

NEW MEXICO

# Rio Grande Trail

Master Plan

# ACKNOWLEDGEMENTS

## Commissioned by:



## In partnership with:



## Developed by:



## Master Plan Guidance

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Special thanks to the Rio Grande Trail Work Group Chairs and the more than 4 dozen Work Group members who volunteered their time and talent to this process.

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View from the Rio Grande Nature Center

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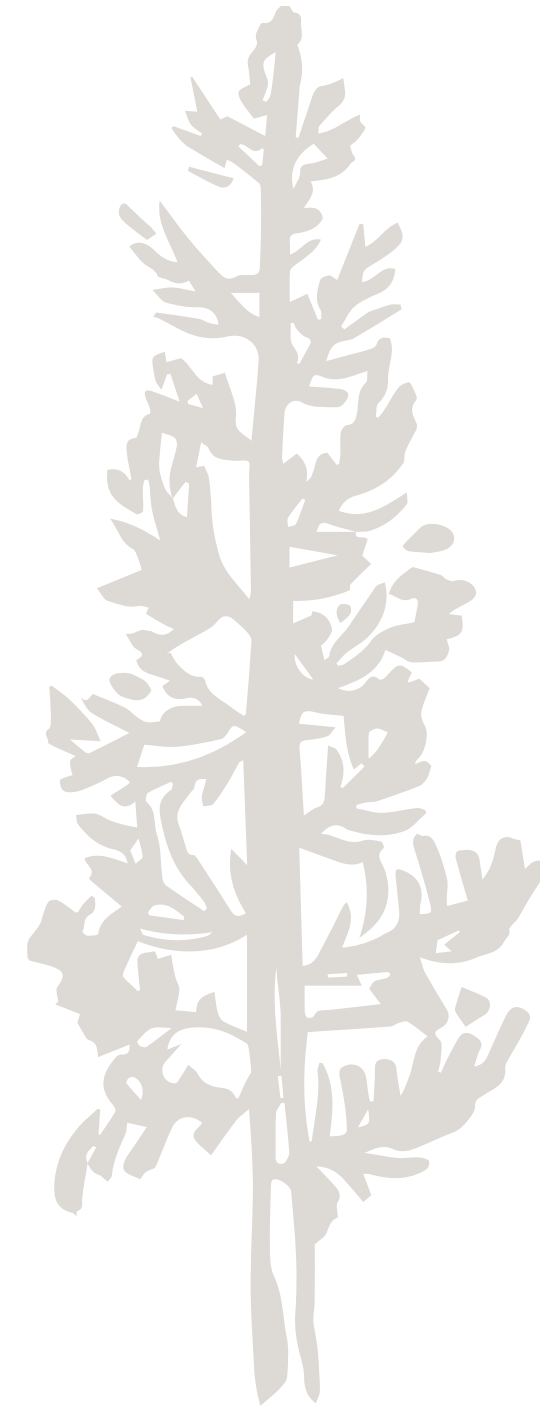
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## HOW TO USE THIS PLAN


The Rio Grande Trail Master Plan provides a common vision and work plan for developing the Rio Grande Trail. It offers technical direction for staff across the state working to implement the Plan, through trail design guidance, alignment alternatives analysis, and funding strategies. The Plan also provides inspiration and guidance for New Mexicans and trail users wanting to learn more about the trail vision and what it may mean for their community.

The Rio Grande Trail Master Plan and website are designed to inspire New Mexican residents, and other potential users, to get excited about the trail, its future development and management, and the educational and economic potential it holds for New Mexican communities. Paging through the plan or perusing the website quickly reveals the amount of work that has already been accomplished. Maps of the proposed trail alignment, the vision for the trail, and colorful graphics provide accessible entry points for community members, trail advocates, and local decision makers who want to follow along or get involved with the trail building effort.

For those looking to learn more, the detailed analysis and recommendations should guide regional collaboration across jurisdictions, facilitate trail management, support grant applications, and leverage other trail planning efforts across the state. The details of the Master Plan can be used to seek high-level consensus about where the trail should go and what it should look like. Community members, politicians, trail advocates, state agency and local jurisdiction staff looking to dedicate more time to building the Rio Grande Trail will find the information they need to advance trail designation, branding, management, design, fundraising, and more!







CHAPTER 1

# THE RIO GRANDE TRAIL VISION





## THE VISION

In 2015, state legislation (HB 563) solidified New Mexico’s vision of a 500-mile cross-state recreational trail and established the Rio Grande Trail Commission to oversee its development. As part of this master planning process, the Commission adopted the following vision statement:

“The Rio Grande Trail is New Mexico’s cross-state, recreational trail for hiking, biking, and horseback riding along the Rio Grande. Trail users explore, learn about, and connect with a tapestry of diverse natural habitats, rich history, striking landscapes, and vibrant communities. The trail contributes to cultural and environmental awareness, healthy lifestyles, spiritual growth, and economic prosperity for New Mexico and its visitors.”

The Rio Grande Trail corridor includes three national wildlife refuges, six national monuments, one national heritage area, and six state parks, touching nearly 10 counties and more than 22 cities or towns.

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*From an evening walk to a month-long expedition, the Rio Grande Trail offers a window into the heart and soul of New Mexico and a journey through its exceptional natural and cultural heritage.*

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# THE PLANNING FRAMEWORK

Planning for the Rio Grande Trail adheres to a clear set of principles established in the state law NMSA 1978m section 9-SC-1 and consistent throughout every phase of the process. The statute is quoted below and included in Appendix E.

## THE PROPOSED TRAIL ALIGNMENT AND DESIGN GUIDELINES SHALL:

### ENSURE A VOLUNTARY PROCESS

“only land that is expressly authorized by the owner, including Indian nations, tribes or Pueblos, for inclusion in the Rio Grande trail and not to be acquired by eminent domain”; “Eminent domain shall not be used to establish or construct the Rio Grande trail or features, facilities or enhancements associated with the trail.”

### USE EXISTING TRAILS ALONG THE RIO GRANDE CORRIDOR

“to the extent feasible, select existing trails for the route of the Rio Grande trail”; “to the extent feasible, in the case of non-motorized existing trails, avoid widening these trails;”

### MINIMIZE ENVIRONMENTAL IMPACTS

“ensure that any recommended designation, construction and use of the trail will minimize environmental impacts”

### PRESERVE SENSITIVE HABITATS

“endeavor to avoid areas of significant habitat value and ensure that any recommended designation, design, construction or use of the trail will minimize the impact on habitat”

### PRIORITIZE NON-MOTORIZED USE

“in the case of new trails on public lands, construct the trails for non-motorized use; provided, however, that such trails may, but are not required to, be open to power-driven mobility devices for individuals with mobility impairments”

## THE MASTER PLANNING PROCESS SHALL:

### COORDINATE WITH EL CAMINO REAL HISTORIC TRAIL

“The commission shall collaborate and cooperate with the National Park Service’s historic trails project for the El Camino Real de Tierra Adentro National Historic Trail from Mexico to northern New Mexico when appropriate”

### ENGAGE WITH PARTNER AGENCIES

“consult with representatives of the following regarding issues within their jurisdiction in development of the Rio Grande trail: each of the conservancy or irrigation districts served by water in the Rio Grande; acequias, counties, land grants, municipalities, and Pueblos adjoining the Rio Grande.”

### SEEK PUBLIC INPUT ON THE TRAIL ROUTE

“prior to making any final decisions regarding trail designation, design and construction, hold public meetings to solicit public input and allow for a written comment period”; “actively engage the public in the planning process of the Rio Grande trail”





# GOALS OF THE MASTER PLAN

The New Mexico Energy, Minerals and Natural Resources Department (EMNRD) commissioned the Rio Grande Trail Master Plan based on the guidance of the state legislation<sup>1</sup>, and in partnership with New Mexico Department of Transportation (NMDOT), Federal Highway Administration (FHWA), and New Mexico Recreational Trails Program. The goals of the plan are to:

<sup>1</sup> NMSA 1978m section 9-SC-1

- **Leverage prior and current trail planning efforts** to establish a broadly accepted vision for New Mexico's cross-state Rio Grande Trail.
- **Establish a common understanding** of the nature and character of the Rio Grande Trail across jurisdictions including its physical look and feel and recommended strategies for management and governance.
- **Seek high-level consensus** regarding the Rio Grande Trail alignment for the purpose of interjurisdictional partnerships for implementation, signage and branding, prioritizing project funding, and tracking progress towards completion.
- **Create a common master document** that informs regional collaboration and supports applications for federal, state, philanthropic, and private sector grants.
- **Elevate excitement** for building a signature trail of national importance among the public, funders, and elected officials.



## **RIO GRANDE TRAIL MASTER PLAN TIMELINE**

To achieve these goals, the consultant team conducted the master planning process from June 2017 through November 2018. The Rio Grande Trail Commission directed the master planning process through quarterly meetings and work group meetings. Figure 1 shows the master planning process timeline.



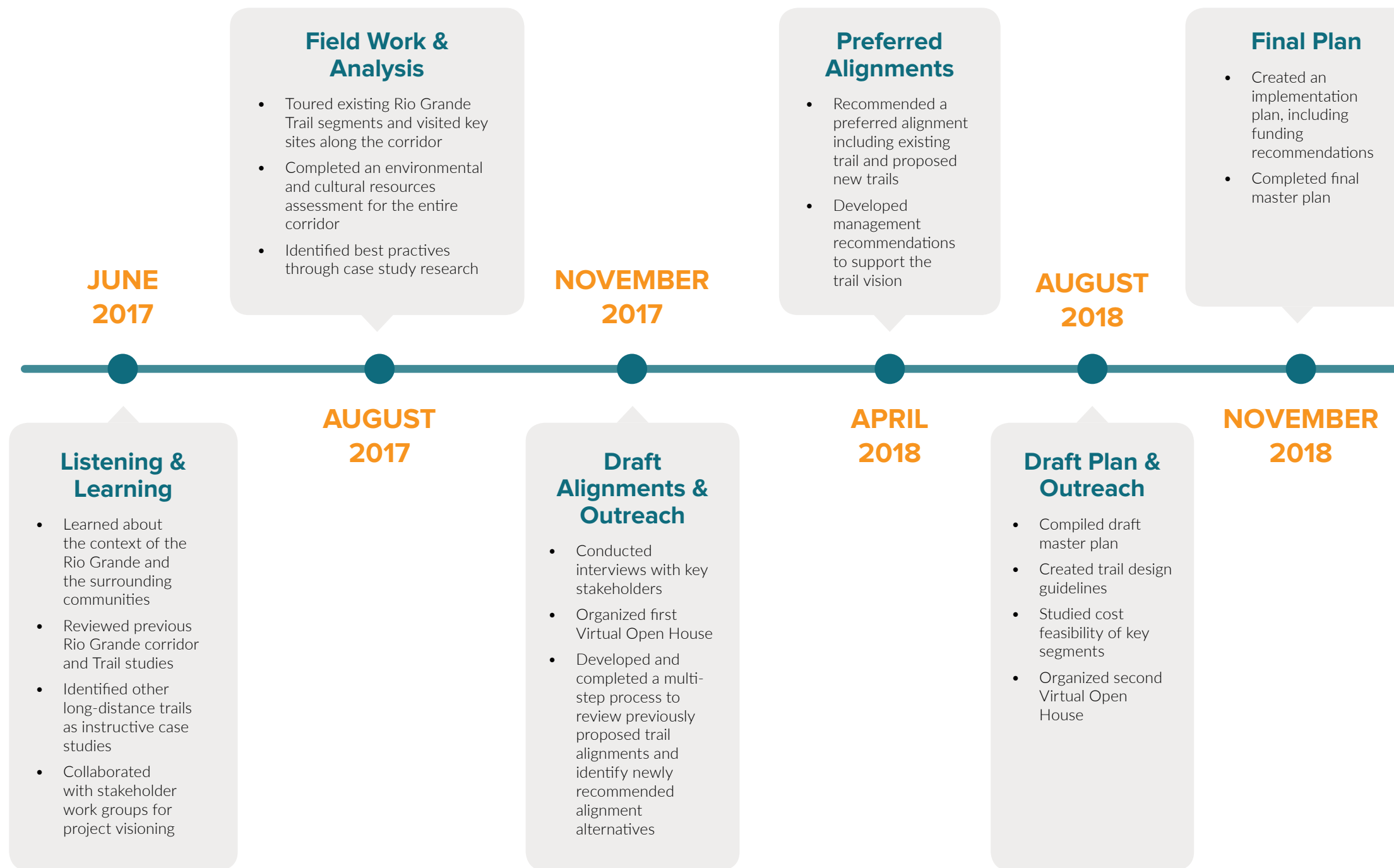


Figure 1: Rio Grande Trail Master Plan Timeline



# TRAIL USES AND CONTEXT

The Rio Grande Trail tread will reflect the diverse environments and communities of New Mexico. As the trail passes through remote natural areas, rural, and urban communities, the trail design will flow and transition to complement the surrounding environment. Across these changing designs, the trail will need to be accessible and comfortable for a range of trail users. The Trail Facility Continuum and Trail User Typology outlined below summarize these foundational elements of the Rio Grande Trail planning project. More information about the typologies is available in Chapter 4: Threading Partnerships and in Appendix B: Rio Grande Trail Design Guidelines.

## Rio Grande Trail Facilities

To guide planning efforts, the Rio Grande Trail Facility Continuum, shown in Figure 1, provides a high-level summary of the types of trail found along the existing and proposed passages of the Rio Grande Trail. The continuum is referenced throughout the Master Plan to ensure that trail design, development, management, and maintenance strategies reflect the specific needs and characteristics of each trail type.

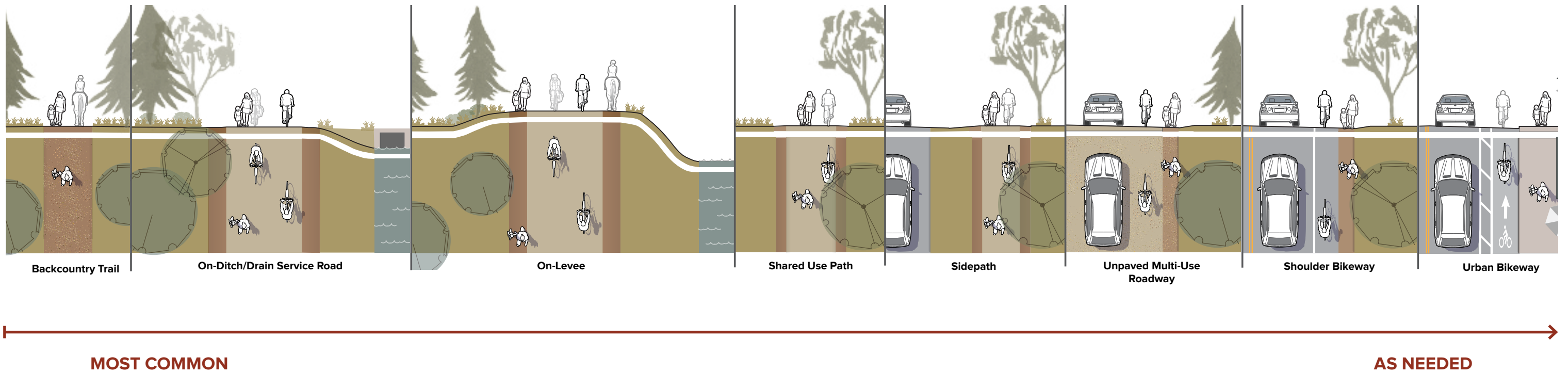


Figure 2: Rio Grande Trail Facility Continuum

## Rio Grande Trail Users

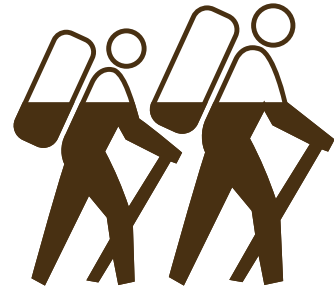
Many different trail user groups will visit the Rio Grande Trail. The Rio Grande Trail will be designed to accommodate pedestrians (including those using mobility devices and pushing strollers), hikers, cyclists, and equestrians, though not all users will have access on all segments of the trail. Trail design and user access will vary based on the trail type and its context on any given section. Trail users access trails in a variety of ways, ranging from local day trips to long-distance backcountry treks, and everything in between. By understanding the unique characteristics and needs of every trail user along this spectrum, Rio Grande Trail managers can provide quality facilities and minimize user risk.



Figure 3: Trail User Typology Continuum

# WHY DOES THE RIO GRANDE TRAIL MATTER?

## ★ ADVENTURE



65%

OF NEW MEXICAN RESIDENTS PARTICIPATE IN OUTDOOR RECREATION EACH YEAR. <sup>1</sup>

THE RIO GRANDE TRAIL WILL PROVIDE ACCESSIBLE OUTDOOR RECREATION OPPORTUNITIES FOR THOUSANDS OF NEW MEXICANS. WITH BACKCOUNTRY SINGLE TRACK AND URBAN PATHWAYS, THE RIO GRANDE TRAIL WILL ENTICE ADVENTURE ENTHUSIASTS AND RESIDENTS LOOKING TO TRY AN OUTDOOR ACTIVITY FOR THE FIRST TIME.

## 🎓 EDUCATION



AS THE RIO GRANDE TRAIL WEAVES THROUGH MANY NEW MEXICAN COMMUNITIES, EDUCATORS WILL USE THE RIVER PATH AS AN OUTDOOR CLASSROOM. STUDENTS WILL TAKE FIELD TRIPS TO LEARN ABOUT LOCAL HISTORY, CULTURE, ECOLOGY, AND GEOLOGY.

## 👜 EMPLOYMENT

99,000

DIRECT JOBS



THE RIO GRANDE TRAIL WILL BE THE LATEST ADDITION TO NEW MEXICO'S THRIVING OUTDOOR INDUSTRY, WHICH, AS OF 2017, ACCOUNTS FOR 99,000 DIRECT JOBS AND \$2.8 BILLION IN WAGES AND SALARIES.<sup>2</sup>

## 🔓 ACCESS

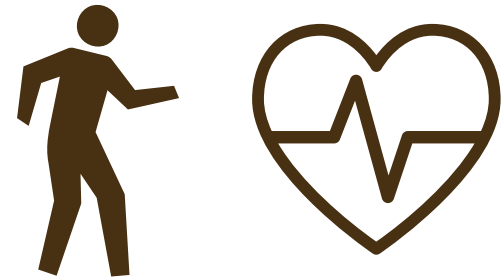


THOUGH THE RIVER RUNS THROUGH SOME OF THE LARGEST CITIES IN THE STATE, MANY NEW MEXICANS HAVE NEVER VISITED THE RIO GRANDE.

THE RIO GRANDE TRAIL WILL IMPROVE PUBLIC ACCESS TO THE RIO GRANDE, WHICH WILL INCREASE THE CONNECTION NEW MEXICANS HAVE TO THE RIVER AND CULTIVATE RIVER STEWARDSHIP.<sup>3</sup>



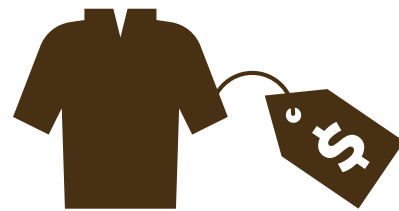
HEALTH



THE RIO GRANDE TRAIL WILL PROVIDE AN ACCESSIBLE OPTION FOR ACTIVE RECREATION AND TRANSPORTATION FOR ALL NEW MEXICANS. COMMUNITIES THAT ENCOURAGE PHYSICAL ACTIVITY BY BUILDING TRAILS SEE A SIGNIFICANT EFFECT ON THE NUMBER OF PEOPLE EXERCISING, WHICH BENEFITS PUBLIC HEALTH AND WELLNESS.<sup>4</sup>

TOURISM & ECONOMIC DEVELOPMENT

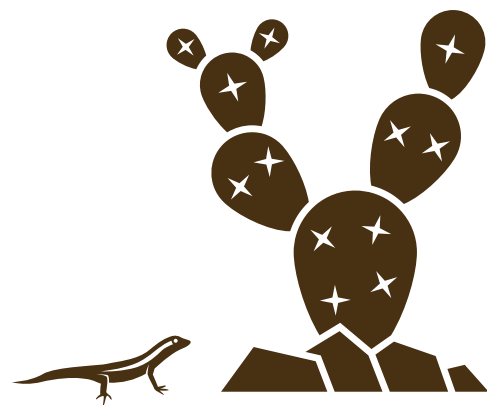
**\$623 MILLION**  
IN STATE & LOCAL TAX REVENUE



IN 2017, OUTDOOR RECREATION IN NEW MEXICO ACCOUNTED FOR \$9.9 BILLION IN CONSUMER SPENDING, \$623 MILLION IN STATE AND LOCAL TAX REVENUE, AND MORE THAN TWICE AS MANY JOBS DEPEND ON OUTDOOR RECREATION THAN ON THE ENERGY AND MINING SECTORS COMBINED.<sup>5</sup> THE RIO GRANDE TRAIL WILL PROVIDE OUTDOOR RECREATION OPPORTUNITIES THAT WILL TRANSLATE TO ECONOMIC BENEFITS BY BRINGING INCREASED TOURISM, JOBS, CONSUMER SPENDING, AND TAX REVENUE.

**\$9.9 BILLION**  
IN CONSUMER SPENDING

SUSTAINABILITY



THE RIO GRANDE TRAIL WILL HELP PRESERVE IMPORTANT NATURAL LANDSCAPES, LINK FRAGMENTED HABITAT, PROTECT PLANT AND ANIMAL SPECIES, AND IMPROVE AIR AND WATER QUALITY.<sup>6</sup>

<sup>1</sup> 2017 New Mexico Report. Outdoor Recreation Association. [https://outdoorindustry.org/wp-content/uploads/2017/07/OIA\\_RecEcoState\\_NM.pdf](https://outdoorindustry.org/wp-content/uploads/2017/07/OIA_RecEcoState_NM.pdf)

<sup>2</sup> 2017 New Mexico Report. Outdoor Recreation Association. [https://outdoorindustry.org/wp-content/uploads/2017/07/OIA\\_RecEcoState\\_NM.pdf](https://outdoorindustry.org/wp-content/uploads/2017/07/OIA_RecEcoState_NM.pdf)

<sup>3</sup> Rumpler, John. "Rio Grande Trail to Benefit New Mexico's Economy, Environment, and Health." Environment America. January 9, 2008.

<sup>4</sup> Benefits of Trails. Rails-to-Trails Conservancy. 2018. <https://www.railstotrails.org/experience-trails/benefits-of-trails/>

<sup>5</sup> 2017 New Mexico Report. Outdoor Recreation Association. [https://outdoorindustry.org/wp-content/uploads/2017/07/OIA\\_RecEcoState\\_NM.pdf](https://outdoorindustry.org/wp-content/uploads/2017/07/OIA_RecEcoState_NM.pdf)

<sup>6</sup> Benefits of Trails. Rails-to-Trails Conservancy. 2018. <https://www.railstotrails.org/experience-trails/benefits-of-trails/>

CHAPTER 2

# NEW MEXICO'S TAPESTRY





## A RICH HISTORY

The Rio Grande Trail follows the Rio Grande corridor and is intended to provide access to and celebrate the rich history of New Mexico. The diverse cultures and historic landscapes found along the Rio Grande reflect a history of human habitation that stretches back at least 11,000 years.

The importance of the Rio Grande to the State of New Mexico cannot be overstated. More than 64% of the state's population, or about 1.3 million people, live in a county traversed by the Rio Grande. Of the four largest municipalities in the state, three are located directly on the Rio Grande (Albuquerque, Las Cruces, and Rio Rancho), while the fourth — Santa Fe — sits within biking distance of the river (15 miles). Both the main campuses of the University of New Mexico and New Mexico State University are within five miles. Between these major population centers, approximately 50 municipalities, 11 Pueblos, many informal settlements or colonias, and countless agricultural centers rely on the Rio Grande for food, water, and recreation. **As the central artery of New Mexico for all of its recorded history, the Rio Grande corridor has been a priority route and a well-worn path for more than a thousand years.** The vision of the Rio Grande Trail links the present-day world to these ancient roots.

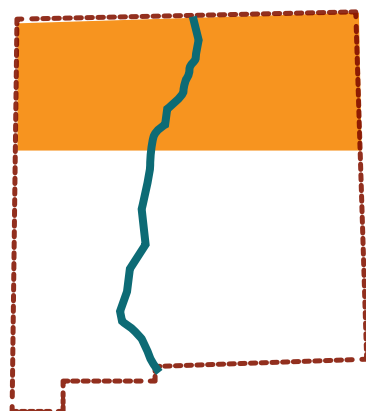


## VIBRANT LANDSCAPES

The Rio Grande, also called the Rio Bravo in Mexico, is the 5th longest river in North America. The river emerges as a snow-fed stream at about 12,000 feet in the San Juan Mountains of Colorado, and flows through mountains, steep canyons, arid high mesas, plateaus, semi-arid scrublands, and lowland subtropics for approximately 1,900 miles before emptying into the Gulf of Mexico. While a portion is used for drinking water in municipalities, such as Albuquerque and Truth or Consequences, the vast majority of the river's flow is used for agricultural purposes.

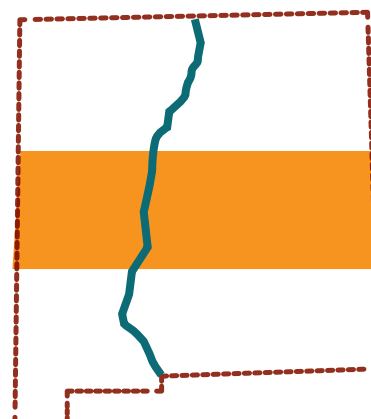
Featuring prominently in Wild West lore and geo-political debate, the Rio Grande is an enigma of American cultural history. **The reality of life in communities along the river is as variable as the two nations through which it courses, with an astonishing tapestry of intersecting cultural and geographic landscapes.** While the Rio Grande represents the U.S./Mexico border for more than one thousand miles, it ties communities together in a figurative and literal sense. Cities and economies share the river and its assets, from national parks that parallel each other on either side of the border to cash crops such as pecans and citrus fruits. The Rio Grande Trail presents a unique opportunity to tell the stories of these communities through a recreation and transportation asset that all can enjoy.





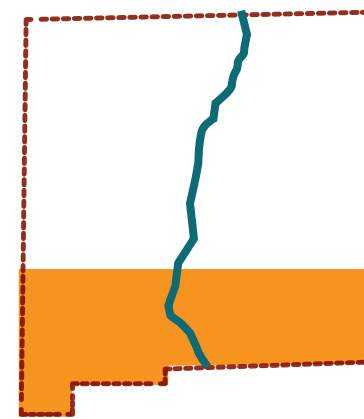
## Northern New Mexico

The Rio Grande runs the full length of New Mexico north to south for 470 miles. At the Colorado border in the arid plains of Cerro La Olla, the river quickly cuts into the Rio Grande Gorge. Also known as the Taos Gorge, this eponymous protected area of 1,000 foot cliffs, river rapids, hot springs, and mesas forms one of two sections of the Rio Grande that fall within the National Wild and Scenic Rivers System (the other in Big Bend National Park). Other major cultural and physical landscapes along the northern New Mexico stretch include the White Rock Canyon of the Jemez Mountains, the agricultural Espanola Valley where the first Spanish settlement was located, and Bandelier National Monument, home to magnificently preserved ancient Pueblo cliff dwellings. Nearby, the Kasha-Katuwe Tent Rocks National Monument is a major destination for locals and visitors with beautiful hikes in narrow slot canyons.



