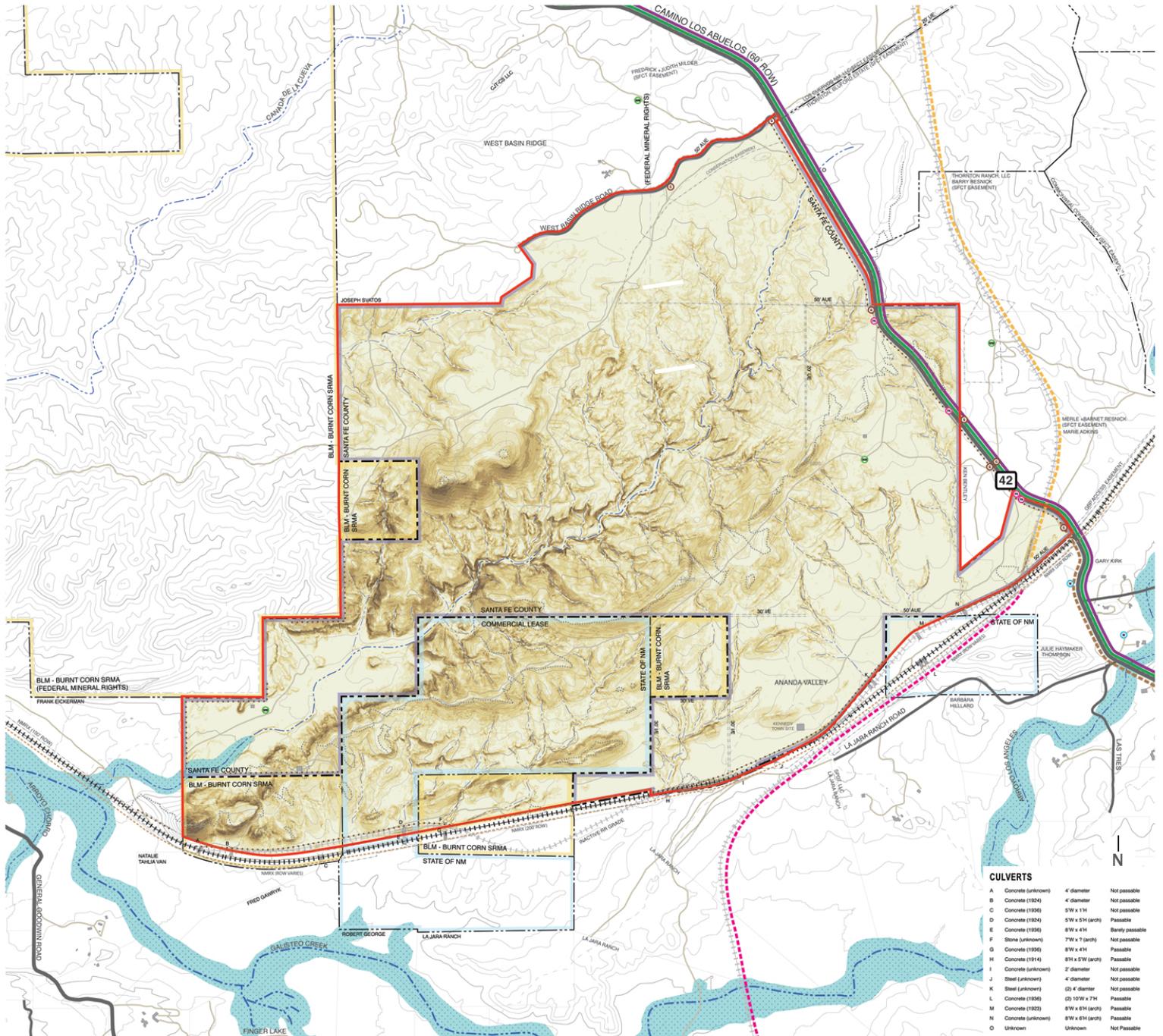
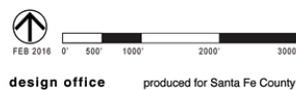
- Master Plan Project Boundary
- County Land Boundary
- State Land Boundary
- BLM Land Boundary
- Commonweal Conservancy Boundary
- Building Footprint
- Road, Major
- Road, Minor
- Road, Dirt (Jeep Trail)
- Easement
- Parcels
- Topography, 20-ft Contour
- Topography, 100-ft Contour
- Drainageway, Major
- Drainageway, Minor
- Railroad, Existing Tracks (active)
- Railroad, Existing Grade (inactive)
- Fence (inventory ongoing)
- Railroad, Powerline
- Scenic Road (County Designated)
- Bike Route (Proposed)
- Trail, Regional (Proposed)
- Trail, Path in ROW (Proposed)
- Potential Open Space Corridor
- Well
- Windmill
- Gate
- 100-year Flood Zone, Zone A Floodway Area
- 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% Mountain Range Viewshed Diagram



FEMA Flood Zone Definitions

Special Flood Hazard Areas (SFHAs) are areas that are expected to be inundated by the flooding from the 1% annual chance flood (also known as the 100-year flood) from any source. SFHAs are shown on maps as areas that are expected to be inundated by the flooding from the 1% annual chance flood (also known as the 100-year flood) from any source. SFHAs are shown on maps as areas that are expected to be inundated by the flooding from the 1% annual chance flood (also known as the 100-year flood) from any source.

