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and

United States Department of Agriculture
United States Forest Service
Española Ranger District

and

United States Department of the Interior
Bureau of Land Management
Taos District

Environmental Assessment
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EL CAMINO REAL DE TIERRA ADENTRO NATIONAL HISTORIC TRAIL
BUCKMAN ROAD SEGMENT
RETRACEMENT TRAIL PROJECT

FHWA NM FLAP CR 77000 (1)

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For Chief of Engineering, FHWA-CFLHD

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ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
AUM	Animal Unit Month
BAE	Biological Assessment and Evaluation
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
CFLHD	Central Federal Lands Highway Division
CR	County Road
EA	environmental assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERMA	Extensive Recreation Management Area
FHWA	Federal Highway Administration
FLAP	Federal Lands Access Program
MBTA	Migratory Bird Treaty Act of 1918
MIS	Management Indicator Species
MOU	Memorandum of Understanding
mph	miles per hour
MRC	Municipal Recreation Complex
NEPA	National Environmental Policy Act of 1969, as amended
NFMA	National Forest Management Act
NMDFG	New Mexico Department of Game & Fish
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NTSA	National Trails System Act
ROW	right-of-way
SHPO	State Historic Preservation Officer
SRMA	Special Recreation Management Area
USACE	United States Army Corps of Engineers
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VQO	Visual Quality Objectives
WOUS	Waters of the U.S.

1 INTRODUCTION

Development of an approximately 15-mile-long trail is being proposed by the Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in coordination with Santa Fe County, Bureau of Land Management (BLM), U.S. Forest Service (USFS), and National Park Service (NPS) which jointly administers El Camino Real de Tierra Adentro National Historic Trail with BLM. FHWA's Federal Lands Access Program (FLAP), along with a local match, will provide the funds for El Camino Real Buckman Retracement Project (hereafter the "project" or "proposed action"). Development of this environmental assessment (EA) is being led by FHWA CFLHD with BLM and USFS as partner agencies.

The project would introduce a dedicated non-motorized corridor for pedestrians, bicycles, and equestrians that would facilitate safe access to federal lands. There are two segments of the project, totaling 14.7 miles of trail. The first segment would be located on City of Santa Fe and Santa Fe County right-of-way (ROW) or easements. It is proposed as a 10-foot-wide, paved shared-use trail that would run parallel to Caja del Rio Road from the existing El Camino Real Park at the Santa Fe River Trail north to County Road (CR) 62.

The second segment would be primarily sited on BLM and USFS lands; only the southeastern part would be located on Santa Fe County ROW or easements. Within this segment, there are two sections that, as proposed, would have varying widths and surface types as follows:

- The first section would be a 4-foot wide crusher fine surface trail that would connect the paved, shared-use trail at Caja del Rio Road to the USFS Caja del Rio Headquarters Well Trailhead.
- The second section, a 30-inch wide, natural surface trail, would generally follow the historic route of El Camino Real de Tierra Adentro National Historic Trail and extend from the USFS Caja del Rio Headquarters Well Trailhead to the BLM Diablo Canyon Trailhead, with a connection to the BLM Dead Dog Trailhead.

If approved, the proposed action would be constructed in 2017.

1.1 Regulatory Framework

The National Trails System Act of 1968, as amended (16 United States Code (U.S.C.) 1241-1251) (NTSA) established a national system of recreation, scenic, and historic trails to provide outdoor recreation opportunities and to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas, and historic resources found across the United States. The law states "national historic trails will...follow as closely as possible and practicable the original trails or routes of travel of national historic significance...National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment" (NPS, 1968).

In 2000, El Camino Real de Tierra Adentro was designated a National Historic Trail for its significance as a principal trade route between New Mexico and the regions of Spanish-occupied New Spain, which were located to the south, for almost 300 years. In the United States, El Camino Real de Tierra Adentro runs 404 miles between Ohkay Owingeh Pueblo just north of Santa Fe, New Mexico and the present day border with Mexico at El Paso, Texas. The trail continues approximately 1,200 miles further south to Mexico City, Mexico. The trail is jointly administered by the NPS and BLM.

In 2001, President Clinton signed Executive Order (EO) 13195—Trails for America in the 21st Century. The EO was established (1) to further the mission of NTSA, the Transportation Equity Act for the 21st

Century, and other relevant statutes and (2) to help achieve the common goal of better establishing and operating the nation's system of trails. The primary provisions of the EO include:

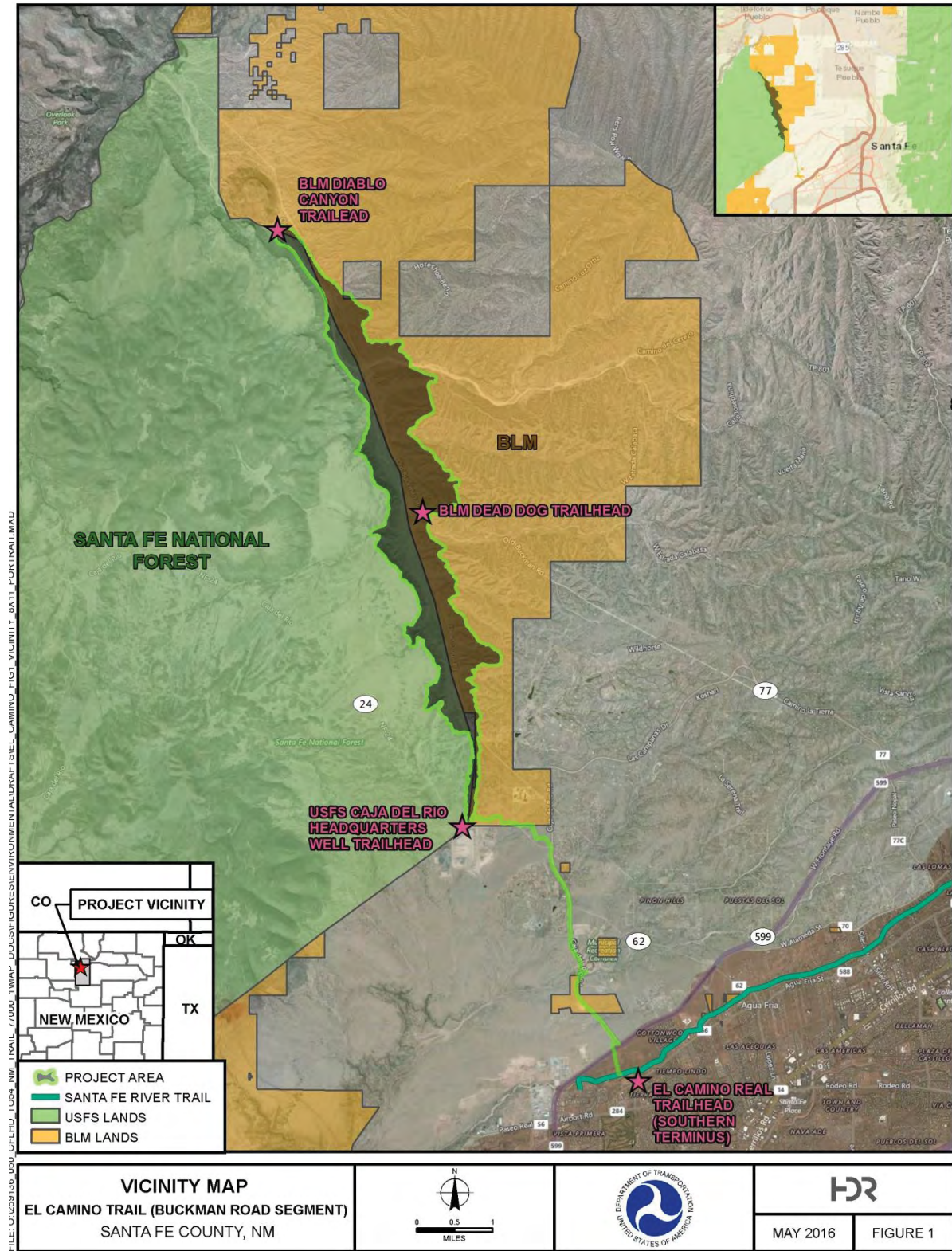
- Provide trail opportunities of all types, with minimum adverse impacts and maximum benefits for natural, cultural, and community resources.
- Protect trail corridors associated with the high priority potential sites and segments of National Historic Trails to the degrees necessary to ensure that the values for which each trail was established remains intact.
- Coordinate maps and data from the components of the national trails system to ensure that these trails are connected into a national system and that they benefit from appropriate national programs.
- Promote trails for safe transportation and recreation within communities.
- Provide historical interpretation of trails and trail sites and enhance cultural and heritage tourism through special events, artworks, and programs.

The EO states that the mission of the Federal Interagency Council, which was established in 1969 and whose core members include FHWA CFLHD, BLM, and USFS, is to coordinate information, program decisions, and policy recommendations among all appropriate federal agencies. To further this objective, the EO identifies the development of a memorandum of understanding (MOU) among agencies to encourage long-term agency coordination and cooperation to further the spirit and intent of NTSA. An MOU between FHWA CFLHD, BLM, USFS, NPS, and U.S. Army Corps of Engineers (USACE) was signed in 2006.

1.2 Project Location

The project would begin at El Camino Real Park at the Santa Fe River Trail (Lat. 35°38'26.79"N, Long. 106°03'24.47"W), approximately 7.2 miles from downtown Santa Fe. The trail would go under New Mexico State Road 599 (NM 599), run parallel to Caja del Rio Road, travel past the City of Santa Fe Municipal Recreation Complex (MRC) and Marty Sanchez Links de Santa Fe Golf Course, and connect to federal lands at the USFS Caja del Rio Headquarters Well Trailhead. From this location, the proposed action would travel north along an alignment generally following El Camino Real de Tierra Adentro National Historic Trail to the BLM Diablo Canyon Trailhead (Lat. 35°48'16.3"N, Long. 106°08'11.584"W). The proposed action would be located entirely in Santa Fe County on BLM and USFS lands and on City of Santa Fe and Santa Fe County ROW or easements. The general location of the proposed action and areas evaluated for potential impacts are presented in Figure 1.

Figure 1. Project Vicinity Map



1.3 Purpose and Need

FHWA CFLHD, BLM, and USFS have a similar goal in improving public safety and access to federal lands, but have operational objectives distinct to their respective agencies. FHWA CFLHD's primary interest is to improve public safety and access to federal lands by enhancing the existing transportation network. Both the BLM and USFS, as land managers and multiple-use agencies, have additional purposes. These include making public land and resources available for use and development while protecting cultural and natural resources in a manner that is consistent with their agencies' respective objectives, and meeting national, regional, and local needs.

The purpose and need for the project, with consideration of these varying objectives, is described below.

Purpose

The purpose of the project is to:

- Improve federal lands access by enhancing trail connectivity between land uses in Santa Fe County and City of Santa Fe and recreational opportunities on BLM and USFS lands.
- Enhance the safety of non-motorized users accessing federal lands and other recreational opportunities in the area.
- Develop a trail retracing a portion of the congressionally designated route of El Camino Real de Tierra Adentro National Historic Trail along Buckman Road.