## Central New Mexico

South of Bandelier National Monument, La Bajada forms the transition to a more urban, agricultural zone that follows the river south to the Texas border. In central New Mexico the river courses through the arid high desert and many Pueblos, including Cochiti Pueblo, Kewa Pueblo, San Felipe Pueblo, Santa Ana Pueblo, Sandia Pueblo, and Isleta Pueblo. This region is typified by the traditional acequia irrigation system landscapes used by Native American and Spanish farmers. Unofficial foot paths follow arroyos and acequias along drainage corridors through the bosque, or Cottonwood forests. In Albuquerque, many of these paths connect to the popular Paseo del Bosque Trail, which runs on the river levee across the city limits. Further south near San Antonio, the river flows through the Bosque del Apache National Wildlife Refuge, home to marshlands and popular for birdwatchers.



## Southern New Mexico

In southern New Mexico, the shallow river is a ribbon of green in the arid Chihuahuan Desert. Here the river is the lifeblood for communities that rely on tourism, such as Truth or Consequences and Mesilla, as well as major agricultural production of crops such as chiles, cotton, grapes, and pecans. The Elephant Butte Reservoir stores much of the water for growing these crops, and Elephant Butte Lake State Park is the state's biggest attraction for water recreation and largest state park. The White Sands and Organ Mountains-Desert Peaks National Monuments serve as spectacular recreation destinations in this region. Near Las Cruces, the influence from Mexico on the culture, architecture, and food is palpable. New residents from Mexico add to New Mexico's complex cultural blend. The sunny climate feeds growing retirement communities, and the proximity to the border results in a variety of colonias - informal settlements that may lack basic services such as running water.

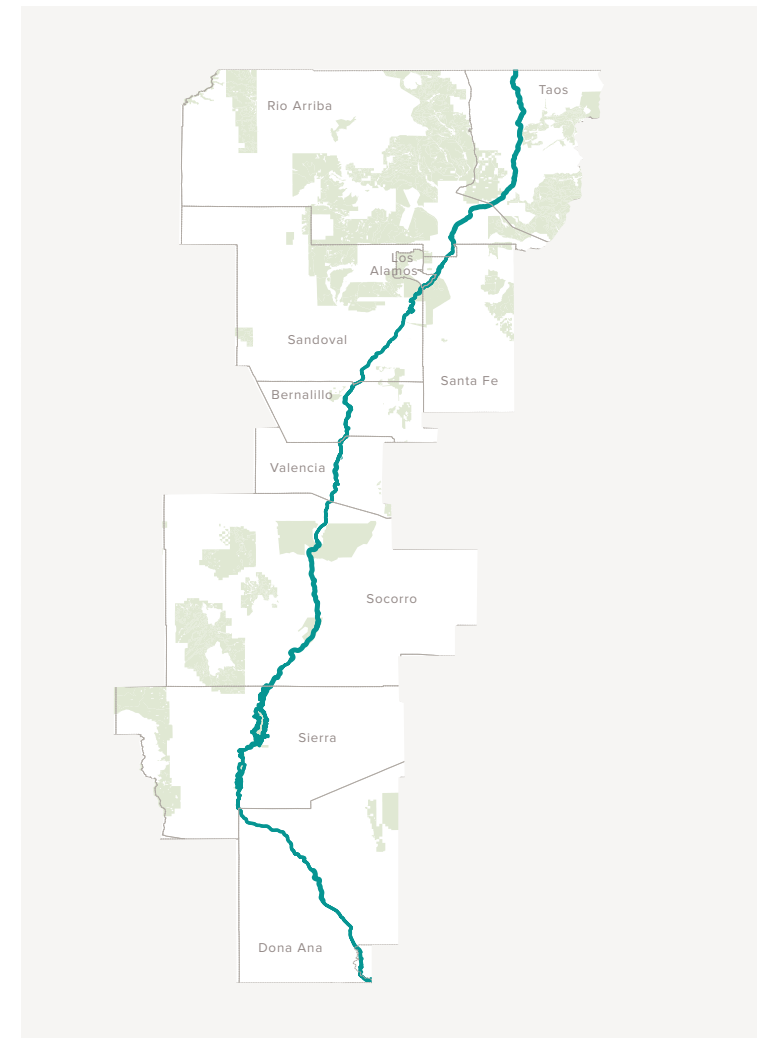
# PUBLIC LANDS

Public lands are a prominent part of the New Mexico’s unique tapestry and an essential opportunity for bringing the Rio Grande Trail to life. Around 35% of the state is federally-owned, with other public land owned by state (Table 1) and local governments. The Rio Grande Trail corridor includes three national wildlife refuges, 11 national monuments, one national heritage area, and six state parks, touching nearly 10 counties and more than 22 cities or towns. The Rio Grande Trail will traverse land owned and/or managed by the Bureau of Land Management (BLM), US Department of Agriculture (USDA) Forest Service, Fish and Wildlife Service (FWS), National Park Service (NPS), and EMNRD State Parks Division, making these agencies key partners in the trail effort. The Bureau of Reclamation is another key partner that owns land along the Rio Grande corridor. In addition to working with land owners, the Rio Grande Trail effort will also coordinate with land managers. Specific roles for public agencies and other trail partners are outlined in Chapter 4.

FEDERAL				STATE
Bureau of Land Management	USDA Forest Service	Fish and Wildlife Service	National Park Service	State Parks
14,093,947 acres	9,225,183 acres	332,058 acres	466,709 acres	11,448 acres
18.12%	11.86%	0.43%	0.60%	>0.25%

**TABLE 1: STATE AND FEDERAL LAND OWNERSHIP IN NEW MEXICO<sup>1</sup>**

<sup>1</sup>Vincent, Carol; Hanson, Laura; Arguenta, Carla. "Federal Land Ownership: Over view and Data. Congressional Research Service. March 3, 2017 and Energy, Minerals, and Natural Resources Department State Parks Division. Staff Report 2018



Map A: Public Lands in New Mexico



# STAKEHOLDER ENGAGEMENT

New Mexican residents, partner organizations, and local jurisdictions are all parts of the tapestry that makes up New Mexico’s unique context. They each bring distinct perspectives, ideas, and desires for the Rio Grande Trail vision. Including these voices and weaving them into the plan for the Rio Grande Trail is important to ensure that the plan is achievable and that it embodies an authentic sense of place. The stakeholder engagement process for the Rio Grande Trail Master Plan included several components:

- Rio Grande Trail Commission meetings
- Stakeholder work groups
- Two Virtual Open Houses
- Project website and emails
- Interviews

## Rio Grande Trail Commission

The Rio Grande Trail is being developed with the support of more than 100 organizations, agencies, and volunteer groups working across the state. To support that effort, New Mexico’s Legislature passed House Bill 563 that created the Rio Grande Trail Commission and the Rio Grande Trail Fund. The Commission is a group of public officials, agency staff, and other leaders tasked with the creation of the Rio Grande Trail. The commission is administered and staffed by EMNRD. The commission members are established in state law.<sup>1</sup> Secretaries or their designees and the Governor may appoint other members.

## Work Groups

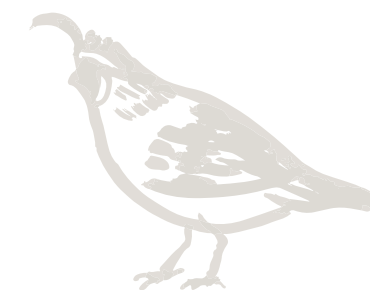
The Rio Grande Trail Commission established six work groups to support ongoing efforts to develop the Rio Grande Trail. These volunteer coalitions include members from across the state contributing time and talent towards specific aspects of the trail planning and development process. Work group discussions provided key insights that informed Rio Grande Trail recommendations. The work groups focused on the following six categories:

- Interagency Coordination
- Communications
- Resources
- Alignment
- User Groups, and
- Design and Management.

<sup>1</sup> NMSA 1978m section 9-SC-1

## KEY FINDINGS

- The Rio Grande Trail is a link to thousands of years of history and is also “history in the making” as the creation of a new signature asset for the United States.
- The trail should be a dynamic learning environment, capitalizing on the multitude of educational opportunities it affords.
- Create an environmentally sustainable trail that also connects people with the Rio Grande and fosters environmental stewardship and awareness.
- Consider the range of users for this trail and their varying needs.
- Foster a courteous trail environment.
- Ensure a positive, comfortable, and safe user experience, whether for day trips or long treks, including basic amenities like access to water, food, and lodging.
- Engage local communities in the identification of the physical trail alignment, promotional partnerships, and future spur trails.
- Stakeholders value the trail’s contribution to the physical, mental, and spiritual health of users and of the community members that live along its corridor.



## Project Website and E-mails

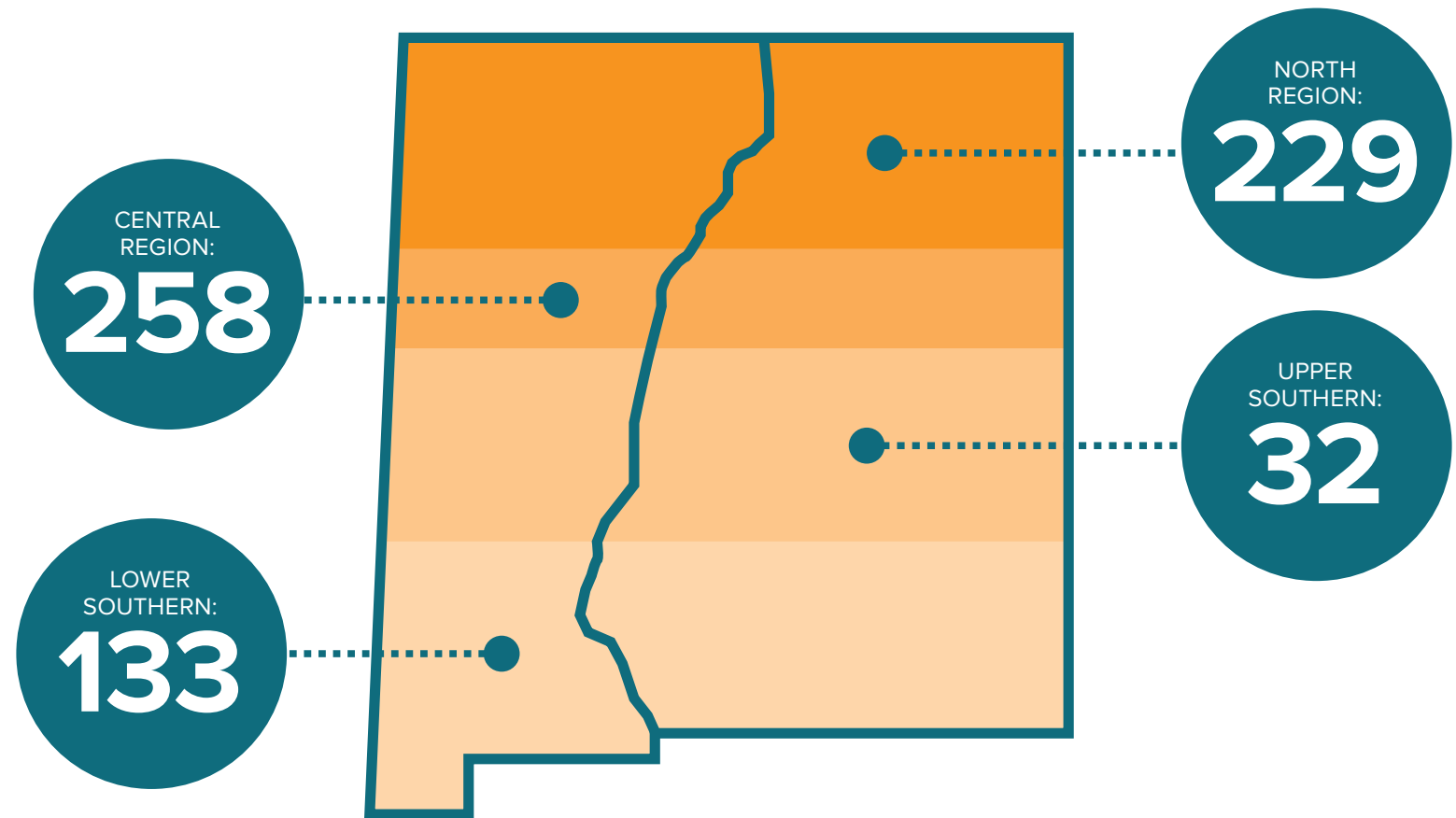
The project website <http://www.riograndetrailnm.com/> became public in the fall of 2017. In addition to general information about the Rio Grande Trail master planning process, the website offered a contact form for visitors to share their thoughts on the trail and join the project listserv. As they developed, draft documents were posted to the website and blog for public review.

## Virtual Open Houses

The Virtual Open House is an online public engagement tool used to explain the master planning process, share findings, and seek feedback from interested New Mexicans across the state. As shown in Map B, the Virtual Open House offered an outreach tool that could reach the project's large study area. The first Virtual Open House was available for four weeks in late fall 2017. During that time, nearly 1,000 people responded to the survey. In the fall of 2018, approximately 800 people participated in the second Virtual Open House, which was available for three weeks. Over 80% of participants in the second Virtual Open House had not participated in the first one.

These surveys allowed the project team to share information and hear from interested community members across the state. The Virtual Open Houses were useful because they:

- provided transparency,
- created awareness and informed people of the purpose and outcomes,
- provide data on the aspects of the trail that are most compelling to New Mexicans, and
- complement in-depth stakeholder outreach.



Map B: Fall 2017 Virtual Open House Participation by Region

### KEY FINDINGS FROM VIRTUAL OPEN HOUSE #1

- Participants are willing to travel to visit a long-distance trail.
- Access to nature is viewed as the most important trail benefit.
- A variety of trail uses are likely to be popular.
- Most participants are interested in historic and cultural tours, as well as birding or wildlife viewing experiences along the trail.
- For hospitality provisions, campsites and showers/bathrooms are clear favorites.

### KEY FINDINGS FROM VIRTUAL OPEN HOUSE #2

- Participants envision a Rio Grande Trail that fosters geographic connections between the natural environment and communities, provides outdoor recreational opportunities, and highlights the exhilarating natural beauty of the state.
- To promote the Rio Grande Trail, participants expressed the most support for community events, the Gateway Community Program, partnering with the State Tourism Department, and trail branding.

## Stakeholder Meetings

For the last several years, the Rio Grande Trail Commission met regularly and held meetings throughout the state. These meetings were well attended by a diverse and interested public and non-profit organizations such as cycling, equestrian, and hiking groups interested in plan implementation. Individuals requested more information about trail alignments and other concerns during follow-up meetings. During the first field visit for the master plan process, four meetings were held throughout the state in: Las Cruces, Socorro, Albuquerque, and Pilar.

Additionally, the State Parks Division Director and consultant team regularly met with stakeholders throughout the planning area. These included:

**Federal agency meetings** including the Bureau of Land Management, Bureau of Reclamation, US Fish and Wildlife Service, National Park Service, USDA Forest Service and the International Boundary and Water Commission.

**State agency meetings** with EMNRD State Parks Division, State Land Office, State Forestry Division, EMNRD Tourism Department and Indian Affairs Department, as well as two important water management organizations: Elephant Butte Irrigation District and Middle Rio Grande Conservancy District.

**State Parks Division Volunteer Summit** where State Parks volunteer organizations heard about possible roles for supporting trails. As trails have been developed in specific counties, the Director and consultant met with county officials and planners and Councils of Government to coordinate efforts and designation. These efforts will continue for several years.

**Other local and regional meetings**, such as the “Friends of” group from Elephant Butte Lake State Park that supports developing the trail through the park, and a meeting of mayors,

commissioners, and Councils of Government representatives, which highlighted the economic benefits of the Rio Grande Trail.

## KEY FINDINGS

- State and federal agencies broadly support the Rio Grande Trail as a concept, as well as the direction of the master planning process. Involvement in the development or promotion of the Rio Grande Trail will vary depending on the agency’s mission and capacity.
- Local and regional agencies are supportive and interested in aligning with the Rio Grande Trail and provided specific input related to trail access points and design guidelines.
- Small non-profit organizations see the value of coordinating efforts, and these continue. For example, the Save our Bosque Taskforce has developed trail alignments and continues to keep areas clean. They are hopeful to raise awareness and funds for signage and continued improvement of trails through the Bosque in Socorro.
- Equestrian groups continue to support the effort and give feedback on specific needs for equestrians.

## PUEBLO CONSIDERATIONS

Since the inception of the Rio Grande Trail Commission, outreach to tribes and Pueblos has been of paramount importance. Commissioners, including the Chair, Vice Chair and the Secretary of the Indian Affairs Department (IAD), who were directly involved, have conducted tribal consultation, along with local engagement by consultants.

Formal government-to-government consultation for the Rio Grande Trail has occurred twice through letters sent by the Chair and the Secretary of the IAD. In 2018, five Pueblos responded and provided point persons in their government to interface with the Rio Grande Trail Commission.

In addition, Rio Grande Trail Commission members have hosted meetings with several Pueblo governors and staff, to provide information regarding the Rio Grande Trail and to receive input and feedback. The Vice Chair and consultant presented information regarding the Rio Grande Trail to the governors representing the Eight Northern Indian Pueblos Council, Inc., answering key questions. On several occasions, the Secretary of the IAD, Vice Chair, and consultant also have presented updates regarding Rio Grande Trail planning to the Eight Northern Indian Pueblos Council, Inc. Intertribal Resources Advisory Committee.

The Secretary of the IAD has conducted statewide Tribal Summits, providing opportunities for input regarding the Rio Grande Trail. Finally, each Rio Grande Trail Commission meeting is open to the public, and members of tribes and Pueblos have often attended these meetings, providing their input.

Through both the formal and informal consultation, Pueblos with land within the Rio Grande Trail corridor have been advised that participation is voluntary and are receiving updates regarding alignments outside of their boundaries.

While most Pueblos have indicated that they do not have interest in designating Rio Grande Trail alignments on their land, the Rio Grande Trail Commission continues to ask for feedback, particularly as related to cultural resources that need protection in the Rio Grande Trail corridor. In addition, archaeologists advise the planning team if alignments need to be rerouted to avoid culturally-sensitive areas in any future trail planning or trail development.

## KEY FINDINGS

- It is important to continue to undertake both formal and informal consultation to keep the Pueblos apprised about trail efforts, receive feedback, and provide state agency level consultation with tribal governments and committees.



CHAPTER 3

# WEAVING THE TAPESTRY TOGETHER





# OVERVIEW

The Rio Grande Trail was conceived decades ago as a cross-state trail that would serve as a cultural and recreational artery through the heart of New Mexico. Following authorization by the state legislature, institutional support from the Energy, Minerals and Natural Resources Department (EMNRD) and the contributions of time and resources from volunteers, local jurisdictions, and partner agencies, the Rio Grande Trail vision is materializing. **86.65 miles of the Rio Grande Trail are now officially designated and this plan outlines a path to connect and complete the remaining 407.5 miles of proposed trail.**

This chapter explains the technical work of identifying, evaluating, and recommending a cross-state alignment for the Rio Grande Trail. The process was rooted in the trail vision, the planning framework, and the master plan goals outlined in Chapter 1. The study area consisted of approximately a one-mile buffer extended on each side of the Rio Grande.

The recommendations for the complete alignment of the Rio Grande Trail are categorized as: Designated Rio Grande Trail (existing trail segments) and the Preferred Alignment (which includes both existing trail segments and proposed new trails).

## GLOSSARY OF TERMS

**Alignment:** A mapped, potential trail route

**Segment:** Sections of the Rio Grande corridor mapped with start and end points at the beginning of the master planning process, and ranging from one mile to 167 miles long

**Designated:** Formally adopted as Rio Grande Trail segments by the Rio Grande Trail Commission

**Existing Trail:** An existing, publicly accessible path, already managed as a trail facility

**Proposed Trail:** A recommended alignment where no trail currently exists



**Preferred Alignment:** The trail alignment recommended in this master planning process



# SUMMARY OF EXISTING AND PROPOSED RIO GRANDE TRAIL

The planning framework (see Chapter 1) prioritizes trails that already exist within the Rio Grande corridor as part of the Rio Grande Trail alignment. Through executive action of the governor and action of the Rio Grande Trail Commission, 86.65 miles of existing trail across New Mexico are already designated. **If all existing trail segments along the alignment were to be formally designated, the Rio Grande Trail would be 39% complete.**

## EXISTING TRAIL

- Designated Rio Grande Trail:  **86.65 MILES**
- Preferred Alignment:  **146.6 MILES**

## PROPOSED TRAIL

- Preferred Alignment:  **407.5 MILES**

## TOTAL DRAFT PREFERRED ALIGNMENT MILEAGE

- This number includes all currently recommended trail segments, and does not include any segments on Pueblo land. Refer to the Pueblo Considerations in Chapter 2 for more information.

 **576.4 MILES**

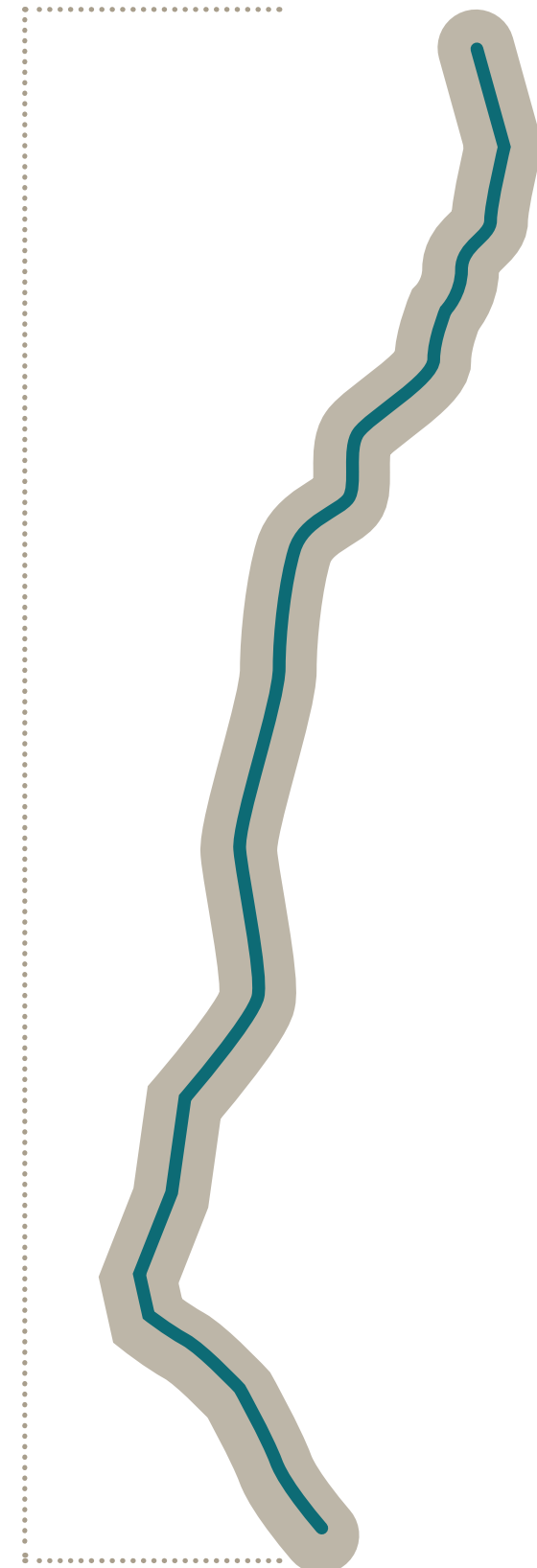


Figure 4: Mileage Overview for Existing and Proposed Rio Grande Trail Alignment



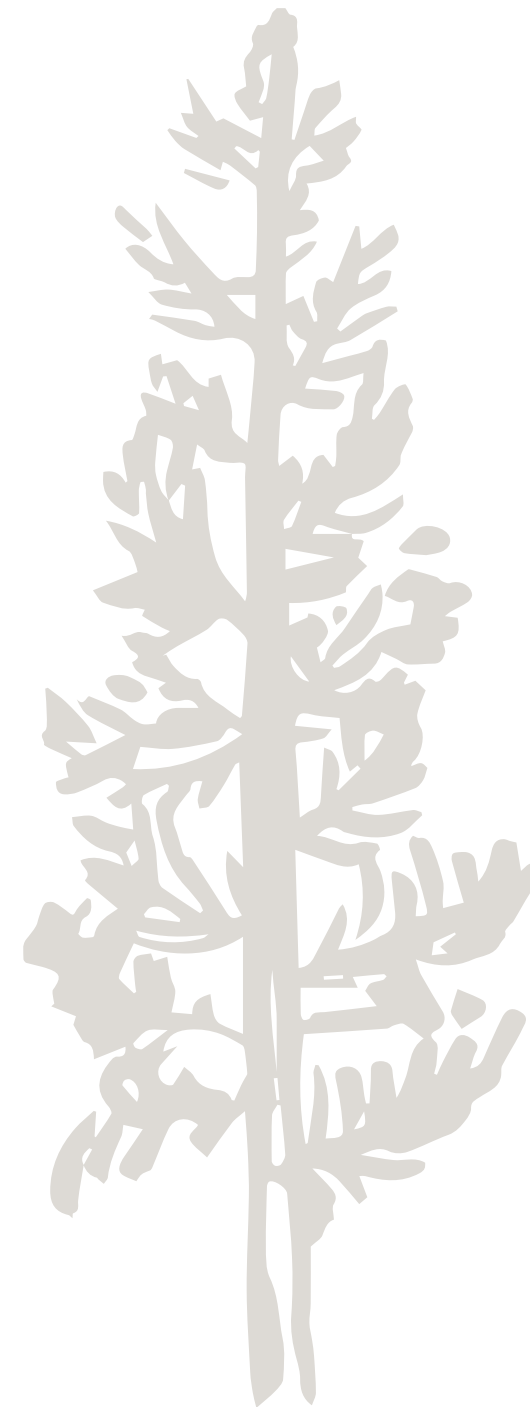
# APPROACH TO ALIGNMENT DEVELOPMENT

## Process Overview

Identifying potential alignments for the Rio Grande Trail begins with an evaluation of previous studies of the trail corridor. The project team collected and summarized the following planning documents directly addressing the Rio Grande and Rio Grande Trail corridor, as well as other documents, not listed here, as needed during the planning process:

- 2016 - Resolution No. 17-036 A Resolution to Support the Designation of 4.5 Miles of La Llorona Trail as part of the New Mexico Rio Grande Trail (Las Cruces City Council)
- 2015 - New Mexico Legislature House Bill 563 (State of New Mexico)
- 2015 - Viva New Mexico: A Statewide Plan for Outdoor Adventure Strategic Plan 2016-2020
- 2014 - Rio Grande Water Fund: Comprehensive Plan for Wildfire and Water Source Protection (The Nature Conservancy in New Mexico)
- 2008 - Rio Grande Trail Corridor Alignments and Constraints Analysis (Anasazi Trails Inc)
- 2008 - Blazing a Trail: The Benefits of a Rio Grande Trail in New Mexico (Environment New Mexico Research & Policy Center)
- 2006 - Rio Grande Trail Extension Bernalillo to Belen (MRCOG)

**The alignment evaluation process focused on previously identified alignment alternatives mapped and proposed in the 2006 and 2008 trail corridor studies.** Mapping these routes along with existing and locally or regionally planned trail facilities along the river, provided a basis for systematically evaluating each potential Rio Grande Trail route. To conduct this systematic evaluation, the project team first created and labeled individual “segments” along the entire Rio Grande corridor. This provided start and end points for every section of the river corridor needing evaluation and the identification of a proposed route. The methodology then combined a quantitative and qualitative approach to winnow the many possible alignments within each segment down to the final proposed Rio Grande Trail route.