DRAFT SITE ANALYSIS MAP ANALYSIS MAP



CULVERTS			
A	Concrete (unknown)	4' diameter	Not passable
B	Concrete (1934)	4' diameter	Not passable
C	Concrete (1936)	5'W x 1'H	Not passable
D	Concrete (1934)	5'W x 5'H (arch)	Passable
E	Concrete (1936)	8'W x 4'H	Barely passable
F	Stone (unknown)	7'W x 7' (arch)	Not passable
G	Concrete (1936)	8'W x 4'H	Passable
H	Concrete (1914)	8'W x 5'H (arch)	Passable
I	Concrete (unknown)	2' diameter	Not passable
J	Steel (unknown)	4' diameter	Not passable
K	Steel (unknown)	(2) 4' diameter	Not passable
L	Concrete (1936)	(2) 10'W x 7'H	Passable
M	Concrete (1932)	8'W x 5'H (arch)	Passable
N	Concrete (unknown)	8'W x 5'H (arch)	Passable
O	Unknown	Unknown	Not Passable

Map 1. Site Analysis

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:

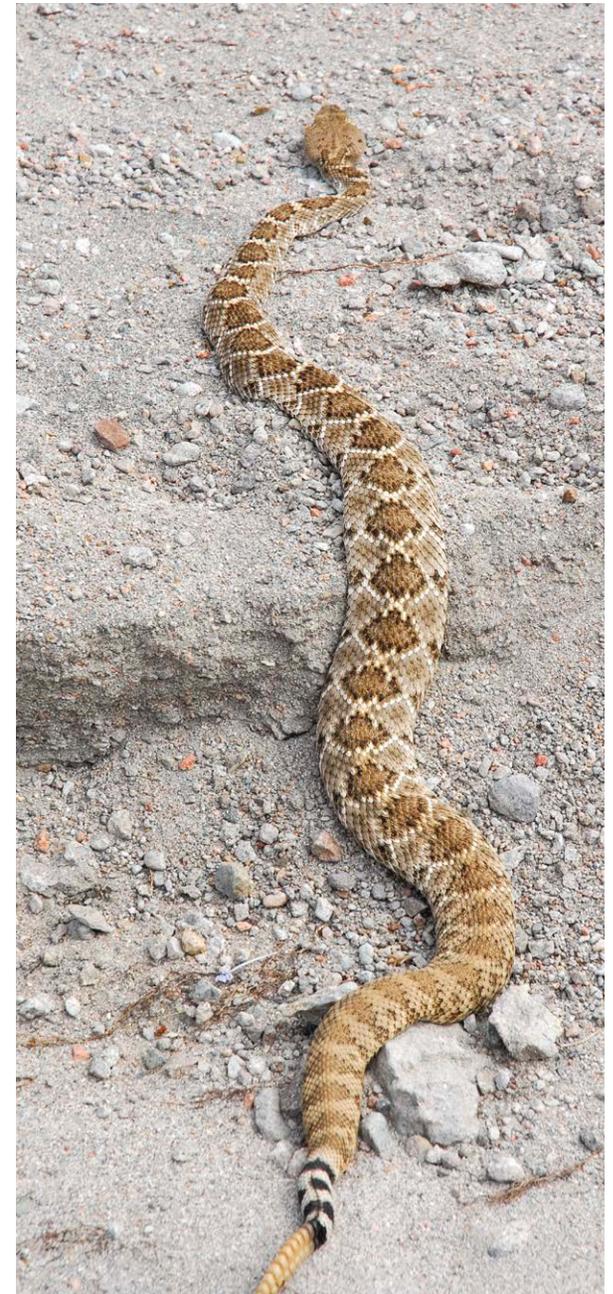
- Describe the vision, goals, and objectives for management of the property;
- Help staff and the public understand terrain conditions and suitability of the land for different uses of the property;
- Clarify priorities for site restoration and maintenance;
- Identify projects for future investment and 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.