Need

The Santa Fe County Open Space and Trails Program has planned for enhanced connectivity among and improved access to the region's wealth of federal lands. One of the goals of the county's *Open Land and Trails Plan* is "to preserve historical trails and protect access to existing trails, trailheads and recreation opportunities on federal lands." Further, Santa Fe County's *Sustainable Growth Management Plan* states that an expanded and well-maintained trail network would provide a green alternative to motorized transportation and improve the quality of life in the community and attract tourists who are looking for outdoor recreational opportunities.

The project would fulfill these county policy directives and directly support the mandate of the NTSA, which calls for the development of a national system of trails near urban areas, within scenic areas, and along historic travel routes of the nation (P.L. 90-543, as amended through P.L. 111-11, March 30, 2009). The Buckman Road segment of El Camino Real de Tierra Adentro National Historic Trail is an unusually iconic segment of the historic route originally taken by Don Juan de Oñate in 1598 to reach his first capital destination at Ohkay Owingeh Pueblo to the north. The fact that this segment of the historic trail route still exists in federal ownership so close to population centers in Santa Fe is a remarkable opportunity for residents and tourists to experience one of the oldest routes of any National Historic Trail in the country. The proposed action would provide a unique opportunity to develop a non-motorized trail that serves the intent of Congress in establishing the National Historic Trail for the purpose of providing today's trail users with a similar experience to that of historic trail users.

Caja del Rio Road (via CR 62) is a primary access point for federal lands on the Caja del Rio Plateau, west of Santa Fe. The roadway carries approximately 2,000 vehicles per day at 45 miles per hour (mph). Although the roadway was substantially reconstructed in 2013, which included the addition of on-road bicycle lanes, there is currently no safe option for pedestrian or equestrian travel through this corridor, which experiences heavy use by trucks hauling refuse to the Buckman Transfer Station and Caja del Rio Landfill. A shared-use side-path along Caja del Rio Road would provide a safe transportation alternative

and recreation opportunity for pedestrians, bicyclists, and equestrians, substantially enhancing multimodal access to Caja del Rio Plateau trails and to the MRC.

The portions of CR 77 and CR 62 that are located within the project area are unpaved, measure between 20 feet and 25 feet wide, have no shoulder, and have a speed limit of 25 mph. Although traffic counts are relatively low (approximately 50 vehicles per day each), these roadways present unique challenges for use by pedestrians, bicyclists, and equestrians. CR 77 is classified as a major collector rural and is the only access point for the Buckman Direct Diversion Facility, which provides public water supply from the Rio Grande to serve Santa Fe County and City of Santa Fe. As a result, many of the vehicles using this road are trucks servicing facilities related to the Buckman Direct Diversion.

CR 77 is also the only access point to BLM's Diablo Canyon Trailhead, which is used by over 6,000 hikers and rock climbers annually. Similarly, CR 62 is the primary access point for the Caja del Rio Plateau and BLM and USFS lands therein. It leads directly to USFS's Caja del Rio Headquarters Well Trailhead, which is a popular point of entry for roughly 9,000 hikers, mountain bikers, and equestrians annually. Non-motorized use of both CR 62 and CR 77 to access adjacent federal lands is common; however, the safety and quality of these recreational uses would be vastly improved by the proposed action because it would resolve the conflict between industrial and recreational use of the roadways.

It is also important to note that while the federal lands and county roads that exist provide an outstanding opportunity for the public to experience this historic route, currently there is no historic trail visibility or interpretation of the trail conveyed to the public. It would only be through the development of the proposed action that these federal lands may provide the National Historic Trail experience that is critical to ensure public interest, awareness, and appreciation that would lead to its long-term preservation. The implementation of interpretive and educational materials as part of the proposed action would be consistent with objectives identified in BLM's *Taos Resource Management Plan* and USFS's *Santa Fe National Forest Plan*.

1.4 Decision to be Made

The decision to be made by the federal agencies is (1) to determine the extent of potential project-induced impacts on cultural, natural, and socioeconomic resources and (2) to identify a preferred alternative that best meets the purpose and need for action while avoiding, minimizing, or mitigating adverse impacts so they do not rise to the level of significance. Following the public comment period, the federal agencies will review all comments received and issue a decision regarding potential authorization of the project.

1.5 Plan Conformance

The following provides an overview of relevant planning documents prepared specifically for El Camino Real de Tierra Adentro National Historic Trail or other federal and county lands within proximity to the proposed action. The section describes whether the proposed action would be consistent with the goals and objectives identified in individual plans.

El Camino Real de Tierra Adentro National Historic Trail Comprehensive Management Plan/Final Environmental Impact Statement (NPS, 2004). The Preferred Alternative described in this plan would implement the provisions of the NTSA, reflect the public's visions for trail administration and management, and include a program for resource protection and visitor use. Trail administration and partners would work cooperatively to provide coordinated programming and activities that integrate themes, resources, and landscapes at certified sites on private land or protected sites on public land. The implementation of the Preferred Alternative would allow visitors (1) to access approved historic and

archeological sites; (2) to understand and appreciate the trail's history and significance, where permissible; and (3) to use the trail corridor in ways that conserve significant values and resources.

The proposed action evaluated in this EA would contribute to the plan's vision of non-motorized trail development, recreational use, and interpretation and help fulfill the mission of NTSA and supporting statutes. It would also help address the following concern stated in the plan: "Between Santa Fe and Española, the major block of land is located northwest of Santa Fe in the Buckman area. Because of recent development of the Las Campanas subdivision, the public land is under increased pressure for use for ROW and recreation."