## Alignment Evaluation Methodology

The alignment analysis process began with a digital inventory of all existing and proposed trail facilities along the river. The project team then evaluated the relative merits of each route alternative, through a quantitative comparison using the criteria listed in Table 2. Based on the numeric score that resulted, the project team ranked the route alternatives from most promising to least promising. Following this ranking, a qualitative assessment examined more subtle or transient influences that might affect the near term likelihood of completing a given segment, recognizing which criteria might change over time. For example, qualitative factors included: agency support, route directness, connection to Camino Real de Tierra Adentro National Historic Trail, opportunity for separate use facilities, and public opinion.

**The Evaluation Matrix in Table 2 describes the six evaluation criteria and examples of how those rankings might be applied to the route alternatives within a given segment.**

For each criterion, a three-tier system was used to rank each segment: good, neutral, or fair-poor. “Neutral” was the default condition, which equated to an average trail design and implementation project, with perhaps some obstacles that would need to be overcome, but nothing that would present a particular challenge. “Good” represented an outstanding trail implementation opportunity, while “Fair-Poor” required a greater than average effort to implement or might be a segment without many compelling features.



**TABLE 2: EVALUATION MATRIX AND EVALUATION CRITERIA**

EVALUATION CRITERIA		RATING GUIDE & NUMERIC SCORE		
		GOOD: 9-7	NEUTRAL: 6-4	FAIR/POOR: 3-1
CHARACTER / AESTHETICS	<ul style="list-style-type: none"> <li>Exemplifies vision for Rio Grande Trail</li> <li>Scenery/Views</li> <li>Compatibility with adjacent land uses</li> <li>Proximity to busy roads or other noise generators</li> </ul>	<ul style="list-style-type: none"> <li>Panoramic views or vistas to distant landmarks</li> <li>Access to, or views of the river</li> <li>Adjacent to park, open space, or agricultural lands</li> <li>Good separation from noisy roads</li> </ul>	<ul style="list-style-type: none"> <li>Wooded area typical of bosque; limited views</li> <li>Along a levee, drain, or irrigation facility</li> <li>Passes through commercial/residential areas</li> <li>Along or near low-moderate volume roadway</li> </ul>	<ul style="list-style-type: none"> <li>Unpleasant/uninspiring views</li> <li>No relation to river, water, or natural areas</li> <li>Adjacent to industrial/mining areas</li> <li>Along or near a high-volume roadway</li> </ul>
CONNECTIVITY	<ul style="list-style-type: none"> <li>Provides options for connecting to</li> <li>Additional trails</li> <li>Parks</li> <li>Communities</li> <li>Trail-related businesses</li> <li>Other points of interest</li> </ul>	<ul style="list-style-type: none"> <li>Offers easy connections to other segments of network</li> <li>Good existing access</li> <li>Potential linkages to nearby destinations</li> </ul>	<ul style="list-style-type: none"> <li>Circuitous connections</li> <li>Potential access points</li> <li>No notable points of interest nearby</li> </ul>	<ul style="list-style-type: none"> <li>Physical or jurisdictional limitations make connections to other trail segments difficult</li> <li>Isolated from nearby destinations or points of interest</li> <li>Limited or no potential for developing access points</li> </ul>
EASE OF IMPLEMENTATION	<ul style="list-style-type: none"> <li>Availability of right-of-way</li> <li>Condition of existing corridor (topography, soils, etc.)</li> <li>Requirements for additional infrastructure (bridges, drainage, major earthwork, etc.)</li> <li>Probable cost of construction</li> <li>Level of public or political support</li> </ul>	<ul style="list-style-type: none"> <li>No additional right-of-way needed</li> <li>Stable soils; gentle topography</li> <li>No need for additional bridges or culverts</li> <li>May be developed with minimal costs; lower than average trail development costs</li> <li>No objections from local community</li> </ul>	<ul style="list-style-type: none"> <li>Some additional right-of-way may need to be acquired</li> <li>Sandy or rocky soils; rolling or sloping topography</li> <li>Moderate amount of engineering or structures required</li> <li>Costs anticipated to be in line with typical trail construction costs</li> </ul>	<ul style="list-style-type: none"> <li>Limited or no available right-of-way, or utility conflicts within ROW</li> <li>Significant earthwork or structural engineering required (levee needs to be rebuilt, major bridge required, etc.)</li> <li>High costs expected as result of any of the above</li> <li>Neighbors or political leaders are antagonistic toward trail development</li> </ul>
ENVIRONMENTAL ISSUES	<ul style="list-style-type: none"> <li>Impacts on critical habitat, wetlands, etc.</li> <li>Proximity to known hazardous materials or leaking underground storage tanks</li> <li>Impacts to historic, architectural, and cultural resources, or traditional cultural properties (TCPs)</li> </ul>	<ul style="list-style-type: none"> <li>No critical habitat, wetlands, etc.</li> <li>No hazardous materials</li> <li>No adverse effects to National Register of Historic Places-eligible historic/cultural resources or TCPs</li> </ul>	<ul style="list-style-type: none"> <li>Impacts to natural and cultural resources can be minimized or mitigated</li> <li>Ineligible cultural resources</li> <li>No known or minimal hazardous materials nearby</li> </ul>	<ul style="list-style-type: none"> <li>Potential for serious impacts and adverse effects with limited possibilities for mitigation with natural resources (critical habitat, wetlands, etc.) and NRHP-eligible cultural resources</li> <li>Known hazardous materials</li> </ul>
SAFETY	<ul style="list-style-type: none"> <li>Proximity to roads and vehicular traffic</li> <li>Visibility/perceived sense of isolation</li> <li>Potential physical hazards</li> <li>Ease of access by emergency responders</li> </ul>	<ul style="list-style-type: none"> <li>No road crossings required, or grade-separated crossing options exist; separated from traffic</li> <li>Open area; good visibility</li> <li>No steep slopes or drop-offs; good separation from open water; other potential hazards are easily mitigated</li> </ul>	<ul style="list-style-type: none"> <li>Safe at-grade road crossings exist or can be implemented with minimal effort; follows or crosses low-volume roadway</li> <li>Wooded or meandering alignment locations with limited visibility but within cellphone service area</li> <li>Moderate hazards may require design solutions to protect users</li> </ul>	<ul style="list-style-type: none"> <li>At-grade road crossings with high traffic and/or limited visibility</li> <li>Isolated areas with poor visibility and no cellphone service</li> <li>Potentially hazardous areas with no cost-effective design solutions</li> </ul>
USER ACCOMMODATION	<ul style="list-style-type: none"> <li>Accessible to various user types:                             <ul style="list-style-type: none"> <li>Road bikes</li> <li>Off-road/mountain bikes</li> <li>Wheelchairs/strollers</li> <li>Pedestrians</li> <li>Equestrians</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Single alignment accommodates all users</li> <li>Parallel alignments can accommodate separate uses, all with good connectivity</li> <li>Good potential for trailhead development</li> <li>May not have trailhead potential</li> </ul>	<ul style="list-style-type: none"> <li>Single facility accommodates some, but not necessarily all, uses</li> <li>Some uses on parallel facilities may have only local access</li> </ul>	<ul style="list-style-type: none"> <li>Physical conditions limit the ability to provide access for all but one or two user groups without major design interventions</li> </ul>

# PREFERRED ALIGNMENT

## Overview

The Rio Grande emerges as a snow-fed stream at an elevation of 12,000 feet in the San Juan Mountains of Colorado, and flows through mountains, steep canyons, arid high mesas, plateaus, semi-arid scrublands, and lowland subtropics for approximately 1,900 miles before emptying into the Gulf of Mexico. As such, land types and potential trail user groups vary between regions of New Mexico, where the Rio Grande runs the full length of the state, north to south for 470 miles. The trail facilities will be designed to accommodate these varying regional contexts.

The preferred Rio Grande Trail alignment was determined by evaluating which alignment alternative within each segment was:

- an existing facility;
- an only option available;
- highest scoring segment; or
- preferred, but not highest scoring alignment (where other considerations made highest scoring alignment less desirable).

This process allowed the consultant team to assess alternatives in light of the priorities for the Rio Grande Trail as outlined in the state law, while also taking into consideration the feasibility and practicality of trail opportunities. This applies to individual trail segments (finding the best route near a particular stretch of river) as well as the full continuous Rio Grande Trail (finding the best routes that connect to each other). For example, a preferred trail on the west bank of the Rio Grande may be ideal, but if the best (or only) trail routes north of it and south of it are on the east side of the river, that particular option is likely impractical.

The preferred alignment is 576.4 miles of trail and includes several proposed river crossings.

The preferred alignment is mapped on pages 39-47 at the county level. More detailed maps of each segment are available in Appendix A. Additionally, the project team created a geodatabase of the preferred alignments (using ArcGIS software) to support trail development, as the Master Plan is implemented.



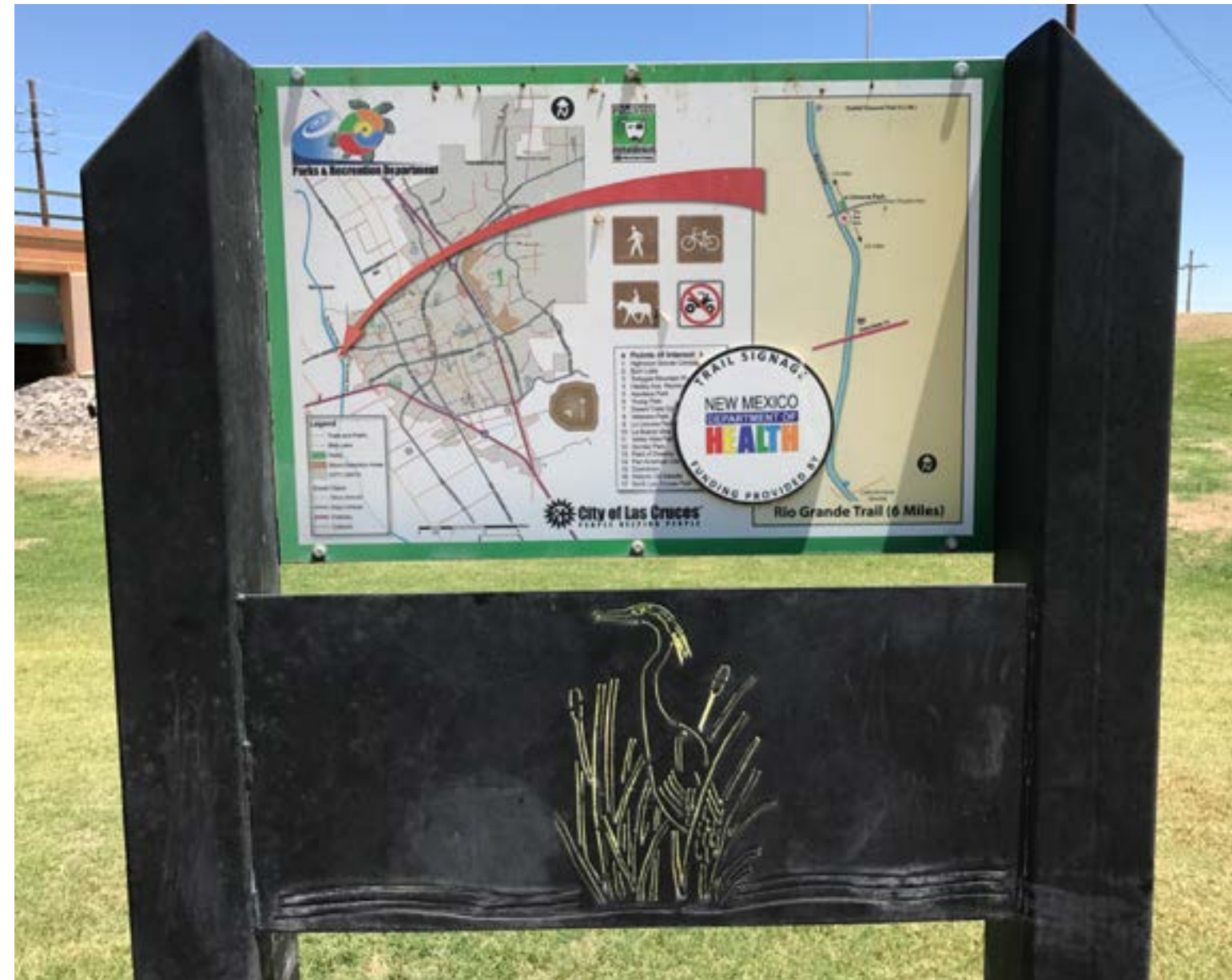


## Supportive Elements

As a part of determining the preferred alignment, the project team researched and developed supporting elements, including:

- **River Access:** Refers to places that trail users can use to either see or physically reach the Rio Grande. The Rio Grande Trail preferred alignment balances enjoyable river access with preservation of habitat for wildlife.
- **Trailheads:** Trailheads are divided into major, minor, and access points. Rio Grande trailheads will serve the local and regional population arriving to the path system by car, transit, bicycle, or other modes. Trailheads provide essential access to the shared use path system and include information and amenities for trail user comfort.
- **Wayfinding:** The preferred alignment for the Rio Grande Trail crosses through ten counties and numerous publicly managed lands. The design and application of the Rio Grande Trail wayfinding system will vary with the changing trail design and contexts. Rio Grande Trail wayfinding will balance local design with the necessary legibility for Rio Grande Trail users.
- **Campsites:** The diverse types of Rio Grande Trail users will need overnight accommodations before, after, and potentially during their visit to the trail. Camping accommodations range from full service campgrounds to backcountry campsites.

Check out the Rio Grande Trail Design Guidelines in Appendix B to learn more about the supportive trail design elements.



Signs and kiosks are used to display trail maps and information, like this example from the designated segment of the Rio Grande Trail in Las Cruces.



## Preferred Alignment: Regional Context

### NORTHERN NEW MEXICO

Starting in the arid plains of the Cerra De La Olla near the Colorado border, the river quickly cuts into the Rio Grande Gorge. This protected area of 1,000-foot cliffs, river rapids, hot springs, and mesas forms one of two sections of the Rio Grande that fall within the National Wild and Scenic Rivers System.

#### KEY CULTURAL/RECREATIONAL HIGHLIGHTS:

- Rio Grande Gorge
- White Rock Canyon
- Bandelier National Monument
- Kashe-Katuwe Tent Rocks National Monument

#### KEY LANDSCAPE NOTES:

- Southern Rocky Mountain region
- Deep canyons
- Variable vegetation coverage

#### KEY TRAIL TYPES:

- Backcountry Trail
- Unpaved Multi-use Roadway
- Shoulder Bikeway



*Rio Grande Gorge in Northern New Mexico*



## CENTRAL NEW MEXICO

South of Bandelier National Monument, La Bajada forms the transition to a more urban, agricultural zone that follows the river south to the Texas border. In central New Mexico, the river courses through the arid high desert and many Pueblos around Albuquerque. This region is typified by the traditional acequia irrigation system landscapes used by Native American and Spanish colonial farmers.

### KEY CULTURAL/RECREATIONAL HIGHLIGHTS:

- La Bajada
- Paseo del Bosque Trail
- Valle de Oro Urban Wildlife Refuge
- Bosque del Apache Wildlife Refuge
- Strong cultural influence of Pueblo settlements

### KEY LANDSCAPE NOTES:

- Mixed Urban/Agricultural context
- Ditch and levee network
- Desert highlands, mesas, and basins

### KEY TRAIL TYPES:

- Urban Bikeway
- On-Levee
- On-Ditch/Drain Service Road
- Shared Use Path



*Rio Grande Nature Center Trail along the Rio Grande in Albuquerque*



## SOUTHERN NEW MEXICO

Elephant Butte Lake roughly marks the transition between central and southern New Mexico, although the differences are more sociocultural than physical. In southern New Mexico, the shallow river is a ribbon of green in the arid Chihuahuan Desert. Although it sometimes runs dry, the river remains the lifeblood of many communities that rely on tourism, as well as major agricultural crops including chile, cotton, grapes, and pecans.

### KEY CULTURAL/RECREATIONAL HIGHLIGHTS:

- Elephant Butte and Caballo Lakes
- The White Sands and Organ Mountains-Desert Peaks National Monuments
- La Llorona Trail (one of the first designated segments of the Rio Grande Trail)
- Strong cultural influence along Mexican border

### KEY LANDSCAPE NOTES:

- Ditch and levee network
- Desert highlands, mesas, and basins

### KEY TRAIL FACILITIES:

- On-Levee
- On-Ditch/Drain Service Road
- Unpaved Multi-Use Roadway
- Shoulder Bikeway
- Shared Use Path



*The Organ Mountains outside of Las Cruces*





*A designated Rio Grande Trail segment through Elephant Butte Lake State Park, near Truth or Consequences*

## Preferred Rio Grande Trail Alignment: County by County Dashboard

### 1. TAOS COUNTY: 113.3 MILES

The Rio Grande Trail begins on the Colorado/New Mexico state line at the northern edge of Taos County and follows the eastern ridge of Rio Grande Gorge, skirting Ute Mountain. An existing connection east to Questa offers a potential link to Red River and Taos Ski Valley. The predominantly backcountry trail crosses the Red River and approaches a series of natural hot springs on the bank of the Rio Grande. The main alignment then crosses to the west side of the gorge, west of the community of San Cristobal, and continues south to the Taos Junction Bridge on NM 567.

- 105.3 miles backcountry trail
- 1.4 miles shared use path
- 4.7 miles sidepath
- 1.9 miles unpaved multi-use roadway
- 15 water access locations and shelters recommended<sup>1</sup>

### 2. RIO ARRIBA COUNTY: 21.1 MILES

The trail passes near Rinconada, La Junta, Embudo, and Velarde before reaching Lyden with gaps where Highway 68 was identified as the only practical option. Several route options for this section are included in the preferred trail alignment because of private property, river crossings, existing utility lines, and the former railroad bed.

- 4.7 miles backcountry trail
- 0.1 mile shared use path
- 2.3 miles sidepath
- 2.0 miles unpaved multi-use roadway
- 2.0 miles shoulder bikeway
- 22 water access locations and shelters recommended

<sup>1</sup> Recommended amenities are based on data provided in Chapter 6, for the purpose of providing sufficient access to drinkable water and shelter from the elements.

### 3. SANTA FE COUNTY AND LOS ALAMOS COUNTY: 105.8 MILES

The trail picks up just northeast of White Rock and splits into two backcountry sections. One route crosses the Santa Fe National Forest while the other loops through Santa Fe County communities, partially along NM 14 – designated as the Turquoise Trail National Scenic Byway. The Turquoise Trail route would deviate from the Rio Grande corridor because of physical and land ownership constraints.

- 62.1 miles backcountry trail
- 43.7 miles sidepath/on-shoulder bikeway
- 0.03 mile unpaved multi-use roadway
- 14 water access locations and shelters recommended

### 4. SANDOVAL COUNTY: 50.6 MILES

The section winds from Golden to the Village of Corrales, near the Bernalillo County line. The main trail connects with State Highway 14 and follows it through Madrid, Golden, and Sandia Park, creating a loop through Cibola National Forest, before continuing west past the Anasazi Trails, until it reconnects with the river in Bernalillo. The trail crosses the river at US 550 and hugs the western edge of the river as it winds through the more populated areas approaching Albuquerque.

- 12.2 miles backcountry trail
- 1.4 miles on-ditch/drain service road
- 14.4 miles shared use path
- 4.8 miles sidepath
- 7.4 miles unpaved multi-use roadway
- 10.4 miles shoulder bikeway
- 7 water access locations and shelters recommended

### 5. BERNALILLO COUNTY: 59.8 MILES

The trail transitions to an urban zone as it runs through the Albuquerque region, made up of shared use path or shoulder bikeway segments. The trail connects with the Rio Grande Nature Center, the Valle de Oro Urban Wildlife Refuge, and the Paseo del Bosque Trail. A bikeway splinters off to the east and runs along US 40, eventually connecting with the Cibola National Forest loop. There are multiple north/south options connecting Rio Bravo to the Isleta Pueblo and the Pan American Highway.

- 29.1 miles shared use path
- 7.1 miles sidepath
- 15.1 miles shoulder bikeway
- 8.5 miles urban bikeway
- 8 water access locations and shelters recommended

### 6. VALENCIA COUNTY: 26.6 MILES

This short segment overlaps with the existing Bosque Loop, and runs along levees that are typical of irrigation systems in the region. Valencia County marks the transition from urban back to rural and traditional agricultural landscapes along the trail, and it parallels several historic routes of the Camino Real Trail that have been documented both east and west of the river.

- 8.9 miles on-levee
- 16.7 miles shared use path
- 0.9 mile shoulder bikeway
- 3 water access locations and shelters recommended





## 7. SOCORRO COUNTY: 98.3 MILES

Through most of Socorro County the primary trail alignment follows levees or ditch/drain service roads that make up the traditional irrigation system of the region. The trail hugs the west side of the Rio Grande and passes several small communities, including Lemitar, Socorro, and San Antonio, as well as traversing two protected natural areas: the Sevilleta and the Bosque del Apache National Wildlife Refuges. The trail also passes the Fort Craig historic site, at which point it diverges from the river and follows a more upland route along the numerous ridges that line the western banks of the river.

- 11.9 miles backcountry trail
- 17.1 miles on-ditch/drain service road
- 58.5 miles on-levee
- 10.8 miles unpaved multi-use roadway
- 13 water access locations and shelters recommended

## 8. SIERRA COUNTY: 86.4 MILES

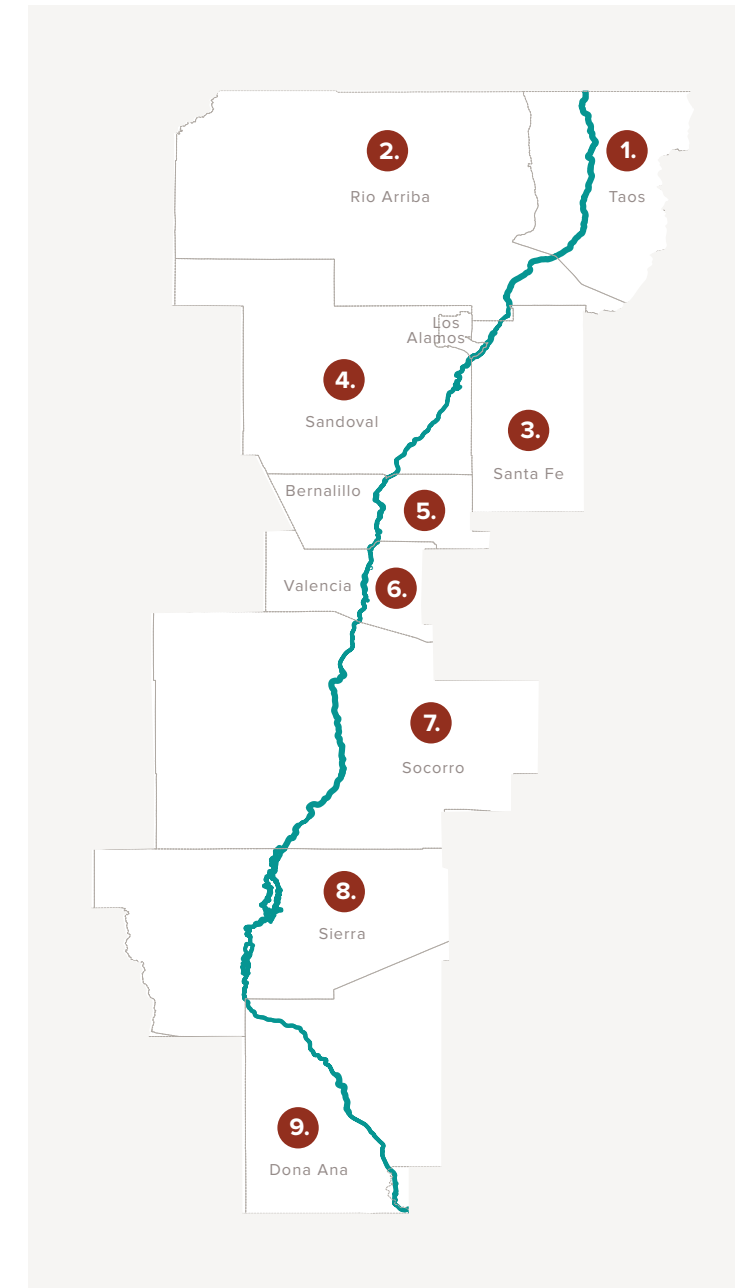
Running through two major recreation areas, the Elephant Butte and Caballo Reservoirs, this section consists of backcountry trails and unpaved roadways. Sierra County roughly marks the transition between central and southern New Mexico, where the Rio Grande runs shallow in the arid Chihuahuan Desert.

- 47.0 miles backcountry trail
- 3.1 miles on-ditch/drain service road
- 3.3 miles shared use path
- 33.0 miles unpaved multi-use roadway
- 11 water access locations and shelters recommended

## 9. DONA ANA COUNTY: 100.5 MILES

The final stretch of the Rio Grande Trail is marked by diverse terrain, ranging from abundant agricultural fields to rugged and desolate rolling desert landscapes, punctuated by views of distant jagged peaks. The preferred trail alignment includes a mixture of urban and semi-urban shared paths, on-levee, and backcountry trails. Jornada del Muerto and old Route 66 are accessible from this section, as is the town of Hatch (center of chile production in the state). The trail ends at the junction of the New Mexico, Texas, and Mexico borders at Mount Cristo Rey.