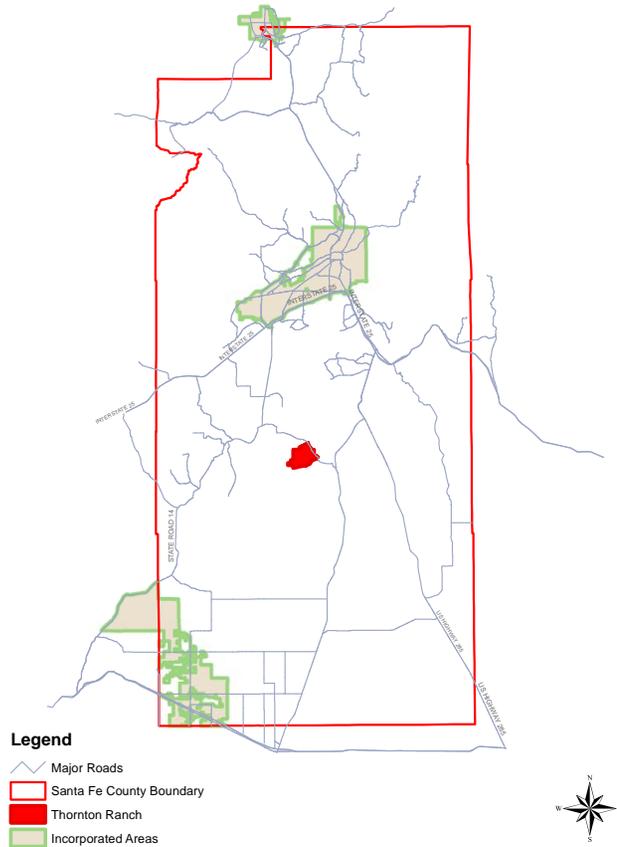


1.2. Property Description

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



Map 2. County Context

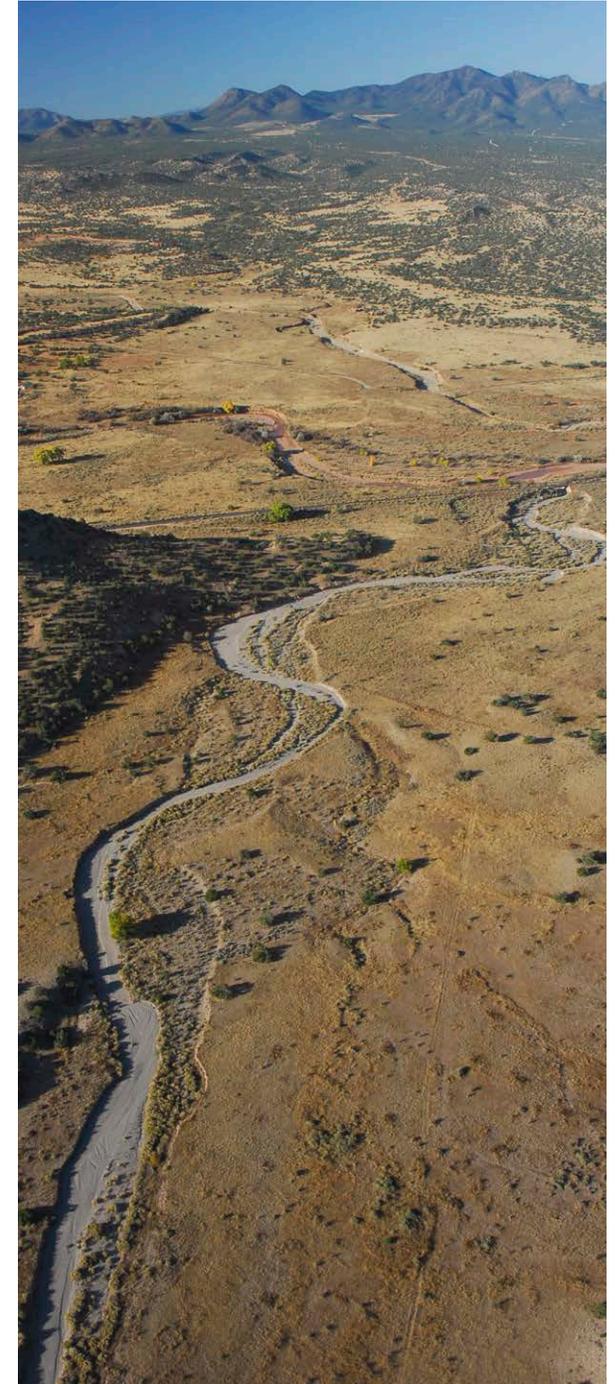
deer which frequent the two water tanks. The site is also a migratory route for cougar. In 2015, RCS Southwest inventoried plant and animal species found on site. Their report includes a list of plant and animal species observed and detected on site as well as a classification of distinct biotic communities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

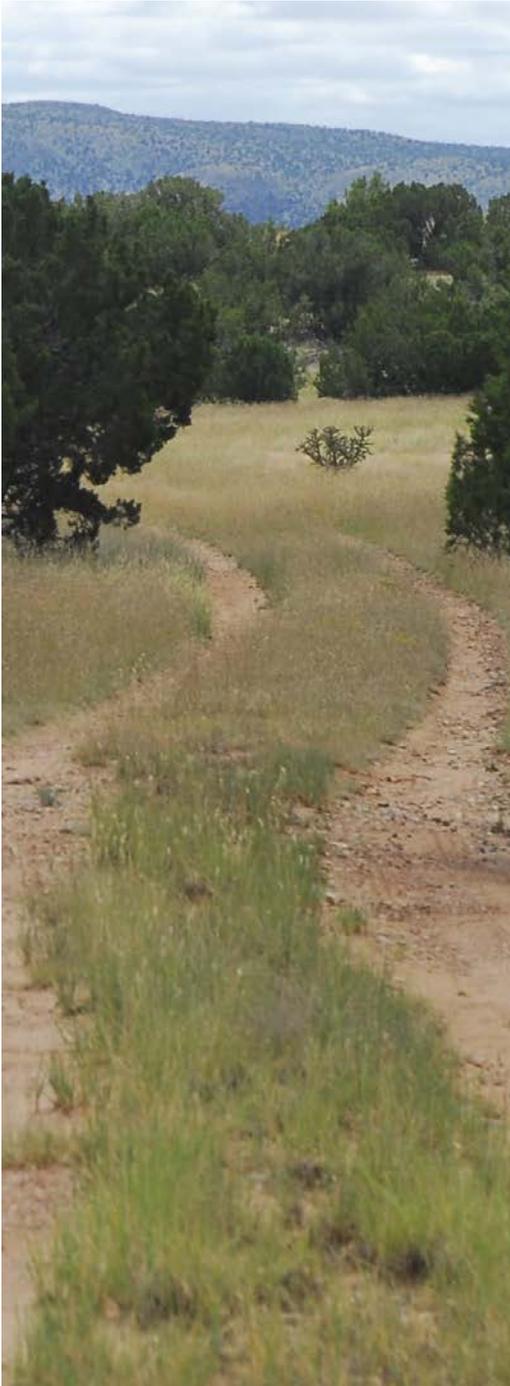
On a broader scale, the Galisteo Basin, a 467,200-acre watershed, has long been recognized for its cultural, archaeological, and natural resources. It is a unique cultural landscape with significant large prehistoric and historic pueblos, Native American rock art, and early Spanish Colonial settlements. 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 Country 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