El Camino Real de Tierra Adentro National Historic Trail, Santa Fe River Greenway to Diablo Canyon Conceptual Plan (David Evans and Associates and Paul S. Sarbanes Transit in Parks Technical Assistance Center, 2014). The conceptual plan was prepared prior to the FLAP application for the same general corridor that is evaluated in this EA. The plan provides an overview of the significance of El Camino Real de Tierra Adentro National Historic Trail and goals and objectives of the proposed action. The goals and objectives outlined in the plan are consistent with the goals of the project evaluated in this EA.

Taos Resource Management Plan (BLM, 2012). The plan provides a broad-scale direction for the management of public lands and resources administered by BLM's Taos Field Office. It identifies goals and objectives for resource conditions and use and establishes allowable uses, management actions, and special designations that will help achieve identified goals and objectives. The project would help achieve the following goals identified in the plan.

- Provide for the safe enjoyment of cultural resources and recreational opportunities related to the trails' history and resources.
- Implement management practices and technologies that help further the mission of the NTSA and administer El Camino Real de Tierra Adentro National Historic Trail in a way that would protect its setting, visual integrity, archaeological resources, and physical traces.
- Identify and protect National Historic Trail routes and historic settings, remnants, and artifacts for public use and enjoyment.
- Preserve the associated high-potential historic sites and high-potential historic route segments, physical remnants, and contributing features; interpret the historic aspects of the trails for the protection of the resource; and enhance the understanding and enjoyment of these trails in cooperation with trail-administering agencies and nonprofit partners.

Santa Fe National Forest Plan (USFS, 2011). The 1987 Santa Fe Forest Plan, as amended, set the goals and objectives for the management of the Santa Fe National Forest. Goals describe the desired resource conditions for the future and are the bases for project-level planning. The standards, guidelines, and management direction contained in the plan set forth the parameters with which the proposed action must take place. Approval of any management activity must be consistent with these parameters (16 U.S.C. 160(i)).

The preparation of the Forest Plan is required by the Renewable Resources Planning Act (1974), as amended by the National Forest Management Act (NFMA) (1976). Subsequently, the 14 planning principles set forth in NFMA regulations (36 CFR 219.1) were integrated into the 1987 plan. Those principles most relevant to the proposed action include:

- Preservation of important historic, cultural, and natural aspects of our national heritage.
- Provisions for the safe use and enjoyment of the forest resources by the public.

The proposed action is within Management Area G, which emphasizes key wildlife habitat protection, habitat improvement, and forage and fireweed production (see page 121 of the 1987 plan).

Recreational opportunities are generally dispersed and subject to the 2012 Travel Management Decision, which limits motorized travel to designated roads and trails described on the current Motor Vehicle Use map. The area is managed within the recreational opportunity spectrum for roaded natural and semi-primitive motorized travel.

The New Mexico 2040 Plan. NMDOT's Long Range, Multimodal Transportation Plan (New Mexico Department of Transportation [NMDOT], 2015). The following goals were identified in the recently completed long-range, multimodal transportation plan. The project is consistent with these goals.

- Partner with state and federal agencies to identify transportation projects that align with the preservation and development of New Mexico's National Historic Trails, which are important assets of the state's heritage, economic development, tourism, quality of life, and future transportation network.
- Support multimodal transportation options for residents and visitors of varying income and mobility levels.
- Work to provide multimodal access and accommodation of all users on National Historic Trails, where appropriate, and in coordination with other state transportation divisions and partner agencies.
- Support recreation and tourism by drawing attention to trailheads and other visitor-oriented locations. Develop maps and criteria to define scenic destinations of economic value and funding select improvements that enhance their value, such as signage on National Historic Trails.

Santa Fe Metropolitan Transportation Plan, 2010-2035 (as amended) (Santa Fe Metropolitan Planning Organization [MPO], 2010). This plan provides a framework for implementing a sustainable, interconnected multimodal transportation system and identifies the importance of investing in shared-use trails. It states, "For a wide variety of bicyclists and other non-motorized users, a system of shared-use paths on alignments distinct from the road network can create enhanced opportunities both for transportation as well as recreation purposes...developing an interconnected transportation system that gives people safe and reliable travel options whether by transit, bicycle, or on foot." The implementation of a designated non-motorized, shared-use corridor as identified with this project would be consistent with these goals.

Santa Fe Metropolitan Bicycle Master Plan (Santa Fe MPO, 2012). This plan prioritizes shared-use trail segments that can effectively function as direct, convenient, and safe transportation facilities. It states that shared-use trails should connect "directly to adjacent land uses, as well as trails and roads, just as roads are connected to driveways and side-streets. These connections can be included in trail design and construction and/or negotiated with private developers and landowners." The segment of the project that would be sited on City of Santa Fe and Santa Fe County ROW or easements is within the Santa Fe MPO region and has been specifically identified as a priority project to improve access to the MRC.

Santa Fe County Sustainable Growth Management Plan (Santa Fe County, 2010). The proposed action is consistent with numerous parts of the plan's Open Space, Trails, Parks, and Recreation Areas Element. It states that (1) new trails should be connected to other new and existing trails in Santa Fe County,

creating opportunities for pedestrians, cyclists, and equestrians to circulate among residential, commercial, and recreational spaces. The Santa Fe County trail network should be tied to the Santa Fe County multimodal transportation network and (2) an expanded and well-maintained trail network would not only attract tourists who are looking for an outdoor recreation experience, but would also provide a green alternative to motorized transportation and improve the quality of life in the community.