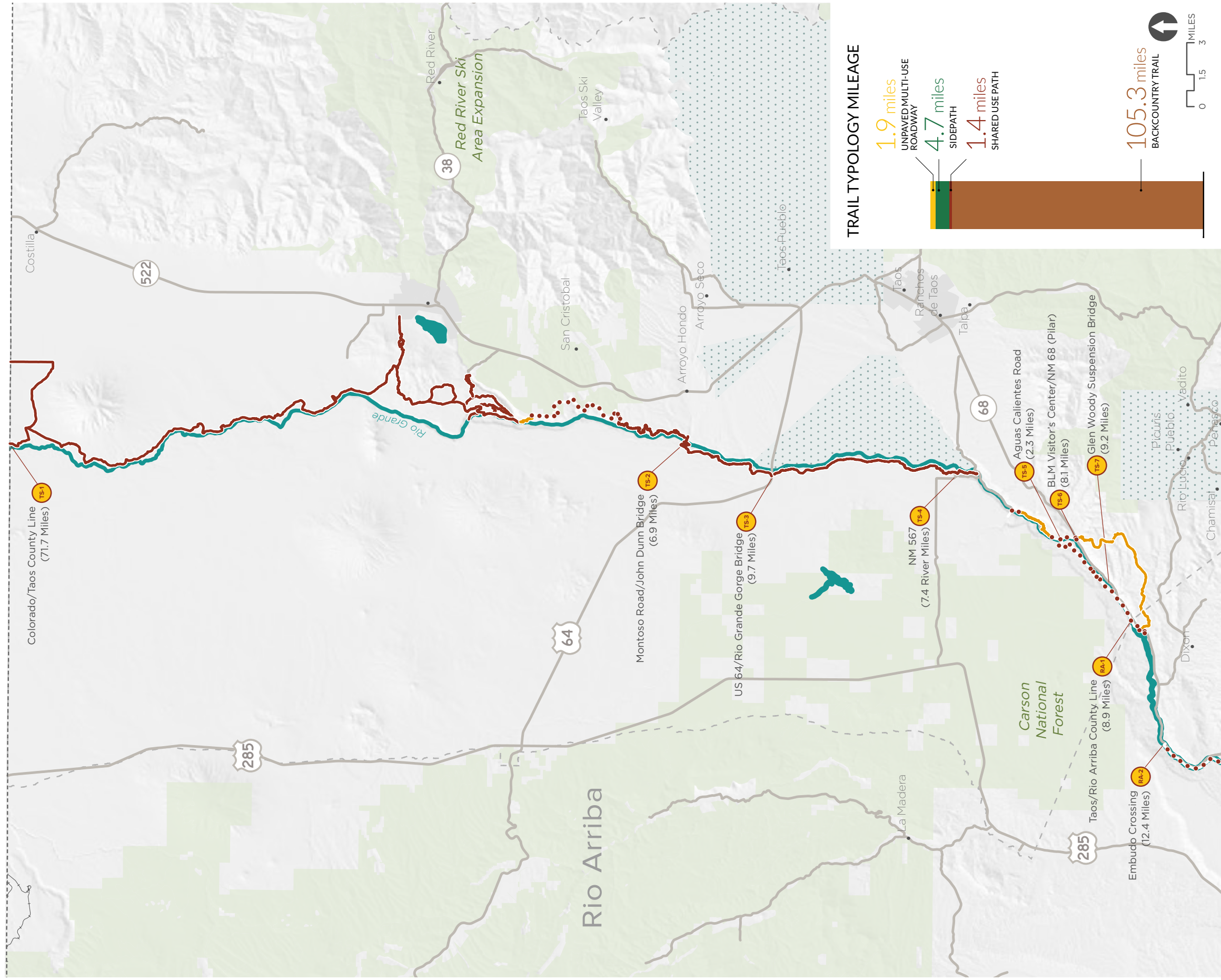
- 7.0 miles backcountry trail
- 11.8 miles on-levee
- 58.0 miles shared use path
- 16.8 miles sidepath
- 6.9 miles unpaved multi-use roadway
- 13 water access locations and shelters recommended



Map C. Counties along the Rio Grande River Corridor

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# COLORADO



## TAOS (TS) COUNTY

PREFERRED ALIGNMENT

NEW MEXICO

# Rio Grande Trail

MASTER PLAN

### LEGEND

#### TRAIL SYSTEM

- Segment Endpoints
- Corridor Reference Points
- Proposed Trail
- Designated Rio Grande Trail
- Existing Trail

### BOUNDARIES

- Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

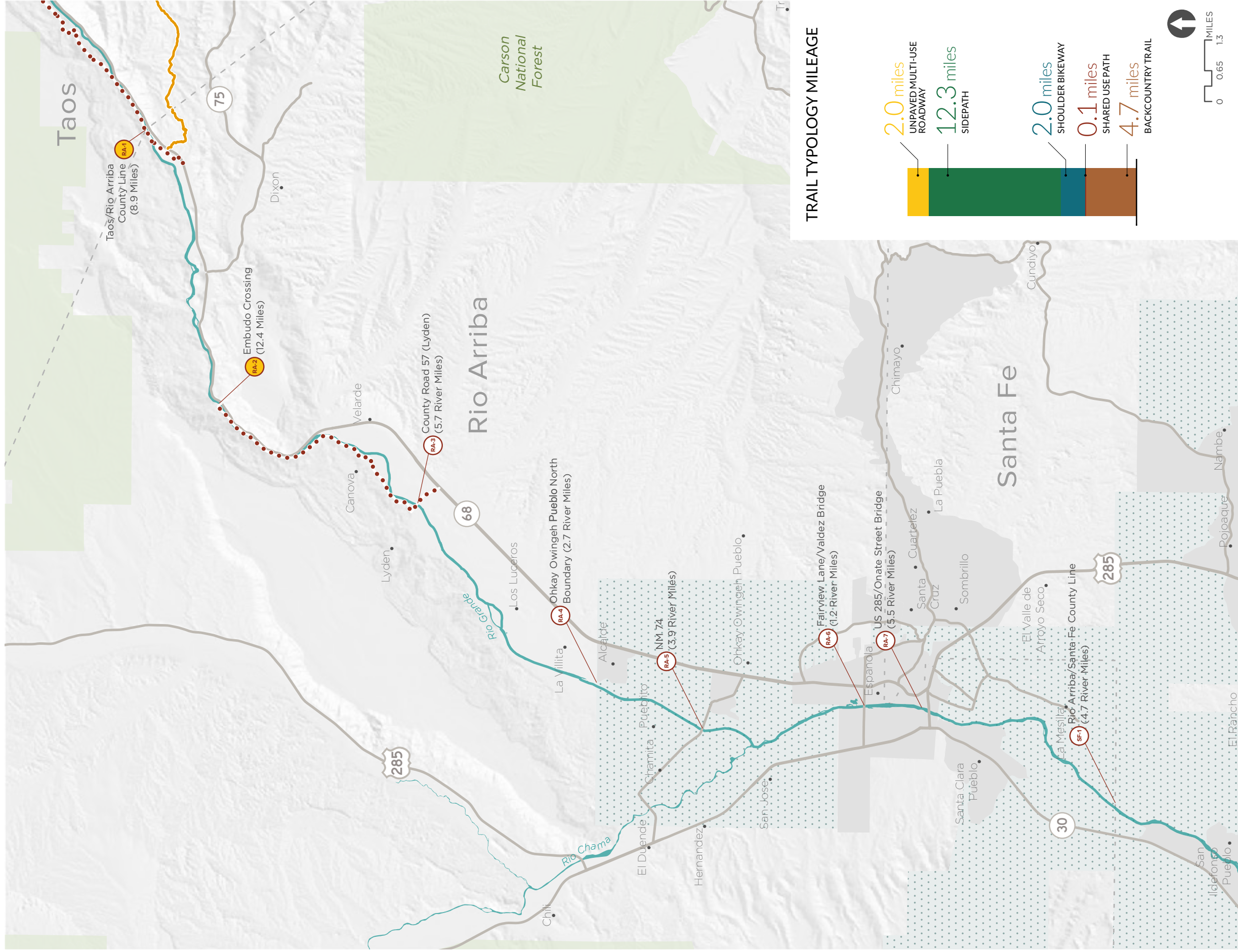
### TRANSPORTATION

- Interstate Highways
- US & State Highways
- Railroad

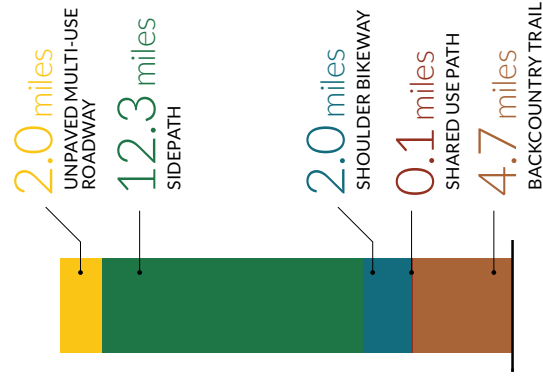


Data Sources: State of New Mexico and RGIS  
Map Produced: Nov 2018





**TRAIL TYPOLOGY MILEAGE**



**RIO ARRIBA (RA)  
COUNTY**

PREFERRED  
ALIGNMENT

NEW MEXICO

**Rio Grande Trail**

MASTER PLAN

**LEGEND**

**TRAIL SYSTEM**

- Segment Endpoints
- Corridor Reference Points
- Proposed Trail
- Designated Rio Grande Trail
- Existing Trail

**BOUNDARIES**

- Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

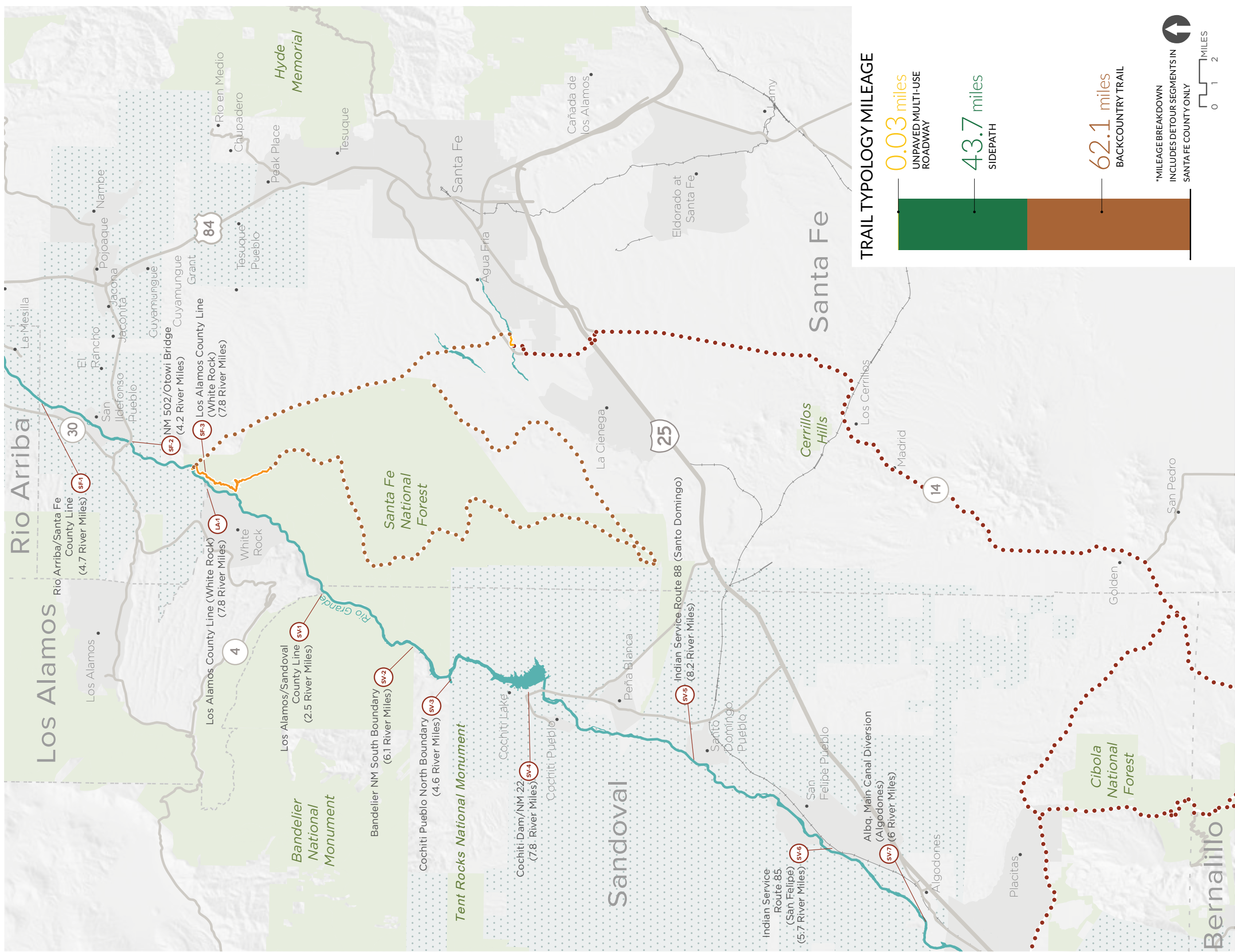
**TRANSPORTATION**

- Interstate Highways
- US & State Highways
- Railroad

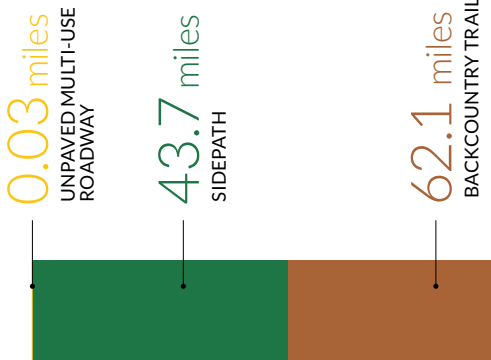


Data Sources: State of New Mexico and GIS  
Map Produced: Nov 2018





**TRAIL TYPOLOGY MILEAGE**



\*MILEAGE BREAKDOWN INCLUDES DETOUR SEGMENTS IN SANTA FE COUNTY ONLY

**SANTA FE (SF) + LOS ALAMOS (LA) COUNTY PREFERRED ALIGNMENT**

**LEGEND**

**TRAIL SYSTEM**

- Segment Endpoints
- Corridor Reference Points
- Proposed Trail
- Designated Rio Grande Trail
- Existing Trail

**BOUNDARIES**

- Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

**TRANSPORTATION**

- Interstate Highways
- US & State Highways
- Railroad

NEW MEXICO

**Rio Grande Trail**

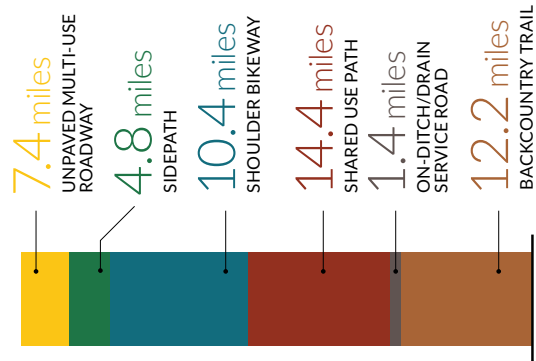
MASTER PLAN



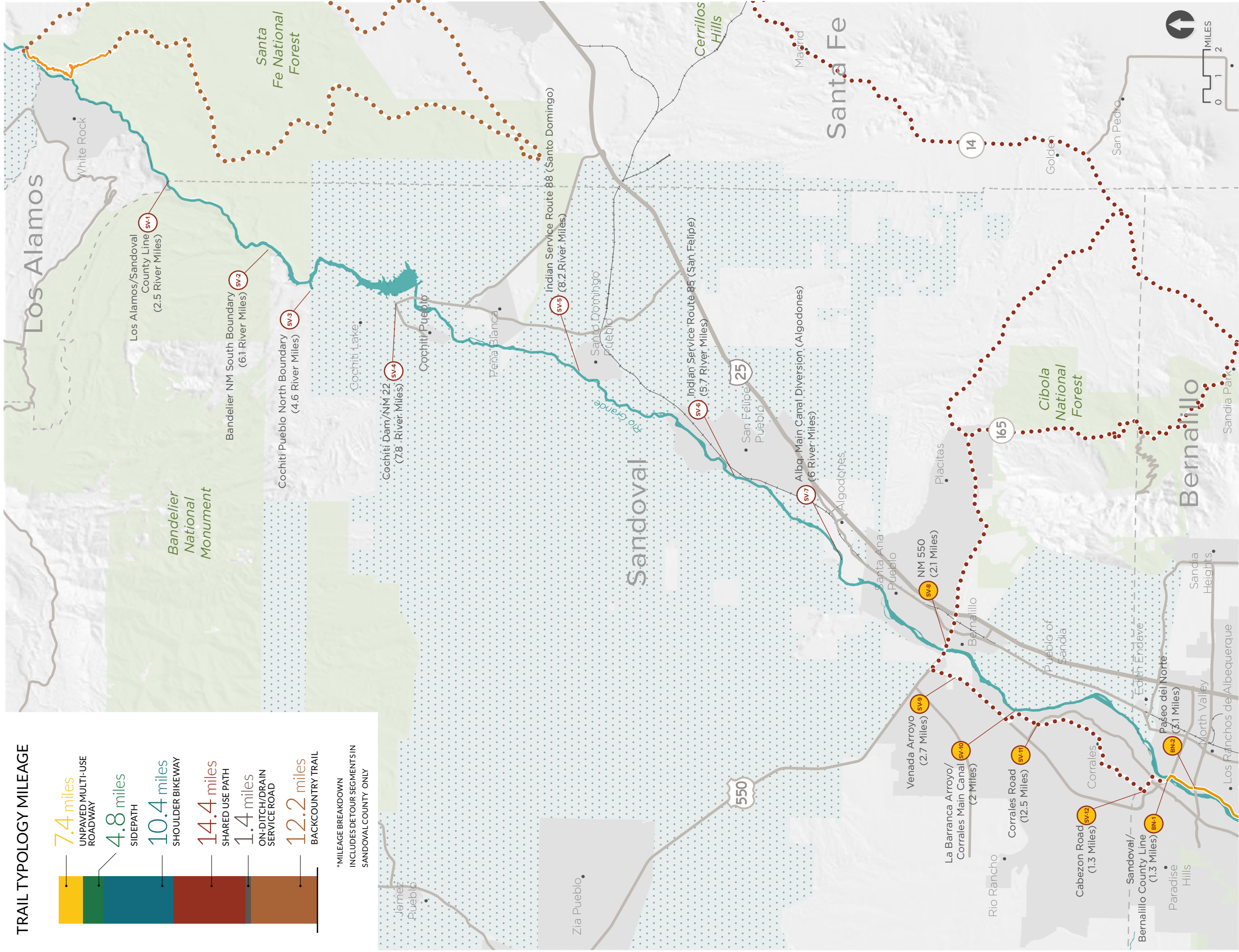
Data Sources: State of New Mexico and RGIS  
Map Produced: Nov 2018



**TRAIL TYPOLOGY MILEAGE**



\*MILEAGE BREAKDOWN INCLUDES DETOUR SEGMENTS IN SANDOVAL COUNTY ONLY



**SANDOVAL (SV) COUNTY**

**PREFERRED ALIGNMENT**

- LEGEND**
- TRAIL SYSTEM**
- SV1 Segment Endpoints
  - SV1 Corridor Reference Points
  - Proposed Trail
  - Designated Rio Grande Trail
  - Existing Trail

**BOUNDARIES**

- Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

**Rio Grande Trail**

NEW MEXICO

MASTER PLAN

**TRANSPORTATION**

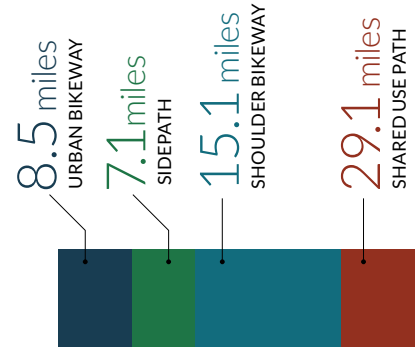
- Interstate Highways
- US & State Highways
- Railroad



Data Sources: State of New Mexico and RGIS  
Map Produced: Nov 2018



**TRAIL TYPOLOGY MILEAGE**



\*MILEAGE BREAKDOWN INCLUDES DETOUR SEGMENTS IN BERNALILLO COUNTY ONLY



**BERNALILLO (BN)  
COUNTY**

**PREFERRED ALIGNMENT**



**LEGEND**

**TRAIL SYSTEM**

- Segment Endpoints
- Corridor Reference Points
- Proposed Trail
- Designated Rio Grande Trail
- Existing Trail

**BOUNDARIES**

- Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

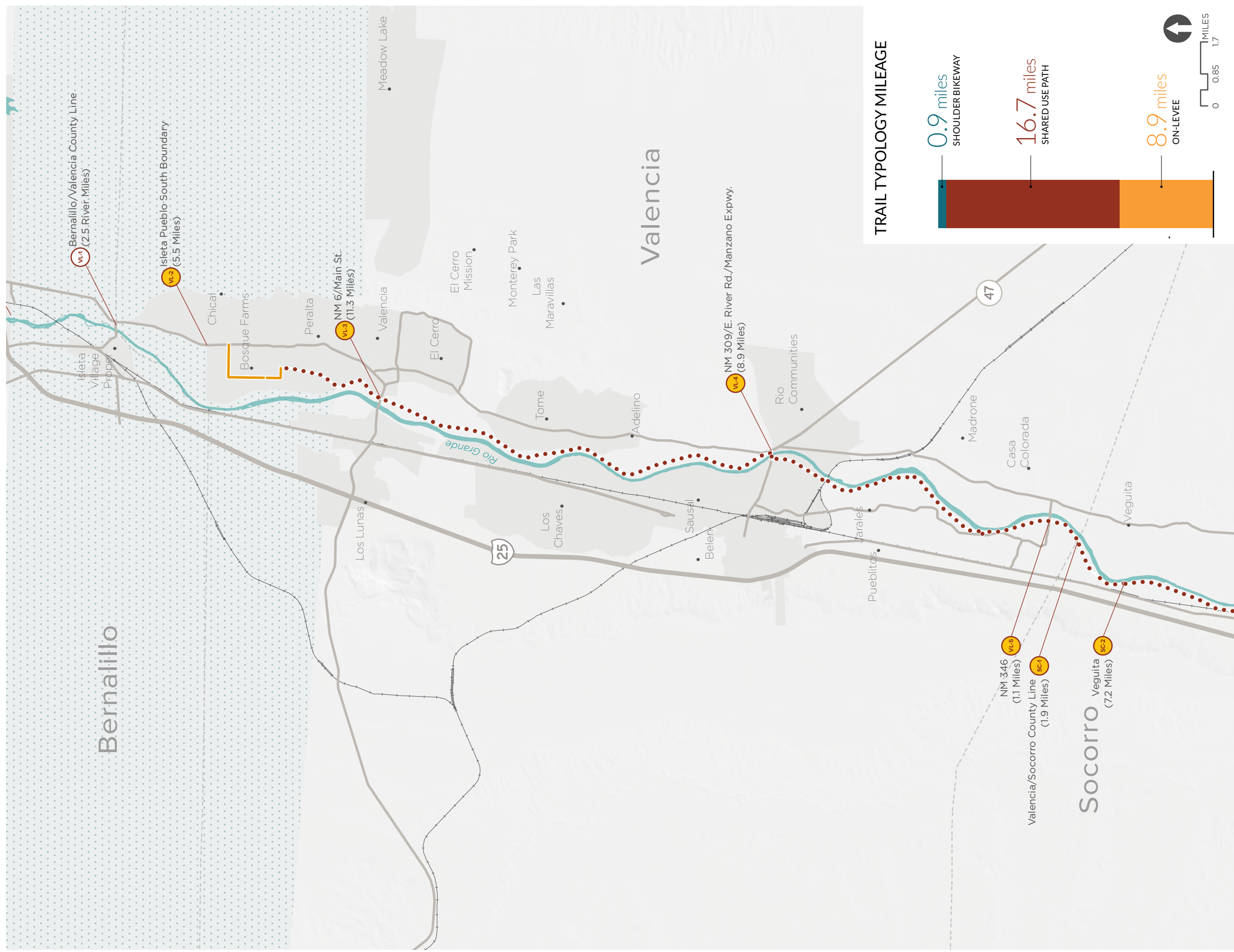
**TRANSPORTATION**

- Interstate Highways
- US & State Highways



Data Sources: State of





**VALENCIA (VL)  
COUNTY**

PREFERRED  
ALIGNMENT

NEW MEXICO

**Rio Grande Trail**

MASTER PLAN

**LEGEND**

**TRAIL SYSTEM**

- Segment Endpoints
- VL-1 Corridor Reference Points
- Proposed Trail
- Designated Rio Grande Trail
- Existing Trail

**BOUNDARIES**

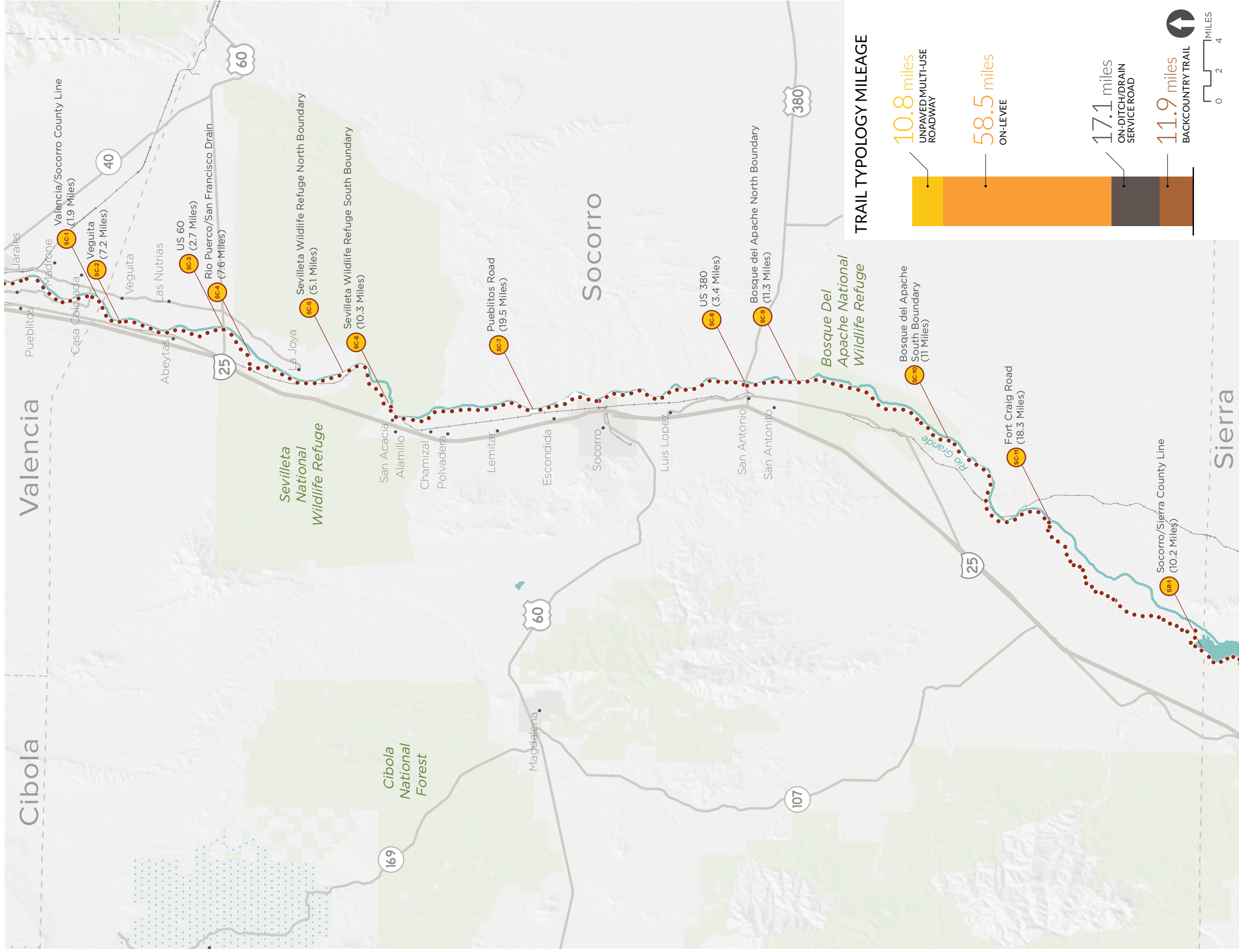
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- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

**TRANSPORTATION**

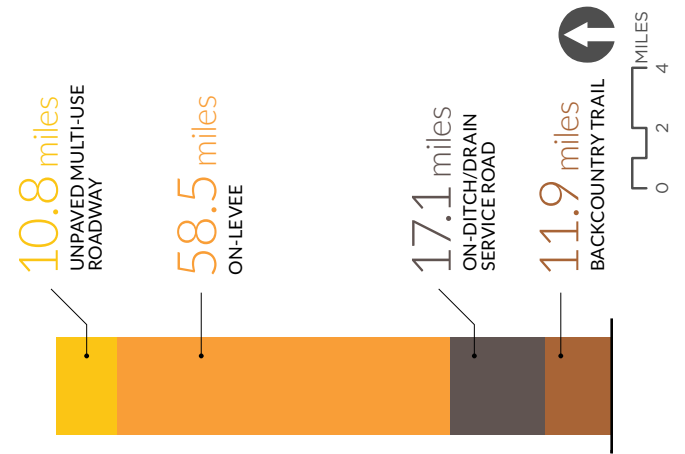
- Interstate Highways
- US & State Highways
- Railroad



Data Sources: State of New Mexico and FGIS  
Map Produced: Nov 2018



**TRAIL TYPOLOGY MILEAGE**



**SOCORRO (SC) COUNTY**

**PREFERRED ALIGNMENT**

**Rio Grande Trail**

NEW MEXICO

MASTER PLAN

**LEGEND**

**TRAIL SYSTEM**

- Segment Endpoints
- Corridor Reference Points
- ⋯ Proposed Trail
- Designated Rio Grande Trail
- Existing Trail