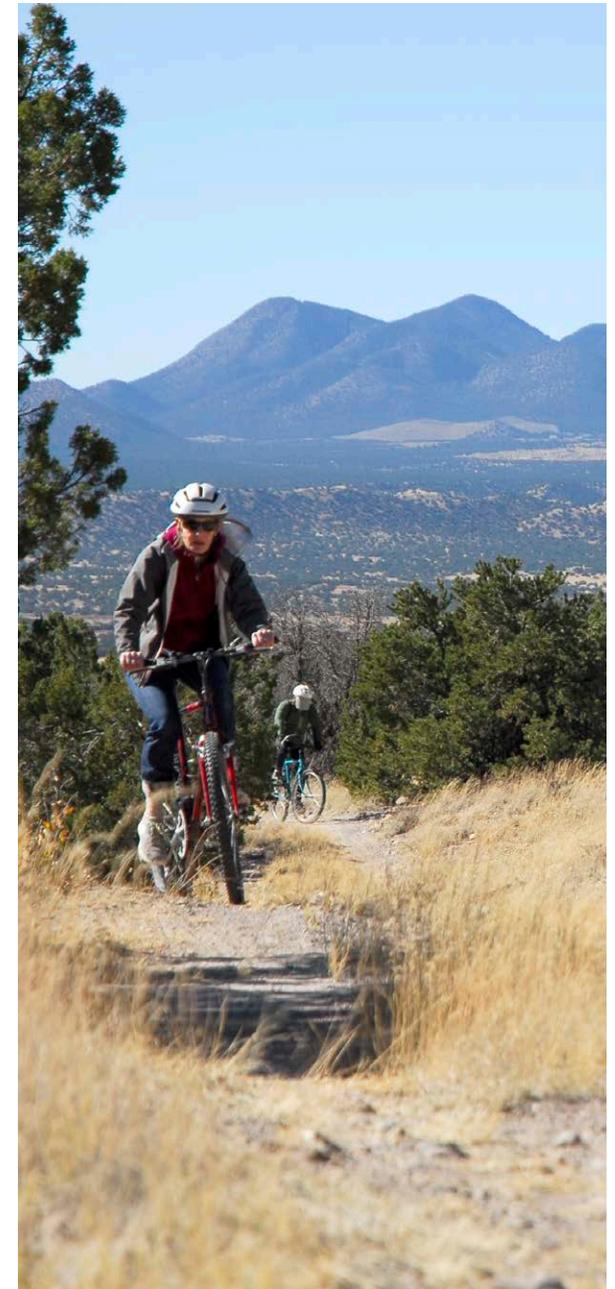
The Master Plan for TROS describes proposed land improvement projects and associated investments to support the TROS vision and management goals. The proposed projects result from stakeholder input and planning opportunities as limited by the suitability of the land. The Master Plan outlines the specific 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.



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

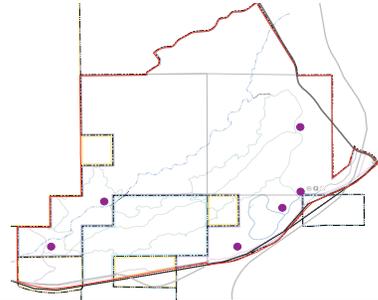
SHORT TERM

PLANNING

MANAGEMENT

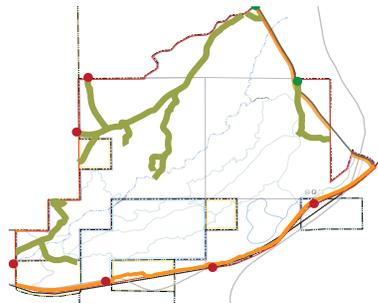
- MOU with BLM
- Business lease with SLO
- Purchase inholdings
- Develop monitoring protocol
- Baseline Assessments
- Special Use Permitting
- Regional Trail along NM Central Line
- Research and Photography Policy

PROGRAMMING



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

RESOURCE MANAGEMENT



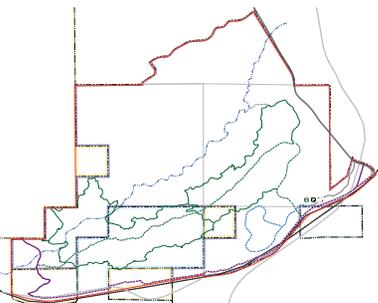
RESTORATION

- Reclaim all ranch roads
- Weed management, remove non-natives
- Erosion Control
- Fencing along CR 42, Railroad

MANAGEMENT

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

IMPROVEMENTS



MASTER PLAN

- Replace windmill near mouth of arroyo
- Install water tank/ wildlife drinkers
- Trailhead/Parking lot
- Trails
- Fence at Rail Road Right-of- Way