Santa Fe County Open Land and Trails Plan (Santa Fe County, 2000). Towards its vision of a countywide network of open space and trails, the Santa Fe County Open Space and Trails Program plans for enhanced connectivity among and improved access to the region's wealth of federal lands, which comprise approximately 25 percent of Santa Fe County's 1,911 square miles of land area. The project would be consistent with the plan's stated goal, "to preserve historical trails and protect access to existing trails, trailheads and recreation opportunities on federal lands."

1.6 Internal Scoping and Agency Coordination

The following provides an overview of Santa Fe County's submission of the FLAP application in January 2014, as well as internal scoping and agency coordination that have taken place since project inception. Because the project would be sited on federal lands and county ROW and easements, the success of this planning process is rooted in interagency coordination. Agency coordination will continue throughout all stages of the decision-making process.

1.6.1 County Submittal of the FLAP Application

Santa Fe County submitted an application to FHWA CFLHD for consideration of the project in January 2014. In the application, Santa Fe County identified several reasons for requesting FLAP funds to support project implementation. The project would provide:

- A dedicated non-motorized corridor to enhance access and to improve the safety of pedestrians, bicyclists, and equestrians accessing BLM and USFS lands and other recreational opportunities on Caja del Rio Road.
- A unique opportunity for the preservation and prototype development of a non-motorized segment of a National Historic Trail that would create a unique tourist destination.
- An opportunity for local and non-local users to experience one of the oldest routes of any National Historic Trail in the United States. This would be achieved via a connection from the oldest part of El Camino Real to the segment of the historic route that was established along the Santa Fe River when the capital was moved to Santa Fe in 1609.

The project was determined to meet FLAP criteria and, subsequently, funds were allocated for project planning, design, and implementation.

1.6.2 Agency Scoping and Meetings

As described above, multiple agencies have partnered with FHWA CFLHD to assist in project delivery. These agencies, primarily FHWA CFLHD, BLM, USFS, NPS, and Santa Fe County met over 15 times throughout project development. These meetings focused on critical issues to each agency, which included the following:

- Purpose and goals of the project.
- Trail alignment, and how to maximize user experience while meeting agency objectives.
- Surface types and widths for the various trail segments.

- Cultural resource analysis coordination across multiple land management agencies.
- Current livestock grazing practices.
- Maintenance agreements and practices.
- Floodplains and arroyos avoidance and/or mitigation.

A summary of environmental and design team meetings in addition to others held with local agencies is presented in Appendix A.

1.7 Tribal Coordination

BLM and USFS provided the names and contact information for Tribes who should receive letters to initiate tribal coordination regarding the project. On February 5, 2016, letters were sent to 24 representatives from 19 Tribes in New Mexico, Arizona, Colorado, and Oklahoma. A list of Tribes who received the letter, and any responses received, is included in Appendix A.

1.8 External Scoping and Public Outreach

A public meeting was held at the La Cienega Community Center in La Cienega, New Mexico, on December 4, 2013, prior to submission of the FLAP application. During this meeting, members of the community expressed their preference for the proposed trail to run parallel to CR 62 and Caja del Rio Road from the USFS Caja del Rio Headquarters Well Trailhead to El Camino Real Trailhead, rather than south from the USFS Caja del Rio Headquarters Well Trailhead to the BLM Trailhead in the La Cienega neighborhood.

In addition, Santa Fe County staff held individual meetings and made phone calls to interested members of the public. During this time, a number of community groups as well as local and state organizations expressed their support for the project. Many of these letters were submitted as part of the FLAP application. Table 1 identifies outreach efforts and activities that have occurred to date.

Table 1. Public Outreach

Activity	Date	Summary
Site Visit/Focus Group Meeting	August 14, 2015	Primary topics of discussion included the need for restroom facilities, camping areas, and the ability for trailheads to accommodate horse trailers. Participants expressed the desire for the trail to make a loop trail and also to connect with other USFS trails on the top of the Caja del Rio Plateau, to connect with other trails and potentially subdivisions, and to incorporate part of the Chili Line. The incorporation of the Chili Line into project design would be consistent with the goals of the national Rails to Trails program.
Grazing Permittee Meeting	February 16, 2016	<p>The project was discussed with affected grazing allotment permittees as part of the USFS’s annual permittee meeting. Concerns about ongoing vandalism (cutting) of fences, fence crossings, increased traffic, and off-leash pets disturbing livestock were mentioned.</p> <p>It should be noted that some of these concerns are outside the scope of this project and, therefore, are not included in the analysis. However, some elements of the proposed action may result in indirect benefits that address these.</p>
Public Scoping Meeting	February 17, 2016	This meeting included an open house, presentation, and question and answer session with the public. Concerns noted by the public included use of off-highway vehicle use, connections to the MRC, and fence crossing design. Comments are further discussed below and public meeting materials can be found in Appendix B of this document.
Grazing Permittee Meeting	March 19, 2016	USFS, as part of their annual meeting with grazing allotment holders, provided an overview of the project. Grazing allotment holders expressed concern about existing fence crossings and dogs being off-leash. New fencing, which would require less maintenance and be introduced as part of the proposed action, was considered a benefit.

In addition to those meetings mentioned above, FHWA CFLHD and agency partners received written and verbal comments from the public throughout project development. While not an inclusive list, general comments and concerns provided by the public included the following:

- Coordinate with emergency responders to ensure that the trail can be accessed in case of emergency.
- Use a fence design that precludes cattle from leaving their designated grazing allotment.
- Maintain separation between off-highway vehicle users and non-motorized users.
- If practicable, include a restroom at BLM’s Dead Dog Trailhead.
- Connect with other trails.