**BOUNDARIES**

- ⋯ Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

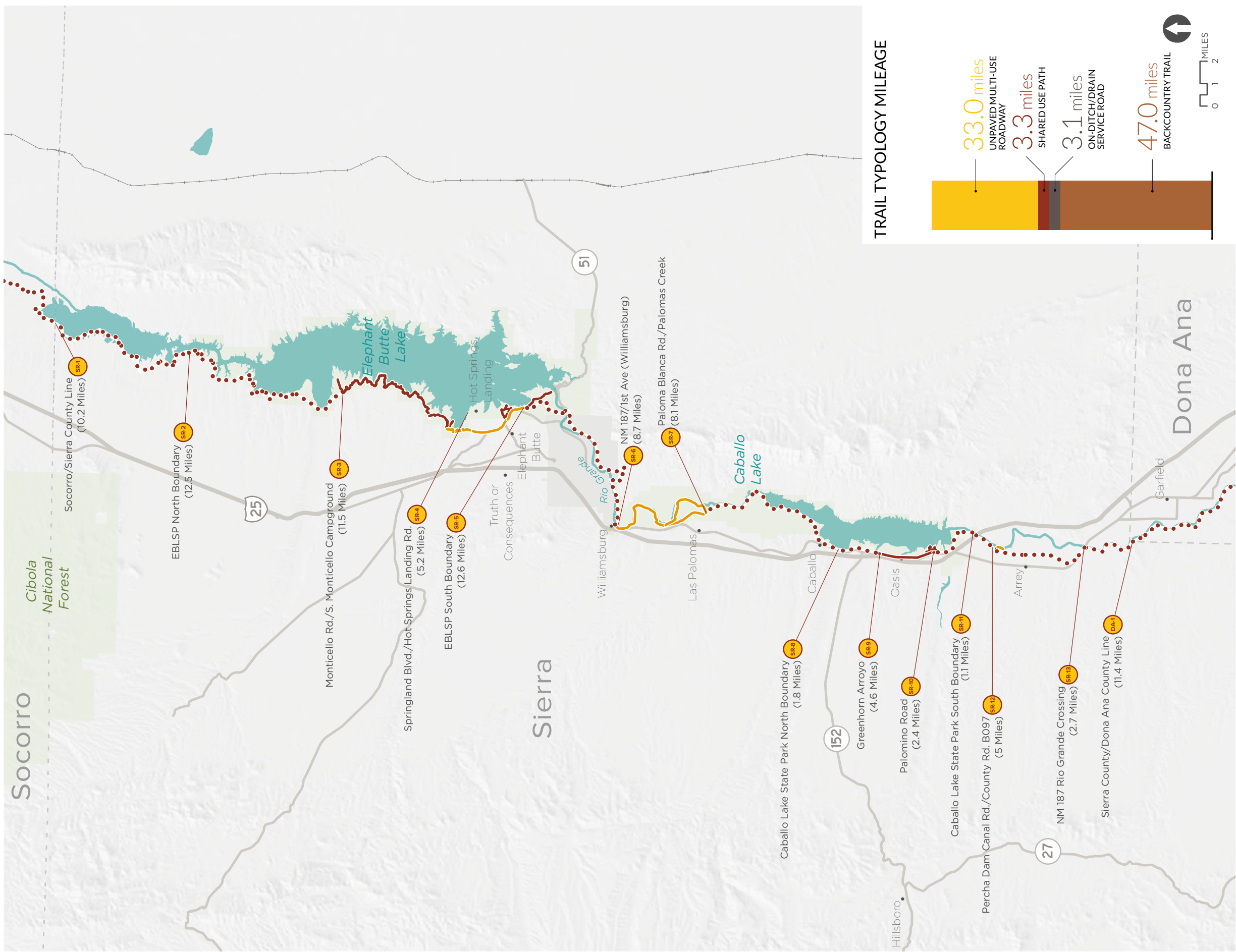
**TRANSPORTATION**

- Interstate Highways
- US & State Highways
- Railroad

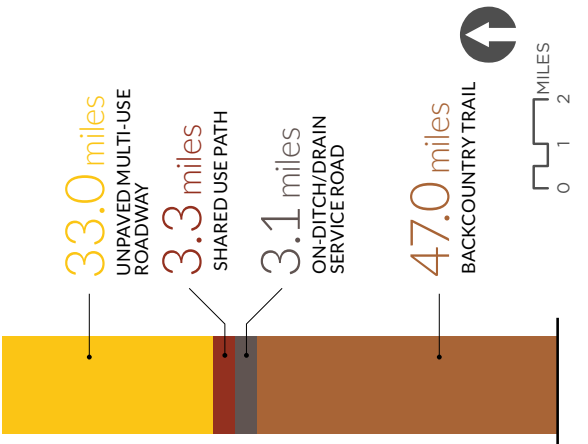


Data Sources: State of New Mexico and FGIS  
Map Produced: Nov 2018





**TRAIL TYPOLOGY MILEAGE**



**SIERRA (SR) COUNTY**

**PREFERRED ALIGNMENT**

**RIO GRANDE TRAIL**  
NEW MEXICO  
MASTER PLAN

**LEGEND**

**TRAIL SYSTEM**

- Segment Endpoints
- Corridor Reference Points
- Proposed Trail
- Designated Rio Grande Trail
- Existing Trail

**BOUNDARIES**

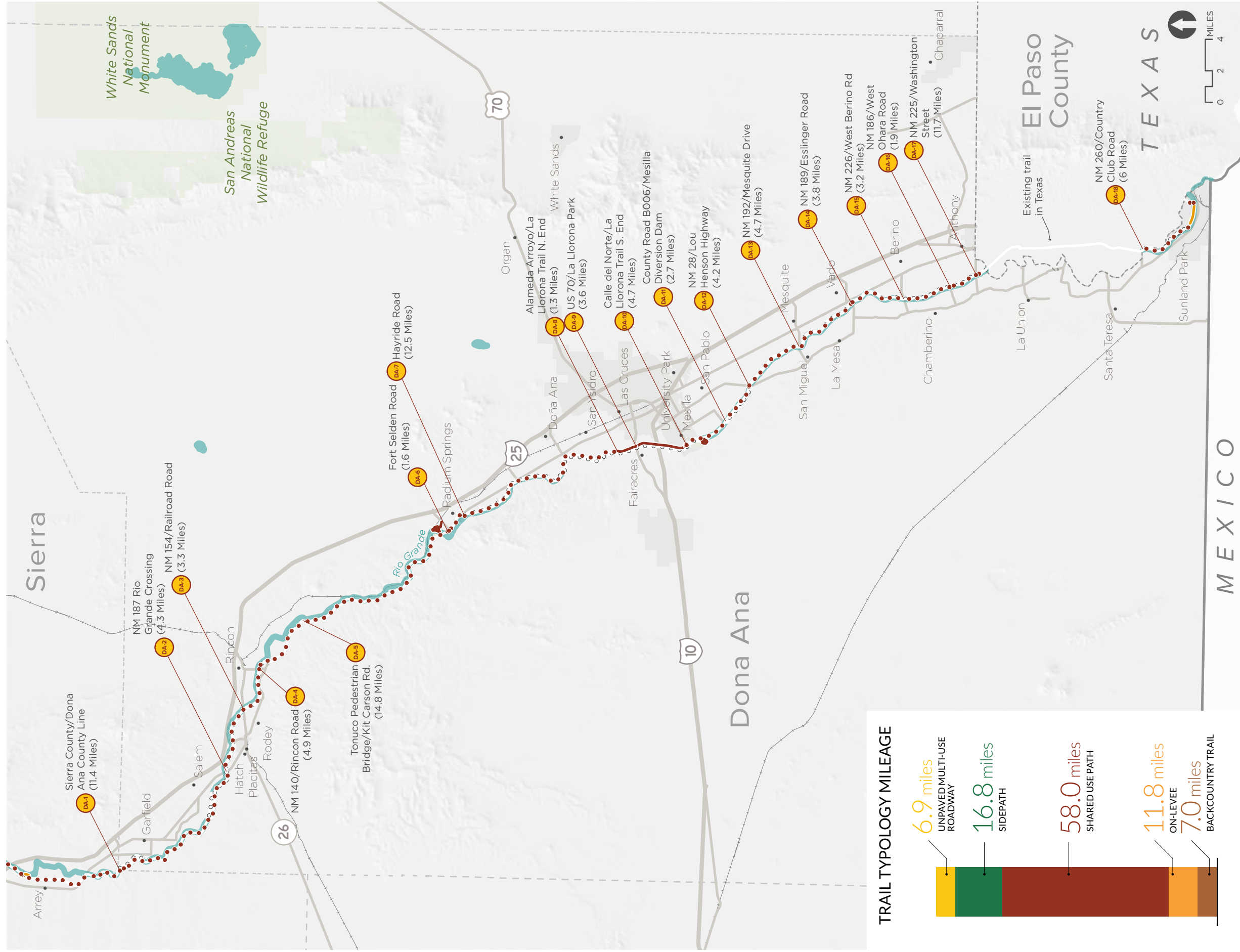
- Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

**TRANSPORTATION**

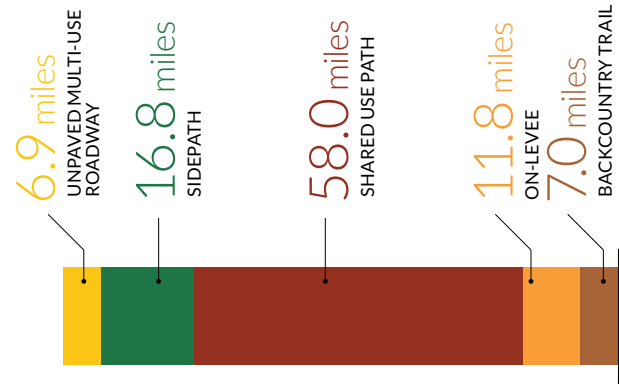
- Interstate Highways
- US & State Highways
- Railroad



Data Sources: State of New Mexico and FGIS  
Map Produced: Nov 2018



**TRAIL TYPOLOGY MILEAGE**



**DONA ANA (DV)  
COUNTY**

PREFERRED  
ALIGNMENT

NEW MEXICO  
**Rio Grande Trail**

MASTER PLAN

**BOUNDARIES**

- Native American Land
- National & State Parks, Forests and Monuments
- Cities & Towns
- County Boundary
- State Boundary
- U.S. Boundary

**TRANSPORTATION**

- Interstate Highways
- US & State Highways
- Railroad

**LEGEND**


**TRAIL SYSTEM**

- Segment Endpoints
- Corridor Reference Points
- Proposed Trail
- Designated Rio Grande Trail
- Existing Trail
- Proposed Alternative



Data Sources: State of New Mexico and HGIS  
Map Produced: Nov 2018





CHAPTER 4

# THREADING PARTNERSHIPS



# OVERVIEW

As the mileage of the Rio Grande Trail grows, and new segments are added outside of state park properties, a cohesive approach to oversight, management, and maintenance of the trail as a singular asset will be increasingly important. The following chapter provides guidance for trail oversight based on the unique characteristics of the Rio Grande Trail alignment, its range of trail types, range of user groups, and the institutional landscape in New Mexico. These unique characteristics include:

- **Long-distance:** More than 400 miles of trail are proposed within the preferred alignment.
- **Historic significance:** Rio Grande Trail alignment follows a 1,000-year-old trade route.
- **Incremental development:** Segments will be completed or designated as available, rather than in a continuous linear fashion, and gaps will exist between designated segments.
- **Multiple land owners and managers:** Segments will vary in land owner and manager, ranging from state parks to New Mexico Department of Transportation (NMDOT) rights-of-way to irrigation district easements, and many others.

- **Federal agency participation:** 27,508,382 acres of land, approximately 35% of the state, is owned by a federal agency, including:
  - » Bureau of Land Management (BLM),
  - » National Park Service (NPS),
  - » USDA Forest Service, and
  - » US Fish and Wildlife Service.<sup>1</sup>

<sup>1</sup> Federal Land Ownership: Overview and Data. Congressional Research Service Report. March 3, 2017.

- **Undefined resources:** While many potential funding sources exist for the Rio Grande Trail, there is no dedicated source of funding for trail construction or ongoing operations and maintenance in existence to date.
- **Fiscal stewardship:** Public funding for constructing and maintaining trails is limited, as is the case with any public improvement.
- **Range of users:** Many different types of users will enjoy and explore the trail in their own ways. User groups include those shown below in Figure 5.



Figure 5: Trail User Typology Continuum



# PURSUING NATIONAL TRAIL DESIGNATION

*Consideration: The Rio Grande Trail may be a candidate for a National Recreation Trail (NRT) designation (see Appendix C for an evaluation of varying national trail designations).*

National trail designations, such as National Recreation Trails, National Scenic Trails, and National Historic Trails:

- elevate the national profile of the trail,
- streamline coordination between different managing agencies,
- prioritize the trail for federal funding and maintenance,
- bring tourism to rural and urban areas,
- spark interest from volunteers,
- and facilitate communication with other National Trails through the Partnership for National Trails Systems.

The National Recreation Trail designation could be particularly applicable to the Rio Grande Trail because of the more accessible federal approval process, flexibility for many different types of trail designs, and aligned goals. NRT designation specifically recognizes trails that link communities to recreational opportunities on public land and in local parks. As it begins to take shape, the Rio Grande Trail will likely embody the criteria for NRT designation. It is planned to be:

- open to the public for at least 10 years;
- well maintained and managed;
- compliant with applicable land use and environmental law; and
- supported by all land owners whose property the trail crosses.<sup>1</sup>

<sup>1</sup>The National Recreation Trails Database. NRT Applications and updates. Accessed 4/27/18. <http://americantrails.org/NRTDatabase/applicantLogin.php>



## APPLYING FOR NATIONAL RECREATION TRAIL DESIGNATION

Nationwide, there are over 1,300 NRTs, ranging from less than a mile to 485 miles in length. They are authorized by the National Trails System Act of 1968. These existing regional and local trails are approved by either the Secretary of Agriculture or the Secretary of the Interior. Unlike other national trail designations, NRTs do not need the approval of Congress. If they decide to pursue designation, the Bureau of Land Management's New Mexico office could serve as an in-state resource for navigating the process to apply for designation. The application and approval process happen on a yearly cycle, starting each November. The application can be completed online, it requires basic information about the trail and sponsoring agency, as well as written consent from all property owners whose property the trail crosses.





## Relationship with other National Trails in New Mexico

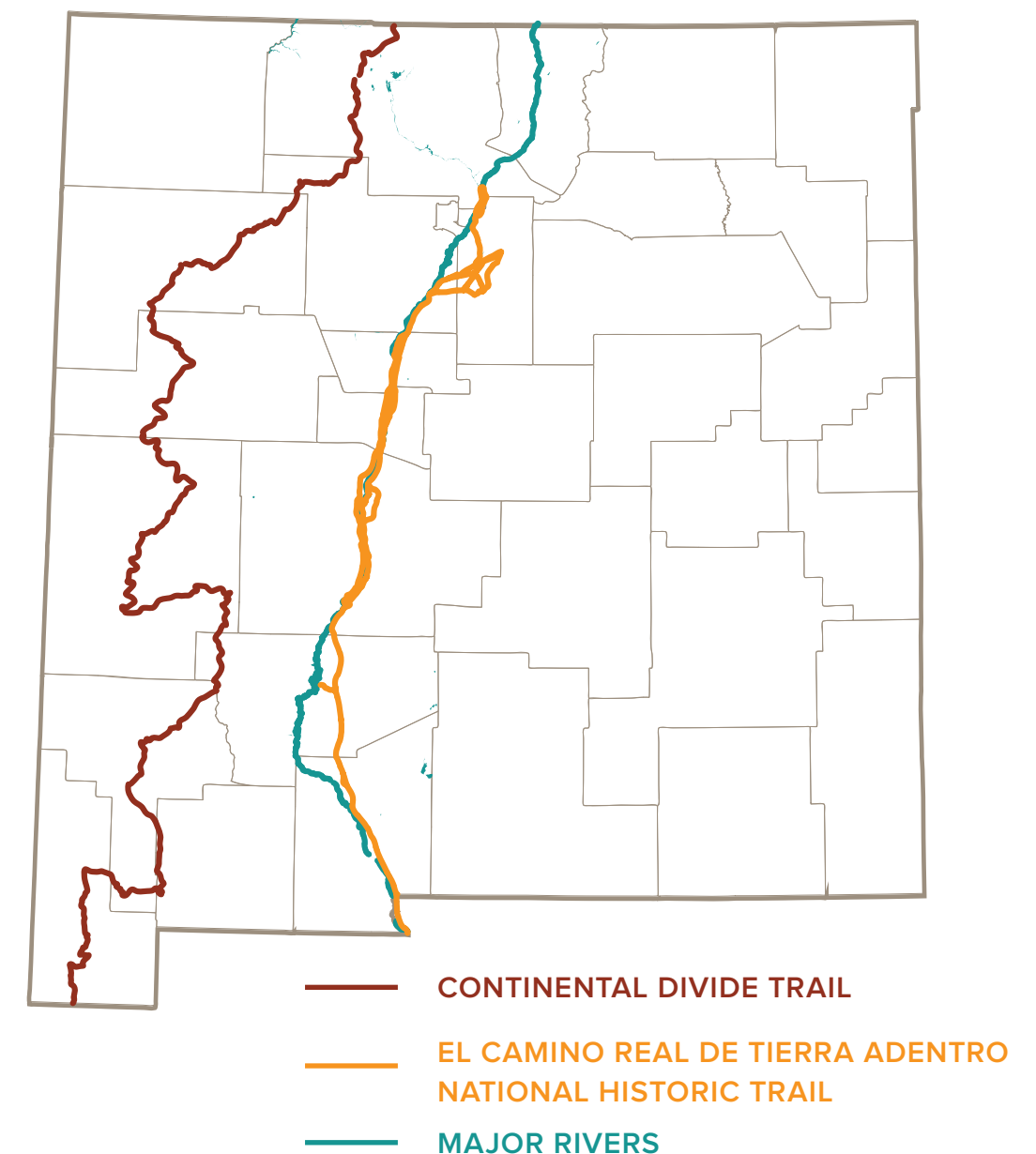
New Mexico currently has 19 nationally designated trails: 15 National Recreation Trails, three National Historic Trails, and one National Scenic Trail. The master planning process identified two national trails of particular significance to the Rio Grande Trail: El Camino Real de Tierra Adentro National Historic Trail, which closely parallels the Rio Grande, and the Continental Divide Trail, which is cross-state and is supported by a non-profit.

### EL CAMINO REAL DE TIERRA ADENTRO NATIONAL HISTORIC TRAIL

The El Camino Real de Tierra Adentro Historic Trail is one of New Mexico's most important cultural artifacts. It tells a story of three centuries of cross-cultural trade and commerce using different modes of travel. The 404-mile route from El Paso, Texas to San Juan Pueblo was designated a National Historic Trail in 1993, and added to the National Trails system in October 2000. In southern New Mexico, the El Camino Real de Tierra Adentro National Historic Trail follows a similar route to the Rio Grande Trail. However, in Kewa Pueblo, the El Camino Real de Tierra Adentro National Historic Trail diverges from the Rio Grande and continues up the Santa Fe River. The Rio Grande Trail will similarly highlight New Mexico's unique history, with more of an emphasis on active modes of transportation and the natural environment. The two trails will work in tandem to promote New Mexico tourism along the river corridor, leverage federal resources, and offer excellent recreational opportunities to New Mexican residents and visitors.

### CONTINENTAL DIVIDE TRAIL

Founded in 1978, the Continental Divide National Scenic Trail (CDT) extends for 770 miles through some of New Mexico's most spectacular natural and historic landscapes. It follows the Continental Divide across the United States, running north/south through western New Mexico. The Continental Divide Trail Coalition (CDTC) (and before that the Continental Divide Trail Association) coordinates trail management, in partnership with USDA Forest Service and New Mexico recreation and conservation groups. The two trails offer different ways for people to recreate in New Mexico. The CDT provides a rugged, backcountry experience for users, with an emphasis on conservation and self-reliance. The Rio Grande Trail will offer a more accessible way for people to explore the state, with less challenging terrain, closer proximity to cities, and developed amenities. The Rio Grande Trail team seeks to learn from the CDTC's decades of trail planning and management experience, and work together to promote state tourism and funding for trails.



Map D: Two of the 19 nationally designated trails in New Mexico

# ESTABLISHING A GOVERNANCE STRUCTURE

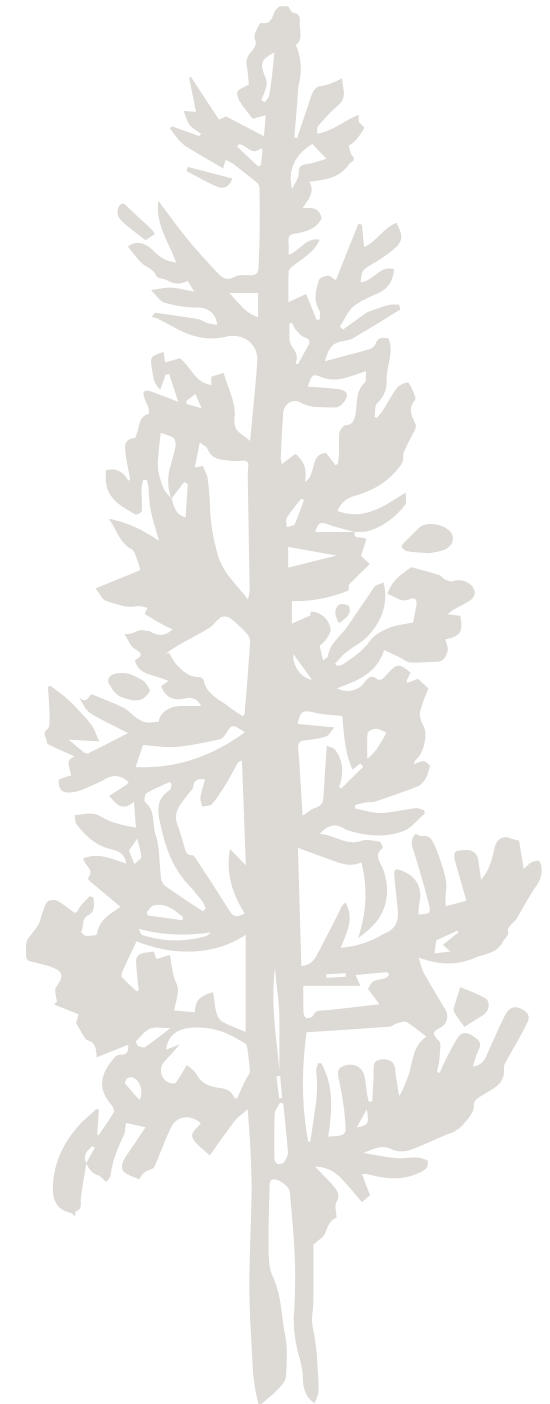
## A Rio Grande Trail Non-Profit

*Recommendation: Trail advocates and partners should establish a non-profit that will play a leading role in the state's efforts to create the Rio Grande Trail.*

Trail advocates and partners should establish a new community-based non-profit organization. A first step will be to hire the first non-profit staff person who would work to further develop the organization and solidify its role and available resources. Identifying an existing non-profit that would be appropriate for, and has the resources to house the Rio Grande Trail non-profit as a program before the group branches out on its own, may be considered as a near-term option.

### THE BENEFITS OF A RIO GRANDE TRAIL NON-PROFIT INCLUDE:

- **Collaboration:** Trail non-profits are uniquely positioned to collaborate with the multiple stakeholder groups who are interested in the statewide trail: local communities, city and state officials, Pueblos, government agencies, and tourists.
- **Accountability:** Particularly when multiple agencies manage the land, trail non-profits are a mission-driven outside force, dedicated to moving the project forward.
- **Advocacy and Education:** Trail organizations recruit and work with volunteers, build momentum for the trail, and raise money, public awareness, and community support.
- **Common Ground:** Trail non-profits are particularly savvy at balancing the needs of different trail user constituencies, such as hikers and mountain bikers. They offer a way for people from different user groups across the state to work together toward common goals.
- **Inclusive:** Trail non-profits provide an inclusive approach to trail governance. Anyone who is passionate about the mission is encouraged to get involved in a variety of ways.



## RIO GRANDE TRAIL NON-PROFIT ROLE

- Serve as 501c3 fundraising arm to raise money to fill the gaps in public funding.
- Advocate for public funding.
- Work collaboratively with the New Mexico Department of Tourism to create a promotional program for the trail.
- Lead volunteer recruitment and management.
- Develop and lead supportive programming, such as a “Gateway Community” program, and larger community events.
- Work with Rio Grande Trail Commission, EMNRD, Bureau of Land Management, USDA Forest Service, and US Fish and Wildlife through an overarching agreement to fund, build, and manage the trail. This agreement will outline how the different entities agree to work together.
- Work with smaller individual land managers, such as cities, counties, and private land owners through individual arrangements.
- Work with the Rio Grande Trail Commission to recommend designation of trail segments and collaborate with land managers to incorporate new segments into the trail system.
- Serve as a one-stop shop for businesses and other groups seeking to hold events on the trail.

## RIO GRANDE TRAIL NON-PROFIT STRUCTURE

The Board of Directors, staff, and key partners will create a system of checks and balances to govern the organization and confirm its role with the Rio Grande Trail. The Rio Grande Trail non-profit has the potential to serve as the advocacy, fundraising, and community-facing arm of the Rio Grande Trail, while the Rio Grande Trail Commission could continue to lend political influence and provide a link to coordinating across multiple state and federal agencies.

### BOARD OF DIRECTORS

The Rio Grande Trail non-profit will need a Board of Directors, as required for all 501c3 non-profits. The Board should include members who represent many different stakeholder groups and interests: environmental, social, health, political, local trail chapters, Native Americans, and more. The Board should include a member that serves as a liaison between the non-profit and the Rio Grande Trail Commission.

### STAFF

Paid staff are essential for the success of the Rio Grande Trail non-profit. At minimum, staff positions should include an Executive Director and Coordinators to manage communication, advocacy, fundraising, trail building, volunteer recruitment, and event planning. The Board of Directors must decide whether to recruit regional coordinators to handle multiple functions with a regional specialization or take a statewide approach with coordinators who specialize in only one function of the trail non-profit, such as a statewide Volunteer Coordinator.





## Successful Trail Non-Profits

The Arizona Trail Association, Colorado Trail Foundation, and Palmetto Conservation Foundation are examples of the many 501c3 trail non-profits that successfully work with government agencies, local officials, and community members to build and maintain long-distance trails. These examples provide “lessons learned” for the future Rio Grande Trail non-profit.

### ARIZONA TRAIL ASSOCIATION

*The Arizona Trail Association illustrates a successful transfer of governance from government bureaus to a trail non-profit, as well as how the mission shifts over time from construction to maintenance and promotion.*

The Arizona Trail Association (ATA) was founded in 1994 to advocate for the trail, provide route info, organize volunteers, identify water and resupply points, and raise money. The Arizona Trail is governed by a partnership between the ATA and government bureaus, led by the USDA Forest Service. At the beginning of the work to build the trail, the government agencies held the majority of the responsibility, but over time much has been transferred to the ATA. The partnership between non-profit, state, and federal agencies is strategic and powerful.<sup>1</sup> The ATA now controls the state trail funding and manages the Trail Steward, who leads the development of the trail. The ATA has the lead role in managing, maintaining, and funding the trail, as the mission has shifted from construction to maintenance and promotion.