MID TERM - LONG TERM

PLANNING

MANAGEMENT

- Land Trade with State Land Office
- State/ National Register

REGIONAL TRAIL PLANNING

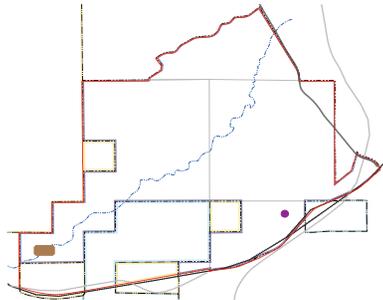
- Collaboration with Commonwealth Conservancy on trail connections
- Scenic Overlook

PROGRAMMING

MANAGEMENT

- Rangers for Interpretation and Patrol

RESOURCE MANAGEMENT



RESTORATION

- Stabilize stone masonry as necessary
- Weed management, remove non-natives
- Erosion Control
- Implement Monitoring Protocol

IMPROVEMENTS

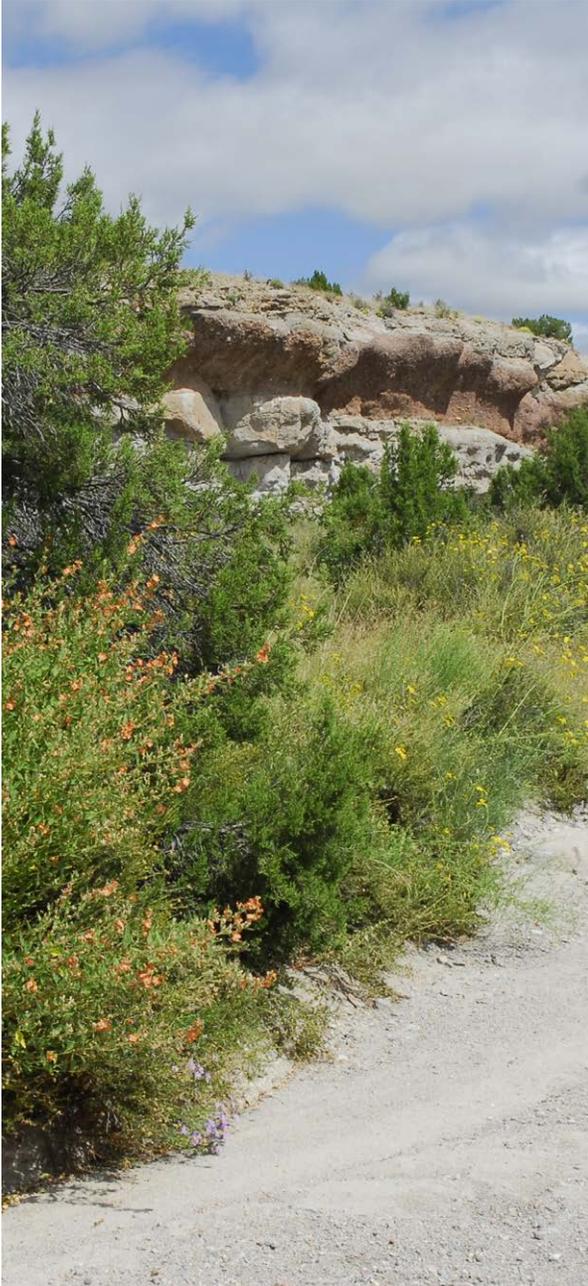
MANAGEMENT

- Maintain 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:

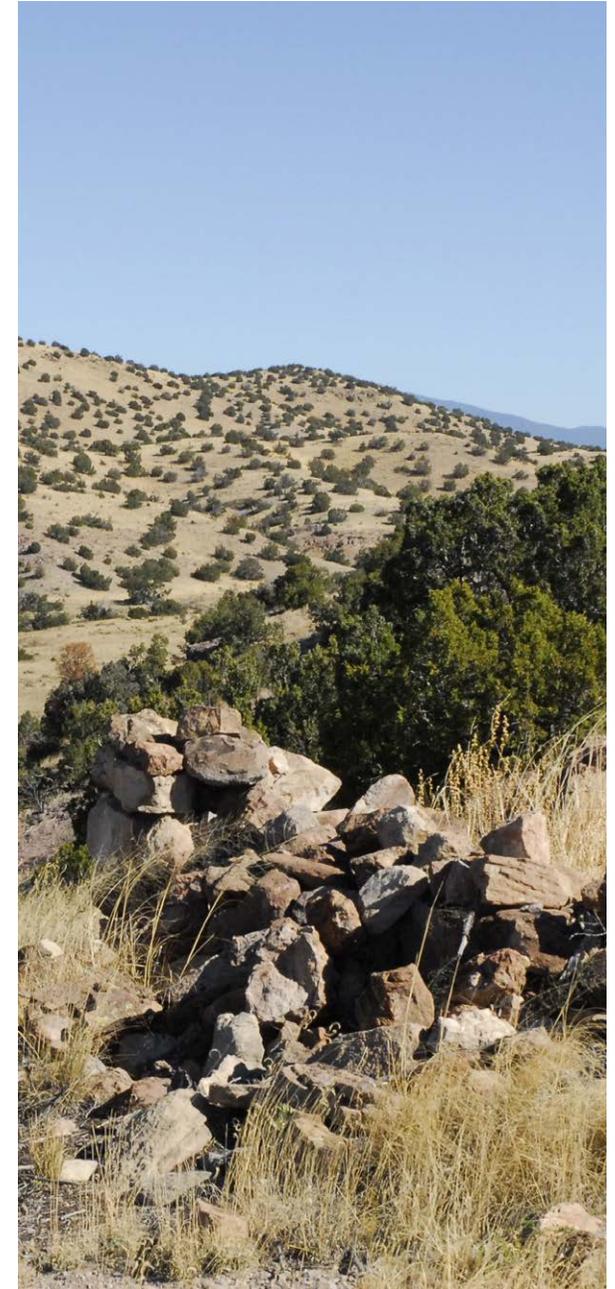
Short-Term

- **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.