These comments were taken into consideration during project development. It should be noted that some of these comments, such as the installation of a restroom, are beyond the scope of this project and, therefore, are not included in the analysis. Actions undertaken as part of the project would not preclude the introduction of a restroom or other infrastructure at a later date.

If requested, an additional public meeting will be held.

Copies of the EA are available for review at the locations listed below:

- BLM Taos Field Office, 226 Cruz Alta Road, Taos, NM 87571.
- USFS Española Ranger District Office, 1710 N Riverside Drive, Española, NM 87532.
- Santa Fe County, 901 West Alameda Street, Suite 20C, Santa Fe, NM 87501.
- Santa Fe Public Library, 145 W Washington Ave, Santa Fe, NM 87501.
- New Mexico State Library, 1209 Camino Carlos Rey, Santa Fe, NM 87507.

Electronic versions of the EA are available on the Santa Fe County website at:
http://www.santafecountynm.gov/open_space_and_trails_program/flap.

For additional information regarding public involvement, including announcements and public open house meeting materials, see Appendix B of this document. A record of all hard copy comments received throughout the life cycle of the project can be obtained by request made to Timberley Belish, FHWA CFLHD, 12300 West Dakota Avenue, Suite 380, Lakewood, Colorado 80238.

2 PROJECT ALTERNATIVES

The Council on Environmental Quality Regulations (CEQ) for implementing the National Environmental Policy Act of 1969, as amended (NEPA) require federal agencies to explore and objectively evaluate all reasonable alternatives. It also requires a brief discussion as to why certain alternatives or elements thereof were eliminated from detailed analysis. Alternatives under consideration must include a “no action” alternative in accordance with CEQ regulations (40 CFR 1502.14). Action alternatives may originate from the proponent agency, coordinating or partner agencies, local government officials, or members of the public as expressed during outreach activities.

Alternatives analyzed in this EA were developed based on the results of ongoing agency coordination, external scoping, and Tribal coordination. The EA evaluates potential beneficial and adverse impacts associated with the no action and action alternatives. Alternatives that were initially considered but were not technically or economically feasible, did not meet the purpose and need for action, created unnecessary or excessive impacts on resources, and/or conflicted with the overall management of public lands or its resources were eliminated from detailed analysis. This chapter describes in greater detail the No-Action and action alternatives, as well as alternatives that were considered but eliminated from detailed analysis.

2.1 No Action Alternative

The No Action Alternative represents a continuation of existing conditions. Under this alternative, neither a trail following a portion of the congressionally designated El Camino Real de Tierra Adentro National Historic Trail nor a shared-use trail along CR 62 and Caja del Rio Road would be implemented. A designated non-motorized corridor would not be constructed; and there would continue to be safety concerns associated with pedestrians, bicyclists, and equestrians accessing federal lands and other nearby recreation facilities via Caja del Rio Road, CR 62, and CR 77. No additional visitor services would be implemented, and no interpretive signage would be installed informing visitors of the historical significance of the area.

2.2 Proposed Action

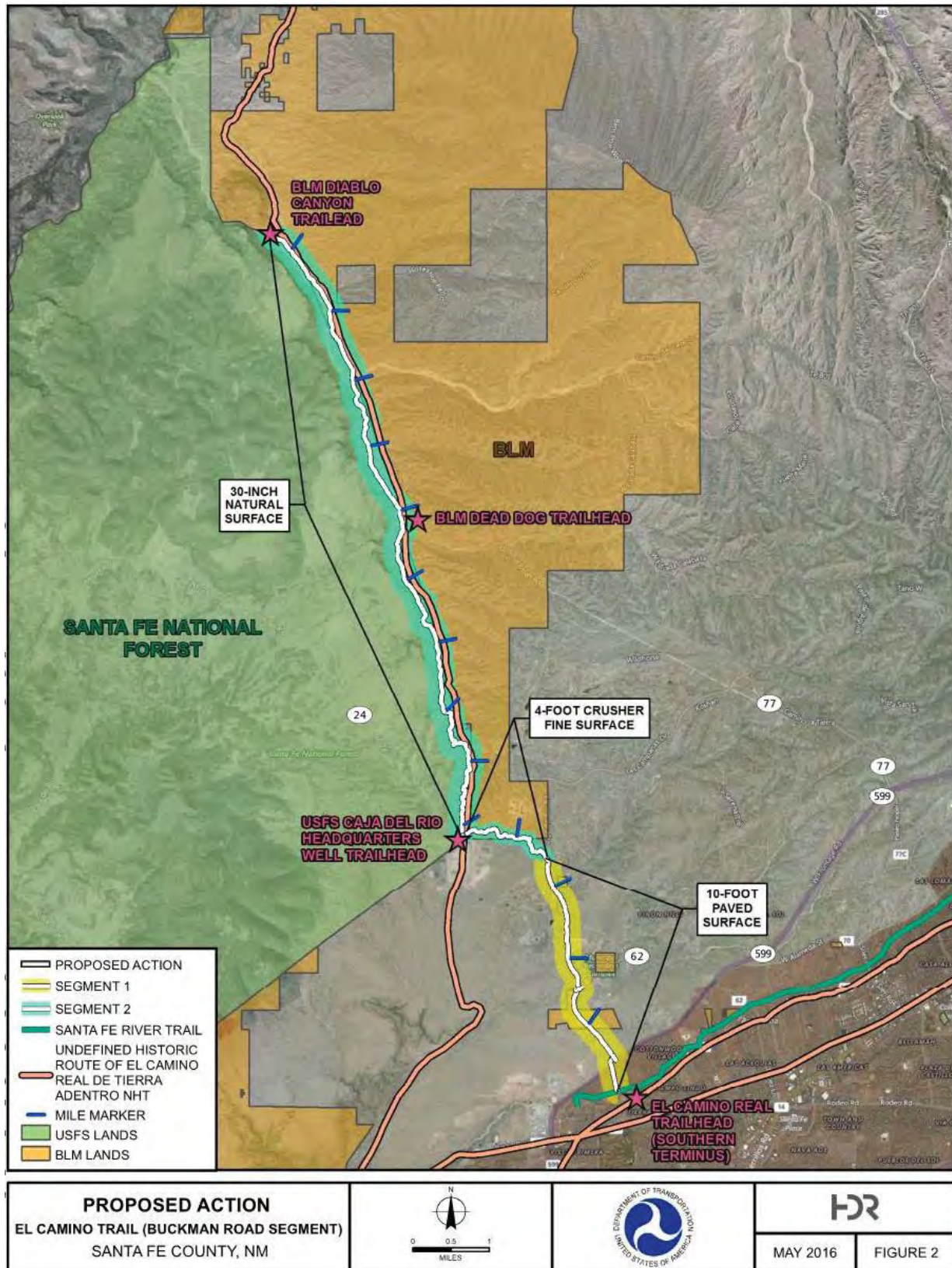
The proposed action, the West Alignment alternative, would be located on BLM and USFS lands and City of Santa Fe and Santa Fe County ROW or easements. To simplify the discussion, the project corridor is split into two sections—Segment 1 and Segment 2. Segment 1 includes the southern part of the project corridor from El Camino Real Trailhead at Santa Fe River Trail to where Caja del Rio Road meets CR 62. Segment 2 includes the part of the project corridor from CR 62 at Caja del Rio Road to BLM’s Diablo Canyon Trailhead. In total, the proposed action would introduce approximately 14.7 miles of trail designed to improve access to federal lands (see Table 2 and Figure 2).