<sup>1</sup> Interview with Matt Nelson, Executive Director, Arizona Trail Association. 8/18/17

### COLORADO TRAIL FOUNDATION

*The Colorado Trail Foundation (CTF) provides an example of a trail non-profit working closely with one main public partner to build and operate the trail. The CTF also highlights the power of leveraging private sector donations for a trail.*

The Colorado Trail is governed by a partnership between the Colorado Trail Foundation (CTF) and the USDA Forest Service outlined by a 2005 Memorandum of Understanding (MOU). The CTF is responsible for trail development, maintenance, and continued improvement of the trail corridor, while the USDA Forest Service is ultimately the decision maker for analysis, construction, restoration, and maintenance in accordance with their regulations. The USDA Forest Service has delegated much of the actual work, but still maintains overall authority. The two organizations maintain a close working relationship.<sup>2</sup>

In contrast to most long-distance trails, the CTF is primarily funded by private sources, such as the Gates Foundation, REI, family foundations, Colorado businesses, and individual donors. Its fundraising success is a result of the CTF’s trail branding, creative donor cultivation, Adopt-a-Trail Program, and numerous grant applications.

<sup>2</sup> 2005 MOU between the USDA Forest Service and the Colorado Trail Foundation



Arizona Trail



Colorado Trail





## **PALMETTO TRAIL**

*The Palmetto Conservation Foundation (PCF) is an example of a non-profit able to build a trail across land owned by many different groups, including small, private land owners. Additionally, PCF's work coordinating trail maintenance and their partnership with AmeriCorps provide guidance for the Rio Grande Trail non-profit as they establish a statewide volunteer and maintenance program.*

PCF spearheads the planning, development, branding, and communications of the Palmetto Trail, South Carolina's cross-state trail. The trail is developed largely through publicly-owned lands, on public rights-of-way, and through easements for recreational use, including rail-trail conversions and access to protected lands. Where that is not possible, PCF relies on Memorandum of Understandings (MOUs) as a way to reach agreement with a private property owner for trail access. Major trail management partners include the South Carolina Department of Parks, Recreation and Tourism, and the USDA Forest Service.

Most maintenance is undertaken by the local entity that owns or operates the trail segment. PCF plays a major role in tracking



*Scenic rest stop along the Palmetto Trail in South Carolina.*

maintenance needs and in organizing and leading volunteer maintenance efforts. This includes ongoing partnerships with AmeriCorps and the establishment of the Palmetto Conservation Corps, a trail-based state AmeriCorps program.

## Roles of Public Agencies and other Trail Partners

### RIO GRANDE TRAIL COMMISSION

*Recommendation: Provide a collaborative link between the non-profit and state government to serve as an internal political champion for the trail, by promoting the trail effort to policy makers and agency staff. The Rio Grande Trail Commission should recommend designation of trail segments, working closely with the Rio Grande Trail non-profit.<sup>1</sup>*

The governor-appointed Rio Grande Trail Commission oversaw the creation of the Rio Grande Trail Master Plan. Now that the plan is complete, the Rio Grande Trail Commission should work in tandem with the new non-profit, once established, to foster sustainable, positive relationships with local jurisdictions and to identify mutually beneficial partnerships. With representation from leadership across the state, the Trail Commission is well-positioned to encourage local partnerships.

<sup>1</sup> See the "Trail Designation Section" on page.

### CITY AND COUNTY GOVERNMENTS

*Recommendation: Promote, maintain, and provide amenities along their section of trail.*

Support from local city and county governments is essential for ensuring the Rio Grande Trail is well-maintained and widely-used. Officials should seek to implement overarching trail design and management guidelines, while maintaining local character. Local city and county governments should establish partnership agreements and clear lines of communication with the Rio Grande Trail non-profit in order to coordinate about trail maintenance, volunteer needs, funding, and promotion of the trail. City and county governments should include building, maintaining, and promoting the Rio Grande Trail into their long-range transportation and comprehensive plans.

### REGIONAL PLANNING AGENCIES: METROPOLITAN PLANNING ORGANIZATIONS (MPOS), COUNCIL OF GOVERNMENTS (COGS), AND REGIONAL PLANNING AUTHORITIES (RPOS)

*Recommendation: Fund construction of the trail, promote the trail at the regional level, and ensure that the trail is incorporated into relevant planning documents, such as Long-Range Transportation Plans and Unified Planning Work Programs.*

Regional planning institutions have access to federal and state transportation funds that can be allocated for trail construction. These funds should be used to construct the trail through local jurisdictions. Each regional institution should seek to create a distinctive, complete Rio Grande Trail across their region to provide an amenity for their constituents, bring in tourists, and spur economic development. In Florida, the MPO Chairs Coordinating Committee has been instrumental in prioritizing and funding trail projects across nine counties and seven MPOs.<sup>2</sup> This type of regional coordination benefits a project of this magnitude.

<sup>2</sup> <http://tbarta.com/en/chairs-coordinating-committee/about/chairs-coordinating-committee>





## REGIONAL IRRIGATION DISTRICTS

*Recommendation: Provide right-of-way easements, resources for trail construction and maintenance, and incorporate the trail into relevant planning documents and capital improvement programs.*

Regional irrigation districts manage extensive networks of irrigation canals, ditches, and levees. These undeveloped linear corridors provide a unique opportunity for trail development. The most important roles of the districts will be to coordinate with the Rio Grande Trail non-profit to establish easements for trail alignment and collaborate in trail design, construction, and maintenance that is compatible with irrigation infrastructure and the agency's needs for ongoing maintenance access.

## STATE GOVERNMENT

*Recommendation: Partner closely with the Rio Grande Trail non-profit to promote the trail at the state level.*

Many state agencies have participated in the master planning process. State agencies should continue to support the role of the Rio Grande Trail Commission and promote the trail, as it complements their agency missions.

## FEDERAL GOVERNMENT

*Recommendation: Designate existing trails and construct new trail segments along the proposed Rio Grande Trail alignment and collaborate closely with the Rio Grande Trail non-profit for funding, maintenance, volunteer recruitment, and trail promotion.*

The USDA Forest Service and Bureau of Land Management will be essential partners for constructing and maintaining the Rio Grande Trail. They should establish an agreement that outlines how they will work with the Rio Grande Trail non-profit to build and maintain the trail. The agreement should outline that the federal agencies will set aside staff time and resources to support the Rio Grande Trail.



## TRIBAL GOVERNMENTS

*Recommendation: Continue to keep the Pueblos apprised about the trail efforts through both tribal consultation at the state agency level and presentations to specific requests from tribal governments.*

As neighboring land owners, tribal governments will remain a partner in dialogue about Rio Grande Trail development and use.

## NON-PROFITS

*Recommendation: Fellow non-profits, such as New Mexico Bike Summit and the Southern New Mexico Trail Alliance, should partner with the Rio Grande Trail non-profit by cross-promoting programming and sharing best practices for trail advocacy in New Mexico.*

Advocacy groups with aligned interests in trails, conservation, the Rio Grande, and community development should partner with the Rio Grande Trail non-profit to coordinate marketing and lobbying efforts and to support events. Collaboration strategies include sharing initiatives through group communication channels, holding coordination meetings, and potentially jointly organizing an event or other action. The proposed Biannual Rio Grande Trail Summit is a great opportunity for non-profits and other trail partners to gather, learn from one another, and coordinate for the years ahead. Further discussion of the recommended Rio Grande Trail Summit are included in Chapter 5.

## LOCAL BUSINESSES

*Recommendation: Contribute funding and/or volunteer with the Rio Grande Trail non-profit or other trail partners.*

Businesses who seek to show they are invested in the community should contribute financially to building the trail or by volunteering their time. High-profile, well-designed trails spur economic development and boost quality of life, which brings direct benefits to the regional business community. Businesses should consider participating in the proposed Adopt-a-Trail program to help keep a specific section of trail clean and maintained. By adopting a trail, they get state-wide philanthropic publicity that will be directly beneficial to their community reputation. Details about the recommended Rio Grande Trail Adopt-a-Trail program are available in Chapter 5.



## **VOLUNTEERS**

*Recommendation: Attend events, assist with trail maintenance, and advocate on behalf of the Rio Grande Trail.*

A strong contingent of dedicated volunteers is essential for the Rio Grande Trail to become a reality. Building, maintaining, and promoting an almost 400-mile trail requires dedication and hard work from communities and individuals across the state. Volunteers are invited to help in as small or large a role as they wish. The Plan recommends that the Rio Grande Trail non-profit create and maintain a streamlined volunteer portal on the trail website, as a resource for people interested in getting involved. Volunteers can help by:

- communicating with an elected official on behalf of the trail,
- sharing information on social media,
- attending a trail clean-up or maintenance event,
- assisting with non-profit administrative tasks,
- or stepping into a leadership role with the Rio Grande Trail non-profit.

## **NEIGHBORING STATES**

*Recommendation: Continue to partner with the Rio Grande Trail Commission and groups along the state border to connect Rio Grande Trail segments in Colorado and Texas to the New Mexico portion.*

Trail advocates and public officials in Colorado and Texas have both expressed interest in linking their Rio Grande Trail segments with New Mexico. In Texas, the Paso del Norte Health Foundation is collaborating with trail stakeholders to build a connecting segment. New Mexico's Bureau of Land Management is an important liaison for connecting with Colorado trails in the north.





# TRAIL SEGMENT DESIGNATION

## Current Designation Process

Rio Grande Trail segments are currently designated according to the “Process for Interim Designation of Segments of the Rio Grande Trail” passed by the Rio Grande Trail Commission in 2017. The application process for designation is as follows:

- Landowner and/or land manager submits a request for designation to the Rio Grande Trail Commission. This request includes:
  - » location;
  - » how the proposed segment supports the vision of the Rio Grande Trail;
  - » evidence of public support for Rio Grande Trail designation;
  - » accessibility of the segment to the public and user groups;
  - » ease with which the trail can readily be incorporated into the system;
  - » evidence that all necessary environmental impact studies and cultural surveys have been completed and negative impacts addressed;
  - » evidence of adequate capacity of landowner or land manager to maintain and manage the segment;
  - » identification of how public safety concerns will be addressed; and
  - » documentation of safe, sustainable trail design.
- Landowner and/or land manager presents to the Commission, responds to public comment, and follows up with a written submittal.
- Written submittals from the landowner and/or land manager would be reviewed by a designated work group (or possibly a subcommittee of the Alignment and Design Work Group members) for review and ranking according to a point system developed for that purpose based on the items identified above.
- The results of the review would be submitted at a subsequent Rio Grande Trail Commission meeting for consideration. After a public comment period, segments adequately meeting the above criteria would be recommended for designation by the Rio Grande Trail Commission.



## Future Designation Process

*Consideration: The Rio Grande Trail Commission will continue to review and recommend approval of trail designations.*

After creation of the Rio Grande Trail non-profit, the group may have a role in assisting the landowners and local communities through the process.



## Land Manager Liability

*Recommendation: Generate awareness of existing state law that limits liability.*

As sovereign entities, local governments are protected by additional limitations on liability for injuries occurring on government-owned property. In New Mexico, private land owners who allow the trail to pass through their land are not held liable for those using their land for the purposes of hunting, fishing, hiking, or other recreational activities. By allowing access to their land, they are not agreeing to maintain the trail or issuing any assurance that their land is safe.<sup>1</sup>

**This statute protection will encourage private land holders to allow the trail to pass through their land.**

<sup>1</sup> NM Stat § 17-4-7 (2016)



## Long-Term Trail Access

*Recommendation: Provide optional conservation provisions for Rio Grande Trail easements. These protections should be available for interested land owners, but not a required component of trail designation on private land.*

As the Rio Grande Trail partners work to build and link together a continuous trail across the state, it will be important to consider how the trail corridor will be protected over time. Some trails, such as the Palmetto Trail, do not prioritize legally protecting the trail corridor from development because it can deter property owners from agreeing to allow the trail to pass through their land. They prioritize continuity over conservation, in the short term, by using less restricted trail easements.

When possible, a conservation easement can be used to protect the trail for future generations by guaranteeing the trail can exist in perpetuity. Conservation easements can be obtained by working through such organizations as the New Mexico Land Conservancy, Santa Fe Conservation Trust, and the Rio Grande Agricultural Land Trust. Land owners may choose to donate a conservation easement, while others will require negotiation for tax benefits. The New Mexico Land Conservancy primarily uses this legal tool in its work.<sup>2</sup>

<sup>2</sup> New Mexico Land Conservancy, "Introduction to Conservation Easements." [http://www.nmlandconservancy.org/nm.php/conservation\\_easements/ce\\_info/ce\\_introduction](http://www.nmlandconservancy.org/nm.php/conservation_easements/ce_info/ce_introduction)

# MANAGING TRAIL USE

## Customer Service: Creating a Courteous Trail Environment

Agencies and organizations successful at keeping trails conflict-free combine proactive outreach and engagement, with on-trail user information and management. These strategies are important and effective for creating a safe and courteous trail environment. Responsibility for creating this positive, safe environment will be shared between the Rio Grande Trail non-profit and land managing agencies. The non-profit will take the lead on positive messaging and creating a courteous culture, while the trail managing agencies will use existing mechanisms for enforcing rules or regulations.

### EDUCATION AND OUTREACH

*Recommendation: Use positive messaging to advertise clear, enforceable trail rules or regulations regarding staying on designated trails, right-of-way, warning when overtaking, speed limits, etc. Negotiate with local trail section partners to create one cohesive set of trail rules.*

For example, instead of posting a sign saying, "Don't speed" post one that states, "Please travel at a safe speed." Numerous studies show positive messaging achieves better overall compliance from road and trail users.<sup>1</sup>

*Recommendation: Create a "Trail Rangers" program where volunteers can hand out local restaurant gift cards or other rewards for good trail behavior and report vandalism or maintenance issues. Involve different trail user group members as volunteers or paid Trail Rangers.*

The Fred Marquis Pinellas Trail, in Florida, has a successful application-based Trail Ranger Program. Many program volunteers are retirees from the neighboring community who enjoy the opportunity to patrol the trail by bike or on foot. The Rangers provide information to visitors, assist with light maintenance, and coordinate or assist with special events. Participation requires completing a certification course and 100 hours of service in the first year. Volunteer efforts are supported by law enforcement, because volunteers cannot enforce speeding violations or other crimes.

*Recommendation: Use the website and social media to share up-to-date information about changes to trail regulations, maintenance, and closures.*

Provide information to users about rules, polices, and advice for trail user respect, right-of-way requirements, courtesy, routes, destinations, and conditions. The non-profit should link to land managing agency websites with up-to-date information about trail conditions. This approach will save the non-profit from needing to devote as many hours keeping their website up to date.

*Recommendation: Train staff and volunteers that a friendly trail environment will foster a positive experience for users and preempt user group conflict.<sup>2</sup>*

Pair this approach with enforcement strategies such as monitoring, warnings, radar, and citations.

<sup>1</sup> Hoekstra, Tamara and Wegman, Fred. "Improving the effectiveness of road safety campaigns: Current and new practices." IATSS Research. November 22, 2010.

<sup>2</sup> Trail Use Conflict Study, California State Parks Road and Trail Change in-Use Evaluation Process, prepared June 2012 by Alta Planning + Design



## TRAIL DESIGN

Conflicts on paved trails tend to center on the speed differential of trail users with different skills and desired uses compared to other users, and on slower users blocking the trail. User conflicts can be a particular challenge at trail junctions and entry points, and at activity areas and other stopping points. Overall, actual accidents between trail users are quite rare. However, trail design, in addition to outreach and education, can facilitate a positive user experience.

*Recommendation: Particularly on newly built segments, design the trail using best practices that encourage good trail user behavior and avoid user conflict.*

- **Tread Width and Passing Space** Provide sufficient trail width and space to allow users to pass each other, either as a continuous condition, or as passing spaces at defined intervals. This also includes vertical clearance from overhanging trees and objects.
- **Sight Distance** Include adequate length of the trail visible ahead to the user. Sight distance should be balanced with speed control features, turns, and sinuous layout.
- **Turn Radius** Create a minimum inside radius of turns to ensure that they can be comfortably negotiated.
- **Sinuosity** Lay out a trail with many curves and minimal straight sections (however, with sufficient sight distance). This helps limit the speed of mountain bikers and other users.

- **Speed Control Features** Install pinch points, choke points, technical trail features, and other elements specifically designed to limit users' speeds.
- **Surface Texture** Design the relative smoothness, evenness, and firmness of the trail tread to moderate travel speed by mountain bicyclists, including the presence of irregularities.
- **Low Trail Structures** Avoid steps and waterbar structures that constrain access for horses and mountain bikers and can create points of conflict.
- **Gradient** Apply design limits or variations in the gradient of the trail to allow for multiple uses.
- **Trail Layout and Classification** When considering trail suitability for multiple uses, factor the level of use of the trail, availability of alternative trails and routes, and the potential for trails to primarily serve one or multiple user types.



## Managing for New Uses

*Recommendation: Trail managers should implement the “building a courteous trail” outreach and trail design recommendations outlined in the previous section to mitigate user conflict with e-bikes and defer to national, state, and local rules or regulations regarding where to allow electric bikes (e-bikes) access to the trail.*

The Rio Grande Trail Act states that in case of new trails on public lands, the trails should be constructed for non-motorized use except in cases when mobility devices are required for individuals with mobility impairments. However, e-bikes may be used on existing trails where their use is authorized by the land owner.

E-bikes and other motorized personal mobility devices are becoming increasingly popular options for enjoying both paved and natural surface trails. E-bikes are categorized into three types, depending on speed, power, and motor mechanism (pedal or throttle assist). E-bikes benefit bicyclists who may be discouraged from riding a traditional bike due to limited physical fitness, age, disability, or convenience. As the Rio Grande Trail begins to take shape, trail managers should consider how they will accommodate this growing group of interested trail users. E-bike technology and regulations are constantly changing, so trail managers must be ready to adapt and tailor their management approach for new information. Different types of e-bikes require different management approaches. Slower, pedal-assist bikes (Type 1) may be able to share the trail with traditional bikes, while faster, throttle e-bikes are more suitable for motorized trails. If implemented, the courteous trail design and outreach recommendations listed in the previous section should mitigate user conflict with e-bikes.

## E-BIKE POLICY IN NEW MEXICO

E-bikes are generally defined as “mopeds,” and are subject to the licensing and insurance requirements of the Taxation and Revenue Department. However, as of October 2017, New Mexico’s Motor Vehicles Division does not have a system for supplying licensing. (NMSA § 66-1-4.11; § 66-1-4.2; §-5-2.)

For trails, the EMNRD State Parks Division does not currently have an e-bike policy. On federal lands, e-bikes are considered to be motorized vehicles and have access to motorized trails that are accessible to dirt bikes, all-terrain vehicles, and other off-road vehicles.<sup>1</sup>

<sup>1</sup> People for Bikes. New Mexico’s E-Bike Law. 2017



## Special Event Uses

Special events on segments of the Rio Grande Trail provide an opportunity for tourism, trail promotion, sponsors, and revenue. However, a single day with a large volume of hikers, runners, or mountain bikers can create substantial maintenance issues, as well as conflicts with other users of the trail. The Rio Grande Trail non-profit should establish special event guidelines or requirements, as outlined below, and help the company or organization get the needed permits across jurisdictions. Legal concerns and logistical challenges preclude offering one single permit to hold events on the trail.

### **SPECIAL EVENT USAGE: “PASSPORT TO THE RIO GRANDE TRAIL” GUIDELINES**

To ensure a successful event for all involved parties, guidelines should specify:

- Which sections of the passage are available for special events and which are not available.
- What types of events are permissible or prohibited (from mountain bike races to mud runs to scavenger hunts).
- Which months of the year, or days of the week, are available or restricted for special events.

### **• SPECIAL EVENT USAGE: REQUIREMENTS**

To ensure a successful event for all involved parties, requirements should specify:

- A meeting with Rio Grande Trail non-profit staff and the landowner/land manager at least four weeks prior to the event.
- A special event usage fee and/or a negotiated donation amount to be provided to the Rio Grande Trail Maintenance Fund.
- Applying for appropriate permits for all affected jurisdictions. If possible, the Rio Grande trail non-profit should work across partnerships to coordinate fee structures.
- Maintenance activities that need to occur within a set timeframe after the event to restore the trail’s condition and repair any damage. (This could occur as a volunteer workday organized by the event promoter).
- Opportunity for the Rio Grande Trail non-profit to advertise at the event.
- Permission for the Rio Grande Trail non-profit to contact the event attendees (once) with an email inviting them to become members of and/or volunteer for the organization.





## Emergency Access

Incidents happen on trails, especially ones where terrain varies and long-distance users may be new to an area. Providing access to emergency response personnel and vehicles is necessary along regional trails for the safety of trail users in case of incidents, whether they be minor or life threatening.

Providing such access requires thoughtful planning and execution of a system, in coordination with local emergency response officials, and an education campaign on behalf of land managers, for the public to fully understand the system as it is implemented along the trail.

There are many strategies that can be deployed by land managers for an easy to use and understand system. **Typically, emergency access is a two-fold system that incorporates a publicly facing element, through wayfinding, educational campaigns, or other media, and, an internally facing system used by emergency response to locate people along the Rio Grande Trail.**

A publicly facing campaign engages the public on their responsibilities in using the trail. Information is typically shared online, at trailheads, at vendors, and even on wayfinding. Safety campaigns inform the public on identifying their location, give them a sense of confidence on the trail, provide them with contact information for trail management if needed, and give new users a sense of confidence to explore new areas.

Mile or other location markers and wayfinding, complemented with maps of the trail that indicate mileage are the most common way of giving people information about their location, and can help orient them towards their destination, outfitters, points of interest, and information on how to navigate difficult territory. This system requires some effort on behalf of land managers before placement along the trail.

**Local planners or other administrative professionals, land managers and emergency response professionals should collaborate on a system that works best at the local or regional level depending on needs.**



*An example of emergency access mile markings (Swamp Rabbit Trail, Greenville, SC). Source: [www.FoxCarolina.com](http://www.FoxCarolina.com)*

The 20+ mile Swamp Rabbit Trail in South Carolina created a customized mile marker system through an Emergency 911 Action Plan with the Greenville County Sheriff's Office called the E-911 System. Stencils placed every tenth of a mile on the trail surface use 'SR' to identify the Swamp Rabbit Trail, followed by 3 digits representing the mile and tenth mile that a user is located (e.g. "SRT314" is at mile 31.4 on the Swamp Rabbit (and next door to the Swamp Rabbit Cafe & Grocery). In the case of an emergency, a user is never farther than .05 miles from a stencil.

To develop a comprehensive emergency response strategy, mileage alone will not suffice to find lost, injured, or other at-risk people using the trail. A mile marker is not always reliable across agencies, or to people who were not involved in the development of a trail system. Thus, a system of global positioning system (GPS) should be agreed upon that includes key elements and are reliable across agencies. The GPS system should include a management reference book that can be provided to emergency response teams that includes information on how to access different points along the trail, what type of vehicle can access the trail and turn-around points for medical response vehicles, the nearest emergency or trauma center, and other information. It is important to note that accessing a user in need of assistance may require some time to visit if destinations are remote and trail access is limited. This book should be periodically updated to include the most up-to-date information.



**TABLE 3: EMERGENCY RESPONSE RESPONSIBILITIES FOR TRAIL USERS AND TRAIL MANAGERS**

USER RESPONSIBILITY	EMERGENCY RESPONSE RESPONSIBILITIES
Do I have first aid for minor cuts, bruises, bites, and scratches?	What type of treatment will be performed in the field?
How often can I re-stock emergency supplies?	What is the closest emergency response system relative to nearest trail access?
Do I know where I am going and where I am?	Do all agencies involved in emergency response have access to gates or entry points, and keys for locks to quickly assist users in need?
Do people I know and trust have my travel itinerary?	Have trails been designed so that emergency vehicles can access and utilize trails?
Will I be able to contact emergency response or trail management in case of emergency or if I am lost?	Do trails include turnaround locations for emergency vehicles?
Do I know the right number to call in case of non-emergencies?	What type of locally contextual vehicles will the Land Manager have at their disposal in case of emergencies (I.E. ATVs or Helicopters)?

One such GPS system utilized is the United States National Grid (USNG) System. The USNG provides for a standardized set of emergency markers and mapping information that can be shared across agencies. Many national agencies and bureaus have endorsed or implemented the use of USNG in their systems, including the Department of Defense, Federal Emergency Management Agency, US Fire Administration, and others. States including Minnesota, Missouri, North Carolina, Wisconsin and Florida have adopted this system as well for use on trails and in search and rescue efforts. More information on this GPS system is available at [www.usngcenter.org](http://www.usngcenter.org).

This method of managing emergency access is important because users typically do not care to know the level of detail that trail managers or emergency response providers have in planning their trail visit.

The table/graphic above summarizes the key considerations for emergency planning for both individuals and government agencies.



*USNG Emergency Location Markers (ELMs) are being used on northern Minnesota trails since an OPERA grant funded a pilot program for the signs in 2010. The first USNG signs were installed in the Fall of 2012 and the first emergency response using the signs occurred in January 2013, when a lost skier was alone at night and not familiar with the area. The skier called 911, read the sign on the trail identifying her exact location, and was easily directed to a road just two minutes away.*

# TRAIL MAINTENANCE

Rio Grande Trail maintenance needs will vary along different trail segments, depending on surface and design, surrounding landscape, land manager, and other factors. Refer to the Rio Grande Trail Design Guidelines for the different Rio Grande Trail typologies. Trail segments that are within jurisdictions with maintenance capacity, such as State Parks, BLM, or a municipal park’s department, will not need trail maintenance guidance from the Rio Grande Trail non-profit. However, new segments of trail being built or designated by a land manager without maintenance capacity will need to be a part of the Rio Grande Trail maintenance strategy.

## Why is Trail Maintenance Important?

Well-maintained facilities create a pleasant and welcoming environment for trail users and establish a sense that users will be safe on the trail. Maintenance is an expression of ownership of property and psychologically deters bad user behavior. Visibly well-maintained trails also have environmental benefits, including minimizing erosion caused by deviant trail users and fostering an appreciation for order in environmentally-sensitive areas.

Crime Prevention Through Environmental Design (CPTED) Principles are the widely accepted design and maintenance concepts that highlight why trail maintenance is important. Proper design addresses both the perceived safety issues (i.e. feeling safe or fear of crime) and actual safety threats (i.e. infrastructure failure and criminal acts). The basic premise of CPTED is that the arrangement and design of infrastructure and open spaces can encourage or discourage undesirable behavior and criminal activity. When all spaces have a defined use and the use is clearly legible in the landscape, it is easier to identify undesired behavior.



*Paseo del Bosque Trail along the Rio Grande in Albuquerque*





## Maintenance Standards

*Recommendation: As the Rio Grande Trail non-profit will not own or manage the vast majority of the trail, they will need to tailor maintenance plans to each trail section’s unique context. When possible, the non-profit should defer to the local land manager to maintain the trail according to that agency’s standards. When necessary, the trail non-profit should develop a plan to handle maintenance themselves or partner with another state or national agency to handle trail maintenance on unmaintained segments. Table 4 outlines some routine maintenance tasks and their recommended frequency.*

The Rio Grande Trail non-profit should consider adopting USDA Forest Service trail maintenance standards or creating its own trail manual that outlines standards of trail maintenance for all types of trail included in Rio Grande Trail. Many peer long-distance trail non-profits conduct a significant amount of trail maintenance themselves, with some paid staff and volunteer support. The Arizona Trail Association has paid staff and a Trail Stewards program to conduct trail maintenance. Trail Stewards are assigned to a section of trail and partnered with a staff person at the land managing agency. ATA staff has found this to be a successful approach and are currently finishing their maintenance standards for each ecologically-specific region.