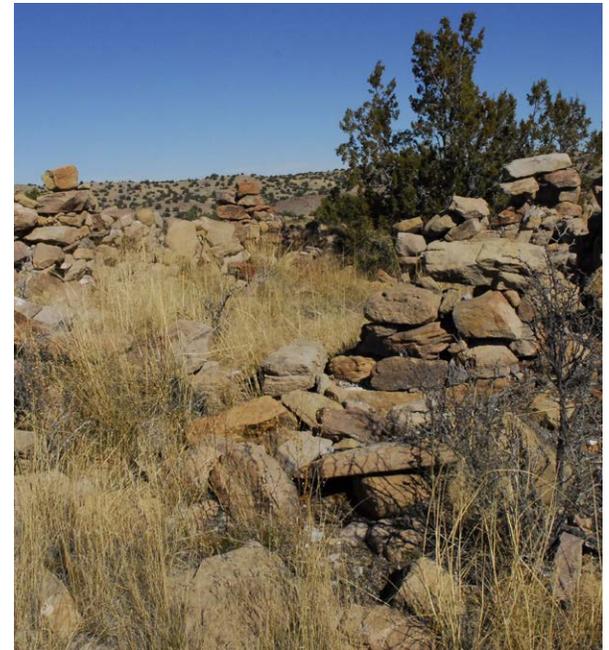
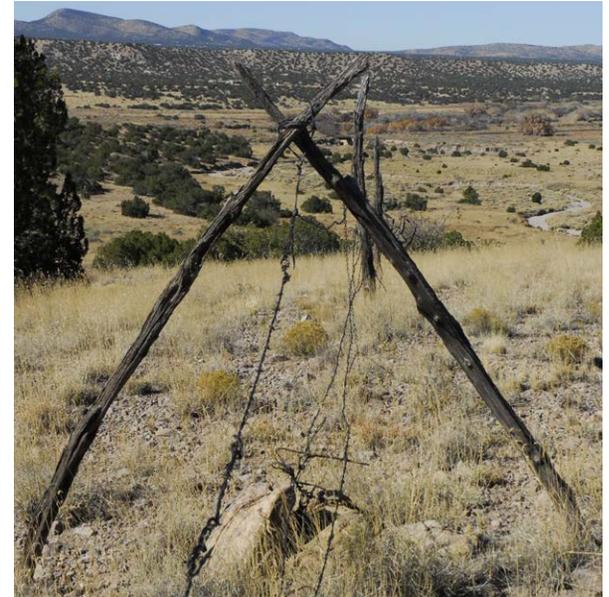
2.3. Monitoring

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 TROS-ROAD	Infrastructure Conditions	Meaningful Public Experience	Visual inspection with checklist, GPS/Photo documentation	Biannually (Spring, Fall)
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:

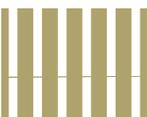
- Collaboration with adjacent properties, agencies and community stewards to leverage working together to address maintenance needs;
- Invest smaller and consistent amounts of time and labor on well-planned maintenance activities;
- Conduct maintenance activities at the optimum time based on monitoring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