Table 2. Trail Distance by Managing Agency

Managing Agency	Trail Distance (miles)
City of Santa Fe and Santa Fe County	3.5
BLM	3.4
USFS	7.8
TOTAL	14.7

All trail maintenance would be performed by Santa Fe County.

Figure 2. Proposed Action (West Alignment) Map



Segment 1

Segment 1 would be located within City of Santa Fe and Santa Fe County ROW and easements. The trail would connect the Santa Fe River Trail to CR 62, generally following Caja del Rio Road. Improvements in Segment 1 include the following:

- Approximately 3.6 miles of 10-foot-wide paved, shared-use trail.
- Use of an existing system of underpasses beneath NM 599 and frontage roads to separate trail users from motorists.
- The double box culvert that runs under Caja del Rio Road at Arroyo de los Frijoles and just south of the MRC would be lengthened approximately 22-feet to carry the shared-use trail over the arroyo (see Figure 3). North of the arroyo, a secondary trail would take users through the box culvert to arrive at the MRC. One side of the box culvert would maintain its existing function while the other would be converted for trail use.

Figure 3. Proposed Location for Trail along and under Caja del Rio Road



- Trail connections to the MRC. This includes two spur trails to create connections to the complex both east and west of Caja del Rio Road. The western spur would provide access to the rugby fields. The eastern spur would travel through the modified box culvert to provide access to the ball fields (see Figure 4).
- Modification of the entrance to the Marty Sanchez Links de Santa Fe Golf Course to accommodate the trail.
- Limited roadway improvements, except as necessary, to accommodate the shared-use trail at existing road crossings and the barrier where the shared-use trail is within the roadway clear zone. Roadway improvements would include concrete accessibility ramps, concrete barrier where the trail and the roadway are immediately adjacent, and necessary signing and striping.
- Installation of concrete barriers in select locations to maintain separation of trail users and motorists.
- Signage and striping.

The typical terrain in Segment 1 is shown in Figure 5.