**TABLE 4: ROUTINE MAINTENANCE TASKS AND FREQUENCY**

MAINTENANCE TASK	SUGGESTED FREQUENCY
Major damage response (fallen trees, washouts, flooding)	Immediate in response to need
Site furnishings: replace damaged components	As needed
Graffiti removal	Weekly; as needed
Trash disposal	Weekly during high use; twice monthly during low use
Litter pick up	Weekly during high use; twice monthly during low use
Fencing repair	Inspect monthly for holes and damage, repair immediately
Inspections	Seasonally (4 times a year)
Remove obstructions from trail path	As needed, quarterly inspections.
Trail sweeping/blowing	As needed during high-use season.
Culvert inspection	Before any rainy season; after major storms
Maintaining culvert inlets	Inspect before onset of wet season
Lighting repair	Annually
Water bar maintenance (earthen trails)	Annually
Shoulder plant trimming (weeds, trees, branches)	Biannual (Fall and Spring)
Sign repair/replacement	4-6 years
Introduced tree and shrub plantings, trimming	1-3 years
Pavement sealing; pothole repair	5-15 years

## Volunteer Resources

*Recommendation: Leverage volunteer labor to conduct trail maintenance when appropriate. Connect land managers with Rio Grande Trail volunteers as part of an AmeriCorps partnership, specific events, or regular work days. Volunteer groups in New Mexico, such as the Backcountry Horsemen, are already interested in assisting with maintenance.*

Volunteers are one of the most precious resources for a long-distance trail effort. Mobilize them wisely! Convert volunteer hours into cost savings to show the direct financial benefit to region and state.

**Soft Surface trails:** It is appropriate to use volunteers to help design and construct a soft surface trail, with the assistance of someone with a professional services certification. Volunteers can easily help clear brush or weeds, clean, paint, and inspect trails for damage and erosion. Volunteers can be used to assist with construction of structures under appropriate supervision.

**Hard Surface trails:** It is not appropriate to have volunteers design and construct hard surface trails. Volunteers can help with sweeping, edging trail surfaces, and other similar tasks as for soft surface trails,

**On roadways (bike lanes, shared roads, etc.):** Volunteer labor is not as effective. A better approach is to work with the local municipality to conduct maintenance.



*The master planning team on a field visit to the Socorro Valley Bosque Trails.*







*Mesilla Valley Bosque State Park, near Las Cruces*



CHAPTER 5

# PROMOTING THE VISION





## OVERVIEW

Though the Rio Grande Trail effort is just getting underway, great strides have been made to develop a unified branding and marketing strategy. Through this master planning process, the “red chile” color and local flora and fauna imagery that demark official Rio Grande Trail materials have created a consistent look and feel. Moving forward intentional, creative methods are required to interest people in using the trail and devoting time to make the vision a reality. At this early developmental stage of the Rio Grande Trail, promotion must focus on the existing trail segments, as well as the long-term vision for a cross-state trail.

This section describes trail promotion recommendations towards three targeted outcomes that balance those short and long-term priorities: trail usage, “friendraising,” and fundraising. Trail usage is about getting people out on the trail and ensuring they have a positive experience. “Friendraising” covers building partnerships and recruiting volunteers. Finally, fundraising encompasses seeking grants and sponsor dollars to support the trail non-profit, fund trail development, and pay for trail maintenance. Each recommendation is identified as either an “immediate”, “mid-term”, or “future” action.

- Establish a Gateway Community Program to promote the stories of small towns along the trail, bring them economic benefits, and involve them in planning for programming and events.
- Establish the Rio Grande Trail as the conduit connecting communities, local and state destinations, and geographies, as well as promoting health, quality of life, and economic vitality in New Mexico.
- Continue to develop the trail website as an up-to-date source of information about the Rio Grande Trail.
- Develop marketing campaigns designed to solicit donations to the trail effort and to recruit volunteers.
- Promote the Rio Grande Trail as a complement and linkage to the other long-distance trails: El Camino Real National Historic Trail and the Continental Divide National Scenic Trail



## Trail Usage

A good trail will market itself over time, but new ones require marketing and promotion to highlight experiences offered on the trail. As the Rio Grande Trail begins to take shape, branding and marketing will be essential to get people out enjoying the trail segments that already exist. A strong and identifiable positive public perception of the trail will build support for ongoing efforts to complete the trail across the whole state.

### TRAIL BRANDING

**Recommendation: Continue to develop a unified brand that is pervasive across different aspects of the trail—from promotional materials to wayfinding signage to the look and feel of trail heads. (immediate)**

Branding is a widely used term to describe the perception of a product or service in a target audience’s mind. A trail brand includes user experience, logo, signage, purpose, safety, comfort, programming, funding, sponsors, and supporters. Everything from how an email is written to the attitude of a person answering the phone reflects a brand.

For a long-distance trail that links many different trails and systems, each with their own alternative names, creating a unified overarching brand is essential for building awareness and for user navigability. The Pacific Crest Trail is an excellent example of unified branding done well and cohesively over

thousands of miles of trail. The PCT adds their logo and signs along the route according to very specific design guidelines but does not replace their local names. The PCT uses “reassurance markers” (logos on trees or signs) at intersections to avoid replacing existing wayfinding where ever possible.

Trail branding is off to a strong start. The Rio Grande Trail master planning process convened stakeholder work groups, virtual open houses, and other public engagement events. The tone and content of these conversations is the beginning of the Rio Grande Trail Brand. The word cloud to the right highlights what people are saying about the Rio Grande trail creation effort. The Rio Grande Trail Commission has also approved a signature “look and feel” for the Rio Grande trail materials. The chosen color pallet, typography, and signature flora and fauna designs are attractive and instantly recognizable. Branded promotional materials are available for use on the project website: <http://www.riograndetrailnm.com>.



This word cloud illustrates resonant attributes of the trail creation effort—the beginning of a brand.



The Project Team developed a signature graphic “look and feel” for the Rio Grande Trail that embodies the state’s distinct natural landscapes and unique culture.



## CONSISTENT ONLINE PRESENCE

**Recommendation: Develop and maintain a consistent online presence through the trail website, social media, and relevant trail apps. (immediate)**

The Rio Grande Trail non-profit should continue the Rio Grande Trail website established through the master planning process. The URL purchased through the Tourism Department is [www.RioGrandeTrailNM.com](http://www.RioGrandeTrailNM.com). The site already sees fairly high traffic and is promoted on all Rio Grande Trail promotional materials developed through the master plan project. The website should be updated regularly with new and accurate content to encourage repeat visits. The website should reflect the personality of the Rio Grande Trail and offer useful resources for trail users, partners, volunteers, and sponsors. Given the many land managers along the trail, the website should link directly to land managers' websites for trail maintenance or user information, or that information should automatically populate the Rio Grande Trail website.

Rather than creating a new, independent app, the Rio Grande Trail non-profit can leverage existing resources for a more time and resource efficient way to share information broadly to users. The following is a sample of popular trail apps where up-to-date trail information is directly accessed by users:

- AllTrails (free)
- Features: allows users to search based on location for nearby trails, use GPS to navigate on the trail, view high quality maps, leave photos of scenic places, and connect with other users.
- MapMyHike (free)
- Features: allows users to map trails, view popular treks, connect with other users, and use health tracking technology.
- CycleMap (free)
- Features: plan and get detailed information about bike routes, learn about points of interest and amenities along your route, discover new routes and use them offline.
- EQUITrail (\$4.99)
- Features: view and download equestrian trail maps, share trail information with other users
- TrailForks (free)
- Features: interactive mountain bike trail maps with topographic layer, access information, points of interest, trail popularity and ratings, compass, and GPS tracking.



## TOURISM CAMPAIGN

**Recommendation: The Rio Grande Trail non-profit should partner with the New Mexico Tourism Department to create a tourism campaign to invite and encourage visitors from outside New Mexico to visit the Rio Grande Trail. (future)**

This promotional campaign could be modeled after the current "New Mexico True Campaign," which focuses on the state's authenticity, and culture, and natural landscapes. The ongoing campaign connects communities, outdoor recreation, cuisine, history, and culture into an enticing pitch to seek new experiences in New Mexico. The Rio Grande Trail will be the newest asset of national significance and a valued local amenity. Partnership with the Tourism Department will legitimize the trail and boost awareness of the effort across the nation. The tourism campaign should be implemented when there is at least one 100-mile continuous segment of designated trail, as that is the length that studies show begins to attract large scale numbers of cycle tourists.<sup>1</sup>

<sup>1</sup> Trail Towns: Proven Steps to Boost Your Trail Town Growth. Rails-to-Trails Conservancy. Webinar February 2018.

## Friendraising

### VOLUNTEER PROGRAMS & EVENTS

**Recommendation: The Rio Grande Trail non-profit should work with state, regional, and local partners to organize and implement community events and cultivate volunteers to help build, maintain, and promote the trail. (immediate)**

In a coordinated effort across the corridor, trail managers should work with the trail non-profit to host National Trail Day events on as many segments of the existing trail as possible. Special events are a useful tool for inviting new users to experience the trail and obtaining media attention. Organizing many events across the Rio Grande Trail corridor, will make the trail's magnitude and potential evident. The Palmetto Conservation Foundation has used this event planning strategy to successfully raise the profile and garner statewide interest in South Carolina. Volunteer events – or larger scale efforts such as volunteer vacations (offered by a variety of national organizations) - not only accomplish small improvement projects, but also engender a sense of ownership and create ambassadors for the trail.



In 2016, the Pacific Crest Trail Association leveraged \$2.5 million in volunteer hours, highlighting the powerful potential impact created by cultivating a strong network of Rio Grande Trail supporters.<sup>1</sup> The Palmetto Conservation Foundation's volunteer partnership with AmeriCorps is an excellent example for how the Rio Grande Trail non-profit can create employment opportunities and training for New Mexican youth, while simultaneously building and maintaining the trail. Palmetto's Conservation Corps launched in 2016. The group's crews have maintained and built numerous sections of trail, as well as responded to natural disasters and learned about environmental conservation.

EMNRD already manages the New Mexico Youth Conservation Corps program and the Rocky Mountain Youth Corps is an AmeriCorps-affiliated non-profit, with offices in the Upper Rio Grande and Middle Rio Grande regions. These groups provide a critical long-term basis for volunteerism, youth engagement, and establishing volunteer partnerships across the state. Additionally, the Rio Grande Trail non-profit should tap into existing user coalitions, such as mountain bike and equestrian groups, as volunteers and trail ambassadors. This model has proven successful with other long-distance trails and has the potential to lessen user group conflict by creating joint stewards of a shared resource.

<sup>1</sup> Larabee, Mark. The PCTA goes to Washington on behalf of Trails. 2/24/17. <https://www.pcta.org/2017/pcta-goes-washington-behalf-trails-45776/>



Palmetto Conservation Foundation



New Mexico Youth Conservation Corps

## BIANNUAL RIO GRANDE TRAIL SUMMIT

*Recommendation: The Rio Grande Trail non-profit should convene a biannual Rio Grande Trail Summit to bring public trail partners, Gateway Communities, volunteers, and non-profit staff together to celebrate successes and learn from work being done around the state. (mid-term)*

A trail summit would be a regular way to gather input from user groups and make sure they have a voice in the management of the Rio Grande Trail. The Continental Divide Trail hosts a fun CDT Day that brings users and partners together from across the state. This Summit would complement that effort by targeting practitioners more than individual community members. The Carolina Thread Trail hosts a trail forum each year where industry innovators, trail enthusiasts, and communities across 15 counties in North and South Carolina. This day-long event raises money for the trail through sponsorships, facilitates sharing information between different trail groups, and provides a perfect way to publicize Thread Trail victories from the year.

## GATEWAY COMMUNITIES PROGRAM

*Recommendation: The Rio Grande Trail non-profit should establish a Gateway Communities program to connect trail users with towns along the route for food, lodging, cultural amenities, or additional recreation activities. Program implementation will foster strong relationships with local municipalities and provide resources for developing connector trails from communities to the Rio Grande Trail. (mid-term)*

In addition to connecting town to trail and establishing activity hubs with needed amenities, Gateway Community programs, also known as Trail Town programs, assist with research, business and real-estate development, and marketing. The program must have joint buy-in from the non-profit and the local community. Communities can self-select to apply or the non-profit can nominate strategically-located communities. Through the application process, potential Gateway Communities should confirm their willingness to participate and pledge resources to develop their program.

Other long-distance trails, such as the Arizona Trail and Great Allegheny Passage have used Gateway Community programs successfully to foster economic development, create jobs, and provide appealing amenities to trail users. In addition to those benefits, the Arizona Trail program found that Gateway

Community residents are much more likely to volunteer or promote the trail on their own. Finally, Gateway Community programs often inspire overnight trips, which generate 6 times the revenue than a day trip.<sup>1</sup>

<sup>1</sup> Trail Towns: Proven Steps to Boost Your Trail Town Growth. Rails-to-Trails Conservancy. Webinar February 2018.



CDT Gateway Community



## Fundraising

### TARGETED MEDIA RELATIONS

*Recommendation: The Rio Grande Trail non-profit should use targeted media relations to celebrate success and show progress towards a completed trail. Ideal coverage will make being a part of the vision irresistible and serve as a fundraising tool. (immediate)*

The state has already seen good coverage of Rio Grande Trail master planning efforts. The Rio Grande Trail non-profit and state agency partners should nurture these nascent relationships with reporters around the state. Stories that resonate across the state, such as National Trail Day events, economic impact study results, or sponsorship campaign launches, should be the focus of press releases and press conferences. Earned media is also a great tool for giving valuable credit to trail sponsors.



### BROCHURE & COLLATERAL

*Recommendation: Local community partners, volunteers, the Rio Grande Trail non-profit and others should use the brochure and collateral developed as part of the master planning process. Additionally, the Rio Grande Trail non-profit should publish an Annual Trail Report to serve as a marketing tool and project update for lobbying purposes. (immediate)*

The Rio Grande Trail Master Plan is accompanied by a suite of promotional materials. The posters and brochure are user-friendly and easily available in both web-ready and print-ready versions on the project website. The Rio Grande Trail non-profit should build from this suite of products to provide regular updates (every two years) as well as expand the suite. The promotional materials provide a basis for developing sponsor and donor facing handouts, as well as annual benchmarking report to show progress in trail development, fundraising, and friendraising. Recognizing measurable success is an important step towards making the case for potential funders and long-term resource partners.

### SPONSOR BENEFITS PROGRAM

*Recommendation: The Rio Grande Trail non-profit should develop a trail sponsor program and Adopt-a-Trail program. The non-profit's Adopt-a-Trail program should draw from and work in tandem with the EMNRD State Parks Division's volunteer program and provide guidance for how the Rio Grande Trail program could work with local jurisdictions. (immediate)*

The trail sponsor program should feature different ways that businesses, foundations, and individuals can advertise their financial contributions to the trail. Sponsors at different levels will be recognized on the trail website, printed materials, collateral (patches, stickers, water bottles, t-shirts, etc.) and potentially verbally as a part of media coverage. The trail non-profit must work closely with the Rio Grande Trail Commission, all partner land managers along the trail, and other key stakeholders to decide which parts of the trail they are willing to sell to sponsors. For example, the Palmetto Conservation Foundation allows sponsors to brand physical pieces of infrastructure (such as the Advance America Bridge or the Blue Ridge Electric Co-op Passage) while other trails, like the Colorado Trail Foundation, are very successful at leveraging donations and sponsorships without displaying logos or branding trail infrastructure. Sponsor contributions have the potential to fund large percentages of the trail. For example, in 2015, the Arizona Trail Association received 37% of its annual operating budget from private sponsor, partially through its successful Adopt-a-Trail program and the Colorado Trail Foundation received over 80%.





*Horseback riders enjoying a ride along a proposed segment of the Rio Grande Trail.*



CHAPTER 6

# MOVING FORWARD





# OVERVIEW

Implementation of a world-class, 500-mile cross-state trail is difficult to implement on a rigid, predetermined schedule and budget. The large number of stakeholders involved, iterative identification of interim and preferred long-term routes, and complex management issues do not lend themselves to a fixed, sequential implementation process. Opportunistic development of the Rio Grande Trail will be necessary, as landownership changes occur and perceptions of the trail evolve over time. This chapter outlines the path forward to implement the Rio Grande Trail Master Plan.

As the Rio Grande Trail Commission moves forward and the Rio Grande Trail non-profit is created (as recommended in Chapter 4), administrative next steps include:

- **Adopt this plan** and seek out local Rio Grande Trail master plan endorsement.
- **Encourage continued designation of existing trail segments** and locally developed preliminary design and engineering for new trail segments.
- **Begin defining projects in local plans**, such as capital transportation and recreation plans, management plans, and LRTPs.
- **Consider national designations**, including National Recreational Trail and US Adventure Cycling Association Designation.

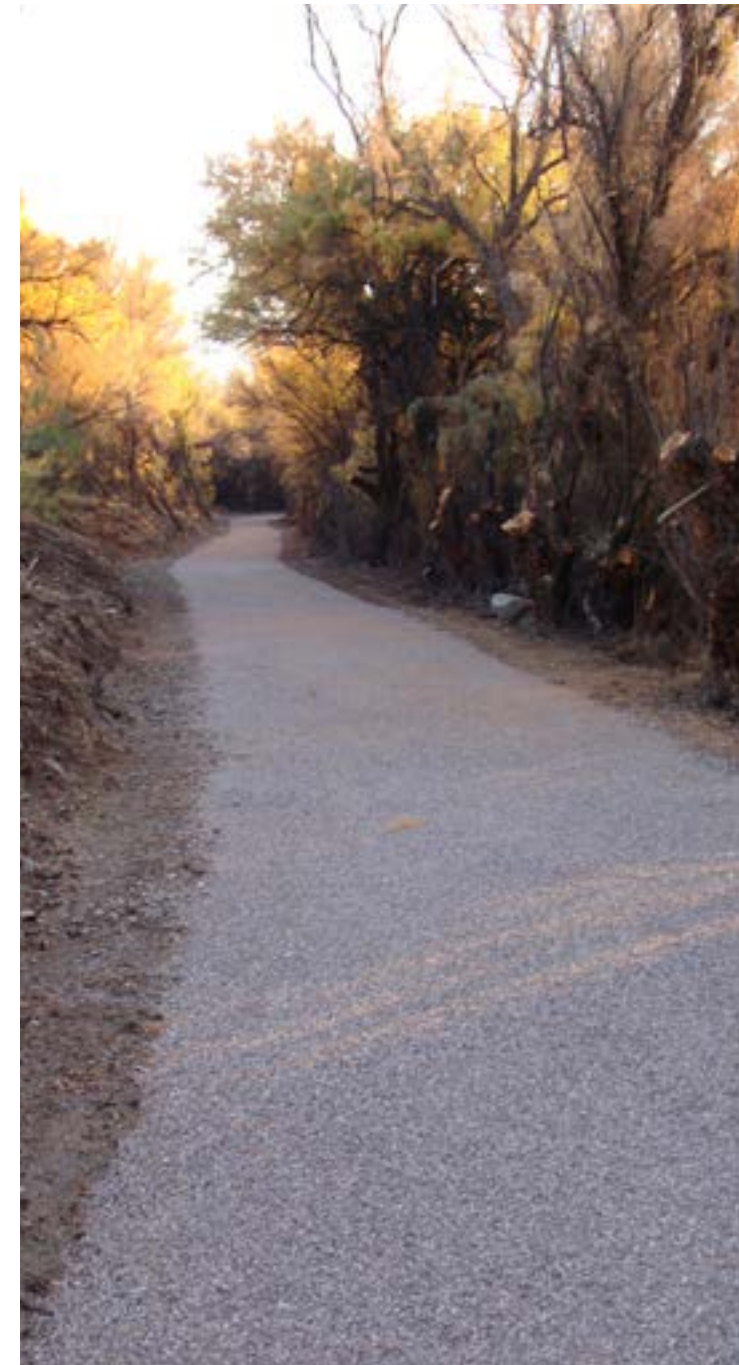
The rest of the chapter outlines next steps for the broader multilateral coalition working together to create the Rio Grande Trail, including the following priorities:

- **Provide user amenities for a safe and navigable trail** that prioritizes the experience of both current and future users.

- **Prioritize wayfinding implementation** to unify designated trail segments and connect trail users with local communities and amenities.
- **Grow trail stewardship** by establishing lasting, workable partnerships with nearby communities through the Gateway Communities Program.
- **Measure and leverage progress** towards a complete Rio Grande Trail by benchmarking trail development, usage, and user experience in the short- and long-term.
- **Seek funding on a segment-by-segment basis**, identifying and programming available funding sources and proactively working toward trail development, segment-by-segment.

Each of the following sections offers guidance for how to build on the master planning efforts, including references to details from earlier Rio Grande Trail Master Plan chapters or the Rio Grande Trail Design Guide. Each section also includes suggestions for who should be involved in different next steps.

*Photo (right): A segment of the Rio Grande Trail.*



# PROVIDE USER AMENITIES FOR A SAFE AND NAVIGABLE TRAIL

User experience is paramount to the success of the Rio Grande Trail. The Rio Grande Trail non-profit should work with land management agencies to build needed trail facilities, (such as parking, seating, and water access), highlight existing amenities, (such as camping and resupply points), and establish accessible ways to share this information with trail users to ensure the trail is navigable and safe for both existing and future users. These components of trail user experience should be prioritized so that people can safely enjoy newly designated trail segments. Other important components of user experience, such as viewpoints, landscaping, access points, or quality of materials can be added over time. Fundamental necessities such as food, shelter, and water access must be in place from the beginning.

Trail design and operations should cater to both new users and experienced users who have logged many miles on these types of facilities. Implications for trail amenities and user experience should be considered in all aspects of Rio Grande Trail planning, management, marketing, and implementation.



## Trail User Amenities

Trail amenities, such as water, parking, resupply points, and restaurants, provide for basic human needs. Is there water available for trail users and horses? Is there adequate space for staging between sections of the trail, or rest areas and campsites for different trail users?

As discussed in Chapter 1 and the Rio Grande Trail Design Guide, many different types of trail users will visit the Rio Grande Trail. These users have varied trail amenity needs based on how they typically access the trail, the duration of use, water needs, trip distance, etc. Successful provision for these needs will create a positive user experience and make it possible for many different user groups to safely enjoy the trail. Rio Grande Trail user amenity needs are summarized in Table 5, which describes:

- Trail User
- Anticipated Time on Trail
- Water Needs
- Parking + Staging Needs
- Bathrooms
- Campsite/Refuge + Rest Area
- Outfitter Access/Resupply Points



*The beautiful Rio Grande*

### **IDENTIFY AND BUILD AMENITIES**

To cater to both day and touring users, Rio Grande Trail amenities will need to be close to trailheads for shorter trips and further afield for longer, multi-day trips. Amenities located further from management headquarters or field offices are more challenging to manage, and make it possible for trail users to access more remote areas. To address these challenges, trail managers should coordinate with volunteer groups, organized user groups, planning agencies, and with neighboring units to plan for amenities across jurisdictions. The Rio Grande Trail master planning process documented some existing amenities, such as trail access points, campsites, water sources, and bathrooms. These amenities are shown on the proposed trail alignment segment maps in Appendix A and available in a GIS database. Trail managers and the Rio Grande Trail non-profit should build on these efforts by continuing to document existing trail amenities, update the database, and fill gaps. Trail managers must catalogue and add access where there are gaps.

**Recommendations for water access points and shelters per county (based on an 8 mile interval) are available in the County by County Dashboard on pages 36-37.**



### **SHARE AMENITY INFORMATION WITH TRAIL USERS**

As the designated Rio Grande Trail grows, maps and materials should be created to share the location, type, and frequency of trail amenities. These materials should include context about the difficulty, distance, and accessibility for different trail segments. This information empowers trail users to choose to explore a section of trail that suits their needs without conducting extensive research on their own. For example, as segments are designated, a map should be created to show existing camping or lodging near the trail for trip planning.



**TABLE 5: TYPICAL USER EXPECTATIONS FOR TRAIL AMENITIES.**

USER	ANTICIPATED TIME ON TRAIL	WATER NEEDS	PARKING + STAGING NEEDS	BATHROOMS	CAMPSITE/ SHELTER + REST AREAS	OUTFITTER ACCESS + RESUPPLY POINTS
PEDESTRIANS	2-8 Hours	Available at trailheads, sometimes along trails in urban or suburban context, sometimes filtered from wild sources (rivers, streams)	Minimal, generally one space per user	Located at major trailheads and along trails in high traffic areas.	At trailheads, optional sun or rain day shelter every 5 miles for rest purposes. Benches in urban/suburban context.	Local Outfitter or Concessionaires at trailheads/ Park Entrances
SECTION HIKERS	At least 8 Hours, Overnight is typical	Filtered from wild sources (rivers, streams), sometimes trailheads and towns.	Overnight vehicle accommodations may be provided at trailhead or in local town	Located at major trailheads, along trails in high traffic areas, and at established campgrounds.	Typically, need camping options every 8 miles, could be campsites, dispersed camping, shelter.	No more than 50 miles ( about five days at 10 miles a day) without resupply options. Volunteer groups may assist with this effort if distance between resupply access is too large.
THROUGH HIKERS	Many days to months at a time		These users often are dropped off without a vehicle	Located at major trailheads, along trails in high traffic areas, at established campgrounds, and resupply points.	Some distances range from 5 to 15 miles depending on section of trail.	
LOCAL BICYCLISTS	2-8 Hours	Available at trailheads, sometimes along trails in urban or suburban context, sometimes from wild sources.	Generally, one space per user – optional longer and wider parking space to accommodate hitch or roof bicycle racks and loading space	Located at major trailheads and along trails in high traffic areas.	At trailheads, optional sun or rain day shelter every 5 miles for rest purposes. Benches in urban/suburban context.	Local Bicycle Shops or Concessionaires at trailheads/ Park Entrances
MOUNTAIN BIKERS	2-8 Hours			Located at major trailheads and along trails in high traffic areas.		
THROUGH TOURING CYCLISTS	Many Days to Months at a time	Filtered from wild sources (rivers, streams), sometimes trailheads and towns.	These users typically do not have a vehicle for longer journeys	Located at major trailheads, along trails in high traffic areas, at established campgrounds, and resupply points.	Camping/shelter needs vary depending on terrain, typically between 50-100 Miles. Mix of dispersed camping and shelters for weather.	Varies widely, typically provide access to convenience stores at a minimum, every 3-4 days (50-200 miles depending on terrain).
BIKE PACKERS	Typically overnight, sometimes many days to weeks					
EQUESTRIANS	Day User: 2-8 hours Extended User: Many days at a time	Day User: At trailheads, 5-7 mile intervals for hot climates, 10 mile intervals for mild climates. Extended User: These users may opt to carry water, but intervals for day users should be followed.	Requires larger space sizes for trailers and adequate clear space to make difficult turns in staging areas	Located at major trailheads, along trails in high traffic areas, at established campgrounds, and resupply points.	Varies widely based on user. Provide hitch and post at key rest or scenic areas. Mix of dispersed camping and shelters for weather.	Varies widely based on user. Volunteer or organized groups could support these users.

## Priority Amenity: Water Access

Regular and predictable water access is essential for both touring trail users and those making a day trip to visit the trail.