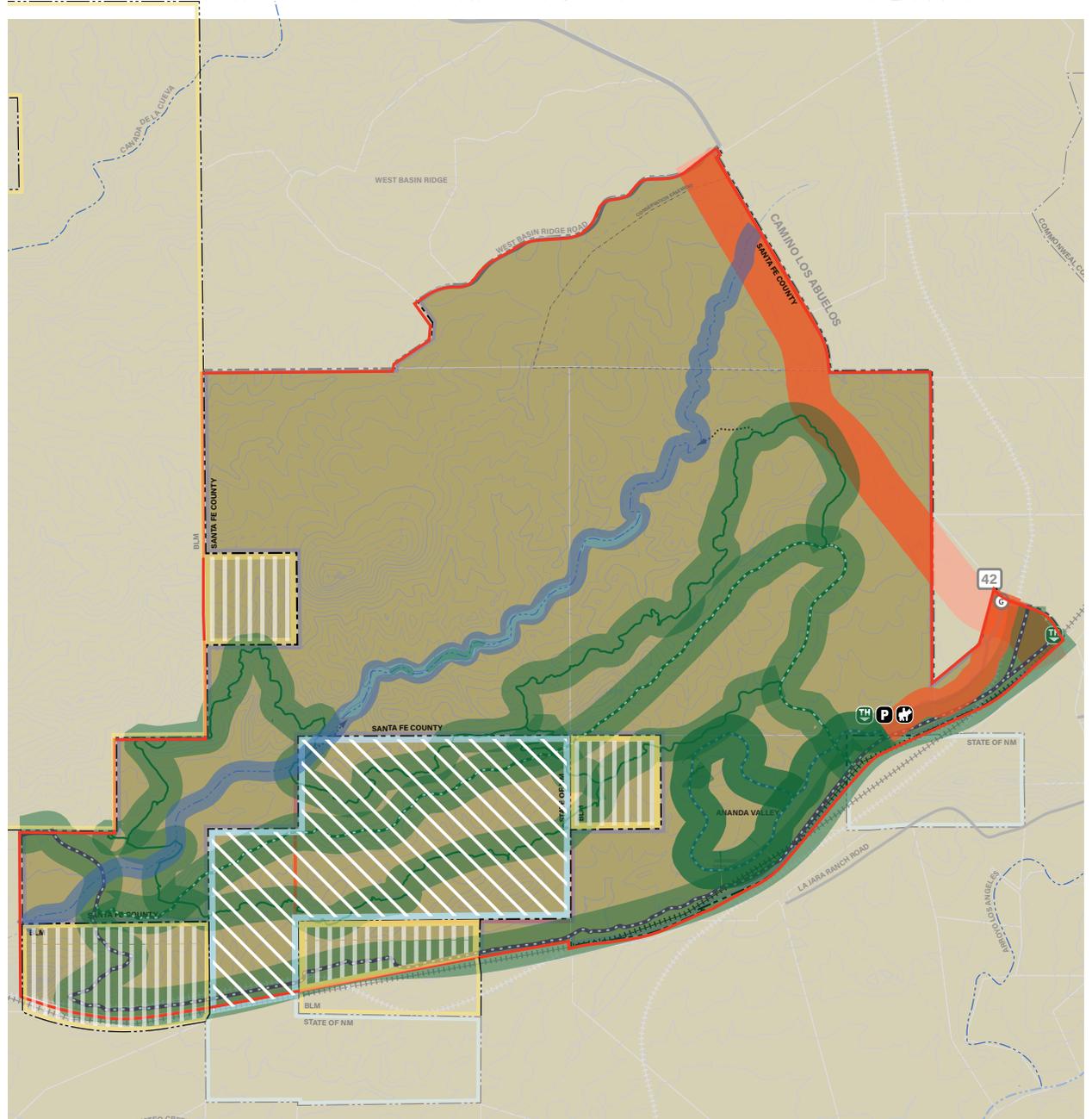
2.4.1 Resource Management Activities and Policies:

- **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 MANAGMENT
	TR-SLO	NM STATE LAND OFFICE



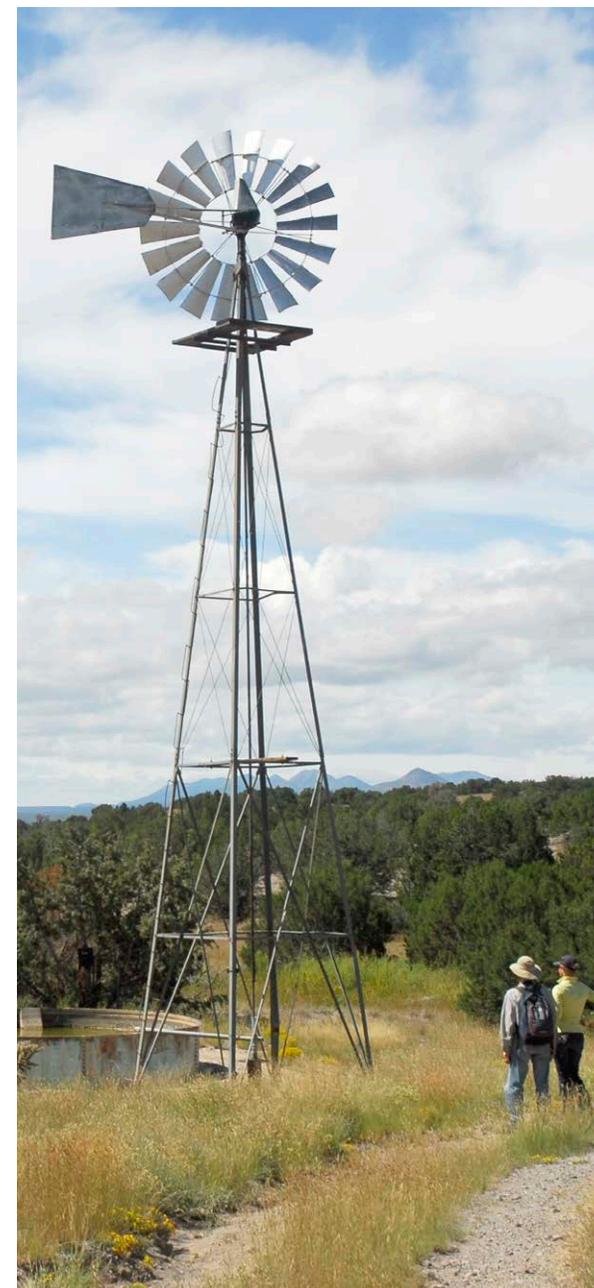
Map 4. Thornton Ranch Open Space--Terrain Management Units Map