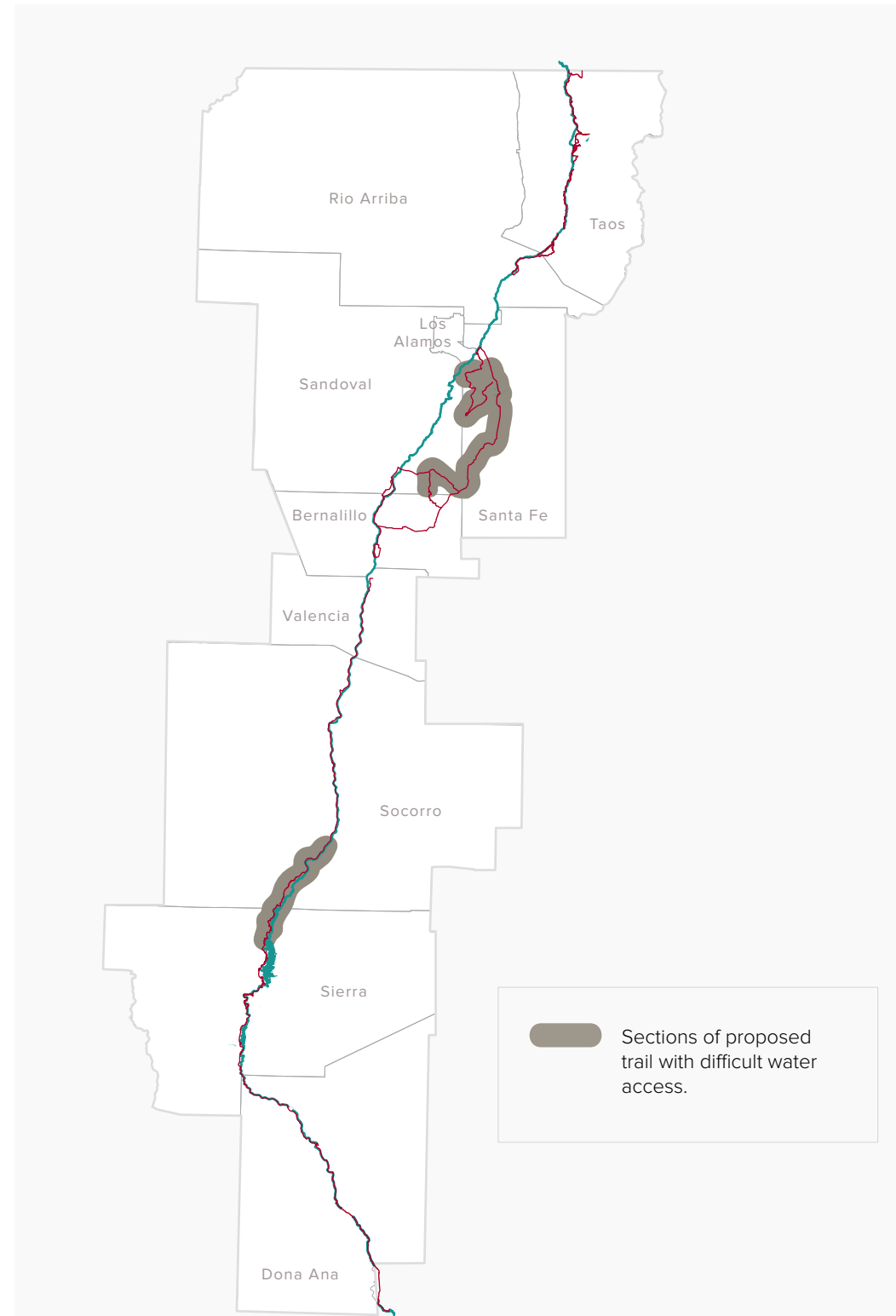
Water access includes natural water sources, such as rivers or streams, or places to fill up water bottles from a spigot or tap. Ideally, water access should be available every eight miles across the length of the Rio Grande Trail. Through hikers need access to water at least once a day. This interval corresponds to the low end of a through hiker's average daily mileage.

During his pioneering through-hike of the Rio Grande Trail in September 2018, Peter Livingstone catalogued specific sections of trail where water access was challenging. Map E identifies those sections, as well as sections of trail outside an 8-mile range of existing public water access points, public parks, and campgrounds. It is important to note that access to river water may be seasonally dependent and cannot be considered reliable year-round. This data should serve as a starting point for local land managers and the Rio Grande Trail non-profit to begin filling these gaps. Water access improvements or other infrastructure, such as shelters, could be funded by local jurisdictions or through a dedicated legislative fund.

Strategies for filling these water access gaps include:

- Local land managers could provide spigots at trailheads, parks, or other key locations with other amenities.
- The trail non-profit and local land managers could partner to dig wells or maintain large water tanks to provide a water source through particularly long dry sections. The Pacific Crest Trail Association (PCTA) successfully uses this approach. Informal water caches should be deterred because of their environmental impacts.
- As more people start to through hike the trail, the trail non-profit or a group of volunteers could crowdsource a list of water access points both on and near the trail. This is also a strategy employed by the PCTA. Their list includes any available details about reliability of each water source.<sup>1</sup>

1. Pacific Crest Trail Water Report. <https://pctwater.com/>



Map E: Proposed Rio Grande Trail Segments with Difficult Water Access

# PRIORITIZE WAYFINDING IMPLEMENTATION

The Rio Grande Trail non-profit and Rio Grande Trail Commission should prioritize wayfinding implementation to increase visibility of the trail, unify newly designated trail segments, and connect users with amenities and local communities. Wayfinding provides navigational assistance to trail users, including distances and times to destinations or places of interest. Wayfinding is comprised of signs, kiosks, mile markers, posts, and other identifiers located at various points along the trail. It is important to create a clear, consistent and understandable wayfinding package. An effective wayfinding system provides people using the Rio Grande Trail with the confidence they are using the correct path and directs them to destinations along the corridor.

## Key wayfinding principles include:

- Connect Places. Facilitate travel between destinations and provide guidance to new destinations.
- Keep Information Simple. Present information simply, using clear fonts and simple designs, so that it can be understood quickly.
- Maintain Motion. Be legible and visible for people moving so that they can read the signage without stopping.
- Be Predictable. Standardize the placement and design of signs so that patterns are established, and the signage becomes predictable.
- Promote Active Travel. Encourage increased rates of active transportation by helping people to realize they can use the bikeway and pedestrian network to access the places they want to go.

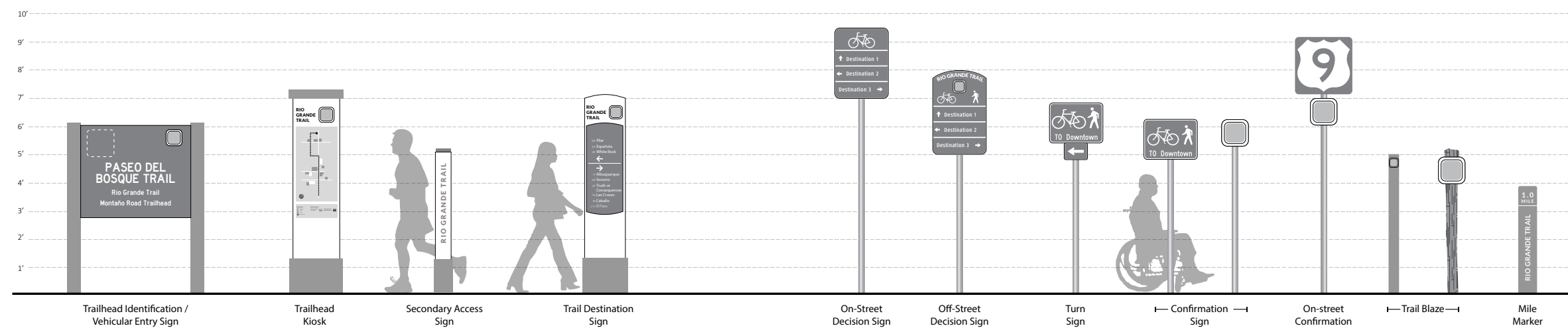


Figure 6: Rio Grande Trail Wayfinding Family of Elements





*The Rio Grande Trail Logo, developed through a partnership with the New Mexico Tourism Department and the Rio Grande Trail Commission.*

Wayfinding for the Rio Grande Trail should incorporate the trail logo developed by the Rio Grande Trail Commission and New Mexico Tourism Department.

The wayfinding package should include guidance for how municipalities, counties, regional, state, and federal government agencies should implement signs and use marketing materials. Wayfinding should be cohesive, legible, and easily implemented by many different agencies. The Rio Grande Trail will traverse urban, rural, and remote areas, so the wayfinding package will need to be applicable in all of these environments. **Existing trails that are designated as part of the Rio Grande Trail should be co-branded so that they are identified by their original name but still confer the route's designation as part of the overall Rio Grande Trail.** This co-branding approach is commonly used by other long-distance trails, such as the Pacific Crest Trail, to balance local identity with through-hiking legibility.



*An example of cobranding on the Pacific Crest Trail.*

As described in Chapter 5 “Promoting the Vision,” the Rio Grande Trail website should be maintained as a trip planning resource for trail visitors. Rather than creating a new, independent wayfinding app to accompany the website, the Rio Grande Trail non-profit can use existing apps, such as AllTrails,

MapMyHike, or TrailForks for a more time and resource efficient way to share information with users.

Section 9 of the Rio Grande Trail Design Guidelines includes additional information about these themes, and other wayfinding designs and strategies.

## First Rio Grande Trail Through Hike

Peter Livingstone hiked 548 miles from September 1 to September 26, 2018, completing the first through hike of the proposed alignment for the Rio Grande Trail. His historic hike provided important data about the route and raised awareness and public support for the trail. Peter catalogued the following statistics about his adventure:

- Trail/Dirt = 390 miles
- Highway/Road = 158 miles
- Total Ascent = 13,490 feet
- Total Descent = 16,570 feet
- Longest Day = 31 miles
- Shortest Day = 5 miles (last)
- Nights in Homes/Motels = 5
- Nights Camping = 23
- Farthest from Rio Grande = 20 miles



*Peter Livingstone and Dan Carter at the northern end of the Rio Grande Trail.*

## PETER'S KEY TAKEAWAYS

- An appreciation for how many beautiful trails, features, and points of interest exist all along the proposed trail.
- Need to address the number of miles a through hiker has to walk along highways to bypass gaps in the trail.
- Need to clarify areas with approved dispersed camping and publicize existing campgrounds.
- As the trail is built and designated, bridges or guidance about river crossings will need to be provided.



*Peter Livingstone at the southern end of the Rio Grande Trail, at the end of his month-long hike.*



## GROW TRAIL STEWARDSHIP

As more trail segments are designated, the Rio Grande Trail Commission and trail non-profit should work to grow trail stewardship through the “friendraising” activities outlined in Chapter 5. A first priority should be establishing the Gateway Communities Program to start engaging communities. This program is a great place to start because of the economic incentive for communities to connect with the trail. Participation in the program will bring both economic and health benefits to nearby towns, but will also make the trail more appealing for visitors. The Gateway Communities Program will be a structure to begin recruiting a network of volunteers, hosting trail events, and organizing the Biannual Rio Grande Trail Summit. Other long-distance trails, such as the Arizona Trail and Continental Divide Trail have used Gateway Community programs successfully to foster economic development, create jobs, and provide appealing amenities to trail users.



*Calm section of the Rio Grande.*



## MEASURE AND LEVERAGE PROGRESS

The Rio Grande Trail non-profit and Rio Grande Trail Commission should develop a strategy to set goals and benchmark progress as efforts to develop the trail continue. Establishing both quantitative and qualitative benchmarks to track progress builds a culture of accountability and continuity. As staff and circumstances change, people can still work together to achieve shared goals and celebrate success. Tracking progress towards project goals is a great way to determine if current allotted resources are enough to meet commitments made to the public.

Benchmarks should include an overall goal with target dates for completion. Progress should be reported and shared with the public, partners, and funders at regular intervals, perhaps annually or biannually. Reaching and publicizing milestones builds momentum for the project and can be a compelling addition to funding applications. Connecting individual community actions to the larger Rio Grande Trail effort links people from across the state and imbues local actions with greater significance. Rio Grande Trail goals could address:

- Targets for existing trail designation and trail building
- Wayfinding package creation and implementation
- Investigating and communicating trail benefits
- Identifying and establishing trail amenities
- Volunteer recruitment and involvement
- Public events and marketing

*Photo (top right): Moon rise over the mountains in New Mexico.  
Photo (bottom right): Blue heron fishing in the Rio Grande.*

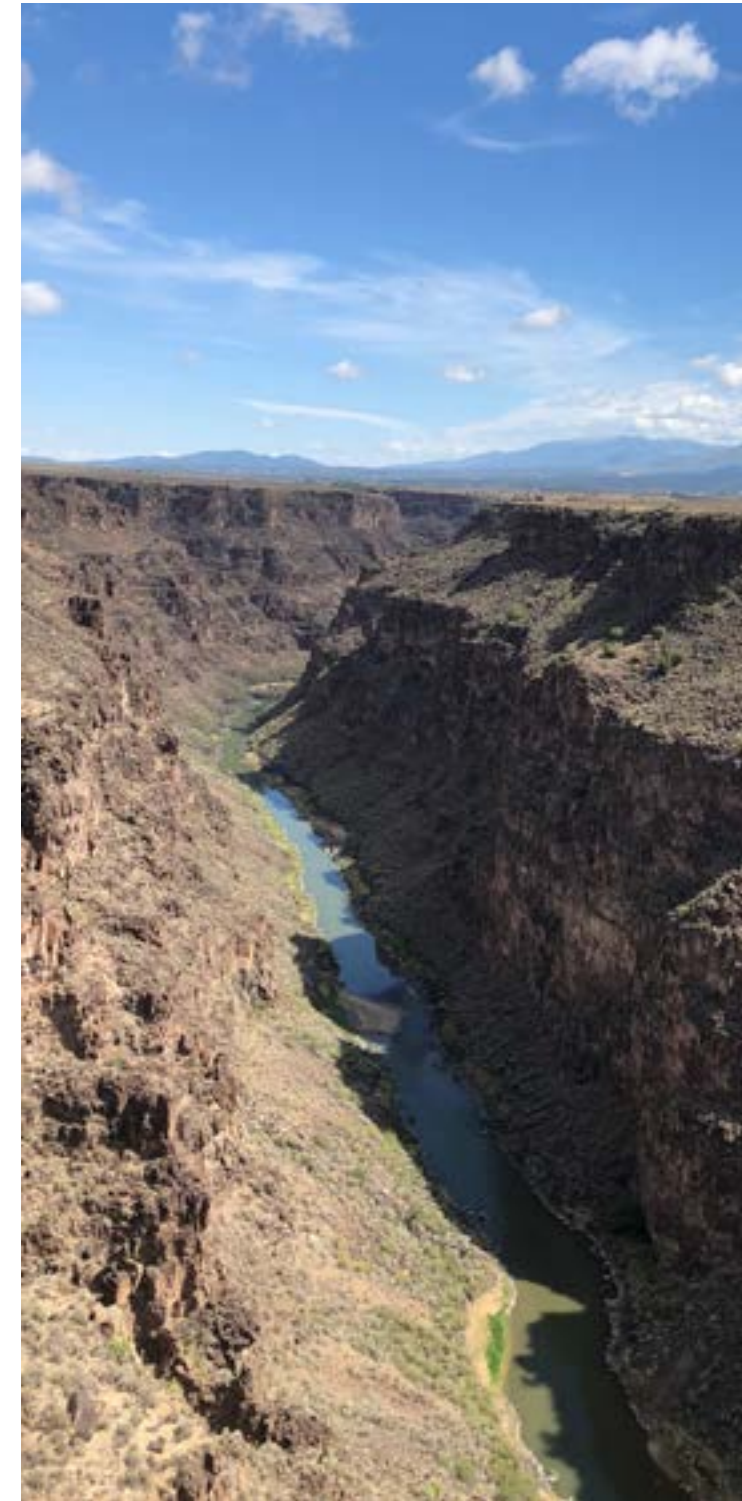


## SEEK FUNDING ON A TRAIL SEGMENT BY SEGMENT BASIS

As referenced in Chapter 1, the Rio Grande Trail will bring numerous social, health, environmental, and economic benefits to the state. The realization of these benefits will grow as more segments of the trail are constructed and added to the system. Funding and implementation of the Rio Grande Trail will require a broad and coordinated effort over many years. The Rio Grande Trail non-profit could play a key role coordinating this varied and multi-faceted approach. Because the Rio Grande Trail encompasses so many trail types and jurisdictions, many different funding sources will be applicable. The Rio Grande Trail non-profit could help match the different projects with the right funding source and pass-through agency. Funding should be sought on a segment by segment basis as opportunities arise. Project boundaries should not be constrained by the segment divisions outlined in this plan. **To assist with this effort, the Funding Matrix in Table 6 provides an extensive list of funding opportunities, organized by project type and pass through agency.**



*Photo (right): Rio Grande Gorge in northern New Mexico.*



**TABLE 6: POTENTIAL FUNDING OPPORTUNITIES FOR THE RIO GRANDE TRAIL (AS OF SEPTEMBER 2018)**

PROGRAM	PROGRAM DESCRIPTION	AGENCY	MATCH REQUIRED	FUNDING AMOUNTS	ELIGIBLE RIO GRANDE TRAIL ACTIVITIES	ON-STREET BIKEWAYS
BUILD GRANTS	BUILD discretionary grants seek to provide desirable long-term impacts on transportation facilities and systems, economic benefits, quality of life, environmental sustainability and safety.	FHWA	20% with exceptions	\$500 Mi total for the program for FY 2017 which is allocated among states. \$1 Mi min. allocated for rural areas	Construction of trails that are not on federal lands and meet program goals relating to transportation, economic benefits and quality of life.	Y
FEDERAL LANDS TRANSPORTATION PROGRAM (FLTP) GRANTS	The Federal Lands Transportation Program was established to improve multi-modal access within national parks, forests, wildlife refuges, Bureau of Land Management (BLM) lands, and U.S. Army Corps of Engineers facilities. Eligible facilities must be owned and maintained by the Federal government.	FHWA	20%	\$1.7 Bi total for the program which is allocated among federal agencies	Transportation planning, research, preventive maintenance, engineering, rehabilitation, restoration, construction, and reconstruction of federal lands transportation facilities	Y
TRANSPORTATION ALTERNATIVES (TA) SET ASIDE FUNDS (SURFACE TRANSPORTATION BLOCK GRANT PROGRAM)	As a form of set aside funds from the Surface Transportation Block Grant Program, this funding source encompasses transportation enhancements, recreational trails, pedestrian, and bicycle facilities. Project must be listed in the Statewide Transportation Improvement Plan (STIP)	FHWA through NMDOT	14.56%	\$835 Mi total for the program for FY 2017 which is allocated among states (Approximately \$6 Mi/year in NM)	Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation.	Y
RECREATIONAL TRAILS PROGRAM SET ASIDE FUNDS (TRANSPORTATION ALTERNATIVES)	The Recreational Trails Program (RTP) provides funding to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Funds are administered by their respective states and requirements vary. Projects must be listed within the Statewide Transportation Improvement Plan (STIP) to qualify.	FHWA through NMDOT	14.56%	\$5000-\$100,000 per Project (Approximately \$1.4/year in NM)	Maintenance, restoration, trail construction on public land.	N
TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION ACT (TIFIA) LOANS	Like bonds, these loans are not a funding source but do provide financing options, including credit assistance in the form of direct loans, loan guarantees, and standby lines of credit for large, surface transportation projects of national or regional significance, as well as public-private partnerships.	USDOT	TIFIA will finance up to 33% of total eligible project costs	Capital cost of project must be at least \$50 million, TIFIA will finance a maximum of 33% of the total eligible project costs	Any type of project that is eligible for Federal assistance through existing surface transportation programs (highway projects and transit capital projects) is eligible for the TIFIA credit program. This includes planning, construction, reconstruction and permitting of bicycle lanes, paved shoulders, trails and trailside amenities.	Y
CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)	Provides a flexible funding source to State and local governments for transportation projects and programs to help improve air quality. Generally, projects must be within non-attainment areas in order to qualify for grants. However, if proved to significantly improve air quality, projects outside of these areas might also receive funds. Projects must be listed in the State's Implementation Plan (SIP) to qualify.	FHWA through NMDOT	14.56%	About \$2.5 Mi total allocated for the program each year which is allocated among states	Projects that improve air quality, including on- and off-street bikeways that help reduce vehicle trips for transportation. Other eligible projects include planning, intersection improvements, roundabouts, park and ride facilities.	Y

Key: Y = Funds may be used for this activity (restrictions apply); N= Funds may not be used for this activity; Y/R=See program-specific notes for restrictions; Y/NC=Eligible, but not competitive unless part of a larger project.



	TRAILS WITHIN PUBLIC ROW	TRAILS OUTSIDE PUBLIC ROW	LAND ACQUISITION	RECREATIONAL TRAILS	TRAILSIDE/ TRAILHEAD FACILITIES (WATER & RESTROOMS)	PARK AMENITIES	PLANNING/ DESIGN	NOTES
	Y	Y	Y	Y/NC	Y/NC	Y	N	
	Y	Y	Y* scenic easements, scenic or historic sites	Y	Y	Y	Y	
	Y	N	N	Y	Y/R	N	Y	
	Y	N	N	Y	Y/R	N	Y/R	
	Y	Y	Y	Y	Y/R	N	Y	
	Y	N	N	N	N	N	Y	Current non-attainment areas in New Mexico include parts of Dona Ana County in the southern portion of the state. Past nonattainment areas include Bernalillo County, and parts of Grant County. CMAQ also includes flexible funds that may be used outside of nonattainment or maintenance areas as long as the projects are likely to improve air quality. Two percent of state CMAQ funds are to be set aside for planning and research efforts

**TABLE 6: FUNDING OPPORTUNITIES FOR THE RIO GRANDE TRAIL**

PROGRAM	PROGRAM DESCRIPTION	AGENCY	MATCH REQUIRED	FUNDING AMOUNTS	ELIGIBLE RIO GRANDE TRAIL ACTIVITIES	ON-STREET BIKEWAYS
HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)	Program purpose is to reduce fatalities and serious injuries on public roads through infrastructure and programs. HSIP is composed of four major programs focused on highway and crossing improvements. It can fund low cost, systemic improvements if benefit-cost is met. Projects must be listed in the Statewide Transportation Improvement Plan (STIP) to qualify.	FHWA through NMDOT	10%	\$2.3 Bi. total allocated for the program for FY 2017 which is allocated among states	Planning, maintenance and construction of facilities that will help reduce crash rates on public roads. This includes on-street bikeways, roadway shoulders, crosswalks, intersection improvement and signage.	Y
COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG)	Program supports community facilities, community and economic development projects in rural areas. Best if project benefits low or moderate-income populations and part of a consolidated plan	HUD, State, and Local Gov't	Matching fund requirement equal to amount of grant	Minimum grant award is \$50,000; maximum grant award is \$250,000	Planning and construction of street improvements, bicycling and walking paths, bridges and other infrastructure that benefit low- or moderate-income populations.	Y
LAND AND WATER CONSERVATION FUND (LWCF)	Provides matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities.	NPS through EMNRD State Parks Division	50%	Varies	Planning and construction of bicycle and pedestrian paths and trails, or acquisition of land for these facilities.	Y* for recreation or as link to recreation facilities
RIVERS, TRAILS, AND CONSERVATION ASSISTANCE PROGRAM	The National Park Service Rivers, Trails, and Conservation Assistance program supports community-led natural resource conservation and outdoor recreation.	NPS	No matching funds required	Range \$3,000 to \$237,000 Average \$45,000	Staff support for facilitation and planning for projects related to conservation and recreation with broad community support, and supporting the National Park Service's mission.	N
CAPITAL OUTLAYS	Capital outlays fund capital project within the state. A local infrastructure capital improvement plan (ICIP) is a plan that establishes planning priorities for anticipated capital projects. The state-coordinated ICIP process encourages entities to plan for the development of capital improvements.	NMDFA	Can serve as matching funds for federal programs. State Grant Funding should only be requested when all other funding sources have been exhausted if entity is providing matching funds.	Varies	Capital projects	Y
LOCAL / PRIVATE FUNDING SOURCES	Bond measures, city/county capital budgets, private contributions, proceeds from special use taxes	City / County / Private	N/A	Varies	Maintenance poses the largest need from local funding sources given the lack of other funding options for these activities. Local funding sources will also be important in developing required matching contributions for other funding opportunities listed above.	Y

Key: Y = Funds may be used for this activity (restrictions apply); Y/R=See program-specific notes for restrictions; Y/NC=Eligible, but not competitive unless part of a larger project

	TRAILS WITHIN PUBLIC ROW	TRAILS OUTSIDE PUBLIC ROW	LAND ACQUISITION	RECREATIONAL TRAILS	TRAILSIDE/ TRAILHEAD FACILITIES (WATER & RESTROOMS)	PARK AMENITIES	PLANNING/ DESIGN	NOTES
	Y	N	Y	N	N	N	Y	This fund is very competitive and has a heavy focus on safety countermeasures for areas with high crash and fatality rates.
	Y	?	N	N	N	N	Y	
	Y	Y	Y	Y	Y	Y	Y	Proposed Federal LWCF Projects (FY 2016) in New Mexico include: Carson National Forest, Rio Grande Del Norte National Monument, Pecos National Historic Park, Continental Divide National Scenic Trail, and Gila National Forest.
	N	N	N	N	N	N	Y	Projects in New Mexico funded through this program include planning for: Taos Park Rx, Santa Fe Grande Unified Trail System, Albuquerque First Choice Wellness, Trails and Roswell Spring River Trail
	Y	Y	Y	Y	Y	Y	N	
	Y	Y	Y	Y	Y	Y	Y	





*Cactus in bloom along the Rio Grande Trail corridor.*



## Cost Estimates

Cost estimates assist with the programming of existing funds and support grant applications to fund the development of the trail on a segment by segment basis. Planning level cost estimates for the Rio Grande Trail assume a general one mile stretch of trail for each typical section and include an estimate for material costs.

Typical sections included:

- Backcountry Trail, \$122,481.37 per mile
- Shared Use Path- \$918,895.38 per mile
- Side Path- \$450,207.42 per mile
- Shoulder Bikeway, \$365,017.50 per mile
- On-Levee Path- \$532,112.10 per mile
- On-Ditch Road Path- \$532,112.10 per mile
- Urban Bikeway, \$40,113.84 per mile



## Potential Funding Sources

The following federal funding programs have funded similar projects in New Mexico. These programs are great places to start applying for funding to build new segments of the Rio Grande Trail.

### LAND AND WATER CONSERVATION FUND (LWCF)

The LWCF is a permanent statewide fund for parks, outdoor recreation facilities, and open space, administered by EMNRD. The U.S. Department of the Interior's National Park Service has provided nearly \$40 million to this fund since the program was initiated in 1965. So far, state agencies, municipalities, counties, schools, and tribes have developed and improved over 1,000 local outdoor recreation areas in response to community and visitor needs. Community projects include parks, baseball and soccer fields, trails, playgrounds, and picnic areas. The LWCF is a 50% federal and 50% local match grant program.

### RECREATIONAL TRAILS PROGRAM (RTP)

The RTP is a federal reimbursement program that provides funding to eligible entities within New Mexico to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized uses. These federal funds benefit people who enjoy hiking, bicycling, in-line skating, equestrianism, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, and off-road four-wheel driving. Since 2010, the RTP has funded 40 projects in New Mexico, an average of five projects per year. This funding requires at least a 20% match on behalf of the implementing agency. The RTP is a diverse funding source and could supplement many phases or elements of trail projects.

### FEDERAL LANDS ACCESS PROGRAM (FLAP) GRANTS

The FLAP grants provide funds for transportation facilities that provide access to federal lands that are owned or maintained by a state, county, local government, or tribe. The program intends to supplement state and local resources for public roads, trails, transit systems, and other transportation facilities. Since 2013, FLAP has funded 10 projects for \$53.9 million. A 14.56% local match is required. The next call for projects is September 18, 2018 to January 15, 2019.

### BETTER UTILIZING INVESTMENTS TO LEVERAGE DEVELOPMENT (BUILD)

The former TIGER program from the US Department of Transportation, now known as BUILD, helps communities revitalize their surface transportation systems, with particular support for rural areas. BUILD projects are evaluated based on criteria, including safety, economic competitiveness, quality of life, environmental protection, state of good repair, innovation, partnership, and additional non-federal revenue for future transportation infrastructure investments. Since 2009, eight projects in New Mexico have been funded through the TIGER (now BUILD) program, averaging \$4.5 million. The program requires at least a 20% local funding match and can be used by many different public agencies. BUILD Grants are better suited for planned RGT projects that are more transportation-focused than purely recreational.