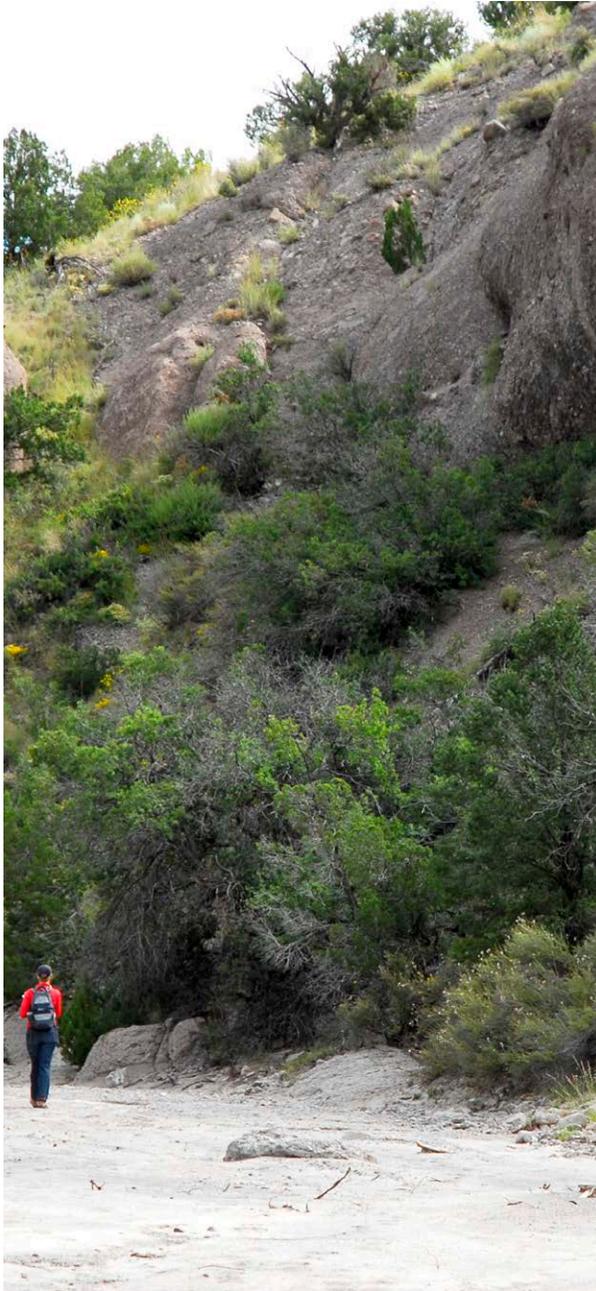
Where	What	Why	When
TMU	Anticipated Regular Maintenance Activities	Objective	Maintenance Frequency*
TROS-PRSV TROS-RIP	Ecological Restoration/Wildlife Habitat Enhancement	Ecosystem Health	Annually
TROS-ROAD TROS-TRL TROS-RIP	Weed Management	Ecosystem Health	Annually
All TMUs	Erosion Control	Ecosystem 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 with in 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

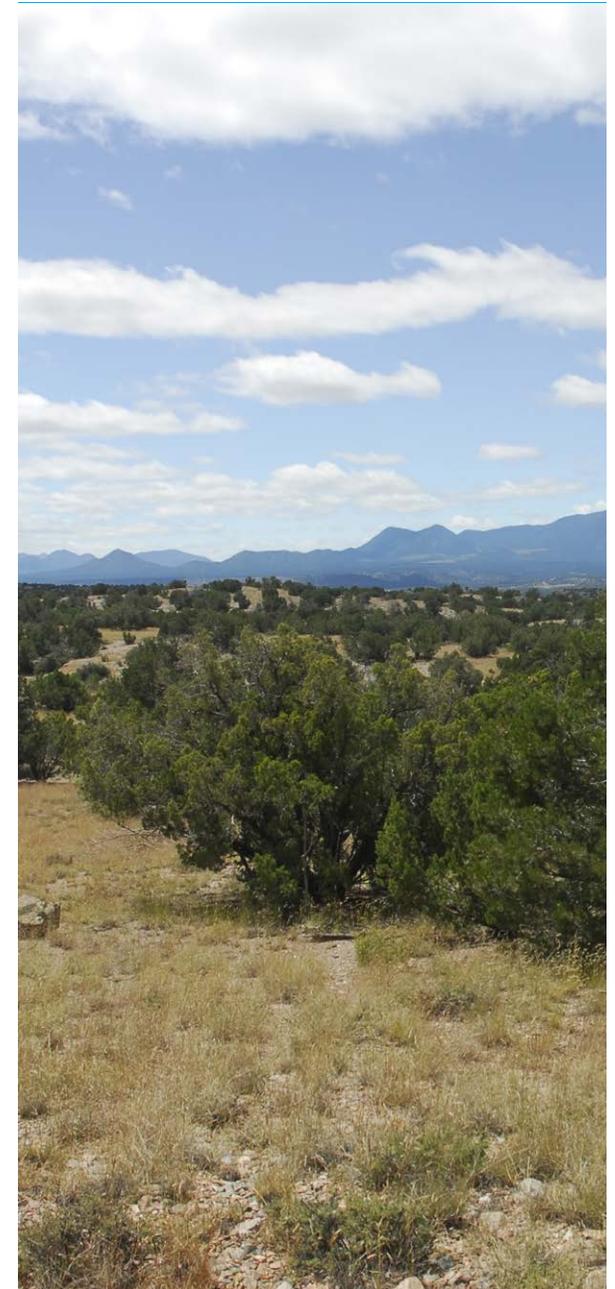
Plan implementation will start by identifying priorities and timelines among staff for activities regarding maintenance, planning and project preparation, community outreach, and community stewardship involvement. Prioritization will be based on balancing the tasks at hand, and the staff and funds available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



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.