Figure 4. Proposed Trail Connections to the MRC

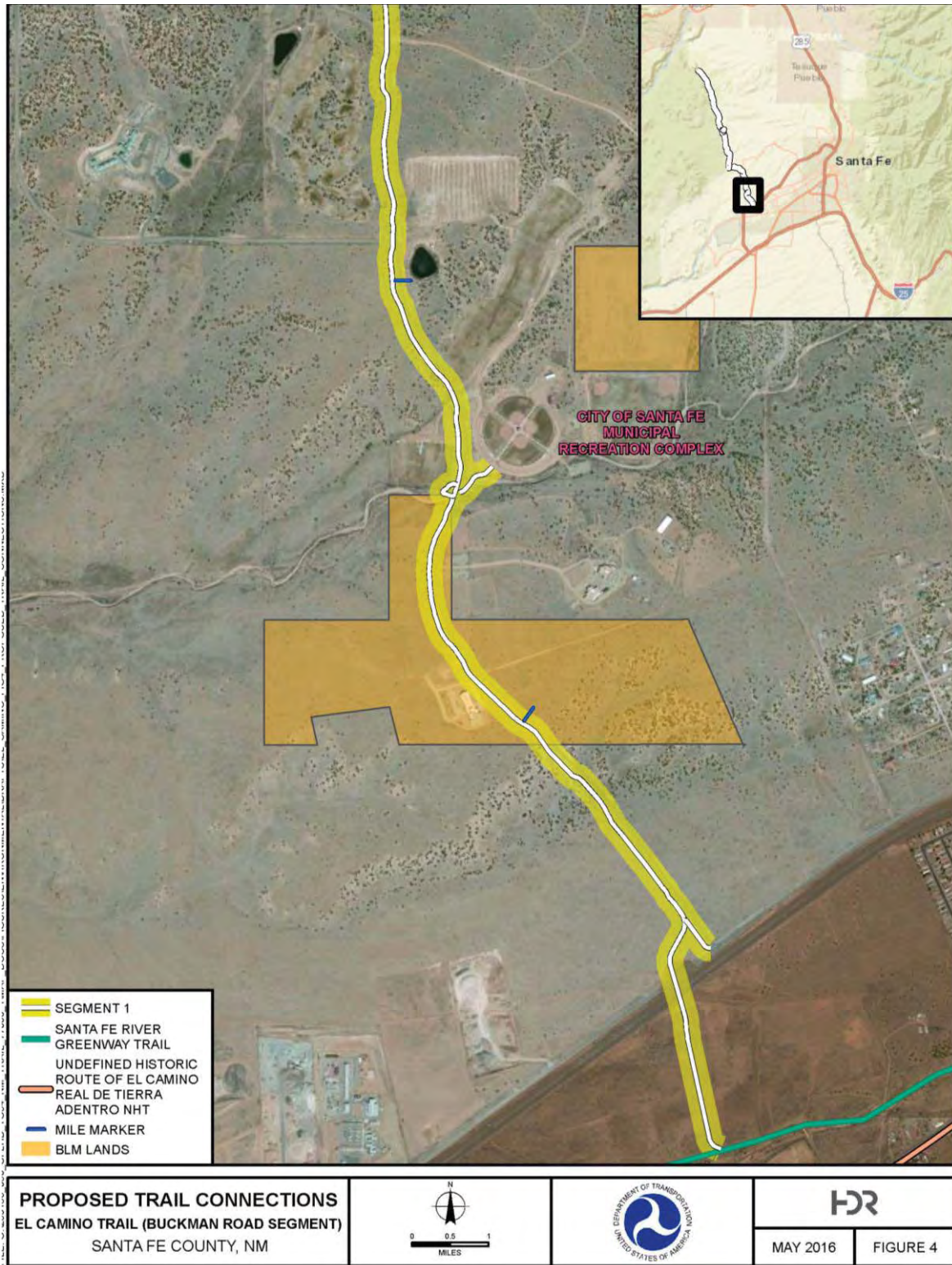


Figure 5. Typical terrain along Segment 1

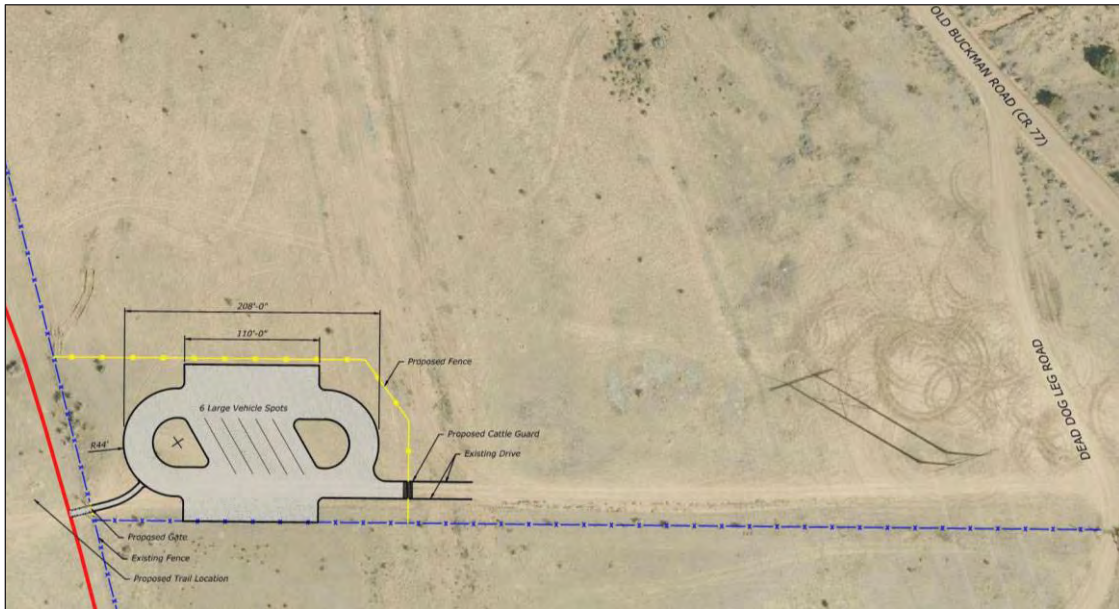


Segment 2

Segment 2 would begin at the Caja del Rio Road and CR 62 intersection where the 10-foot wide, paved shared-use trail would connect with the 4-foot wide, crusher fine surface trail and would continue to the USFS Caja del Rio Headquarters Well Trailhead. From there a 30-inch natural surface trail would extend north to the BLM Diablo Canyon Trailhead (see Figure 2). Segment 2 traverses lands managed by BLM and USFS and on City of Santa Fe ROW or easements, and includes the following elements.

- Approximately 1.7 miles of 4-foot-wide crusher fine-surfaced trail between the Caja del Rio Road and CR 62 intersection and the USFS Caja del Rio Headquarters Well Trailhead.
- Approximately 9.5 miles of 30-inch-wide natural-surface trail from just north of the USFS Caja del Rio Headquarters Well Trailhead to the BLM Diablo Canyon Trailhead.
- Parking improvements at the BLM Dead Dog Trailhead. The parking area would be gravel without curbs, and accommodate 6 large vehicles (i.e., horse trailers) and 12 passenger vehicles. The existing fence, which is just east of the proposed action, would be relocated further to the east to enclose the proposed parking area. A cattle guard and gate would prevent cattle passage (see Figure 6).
- Realignment of fencing to minimize trail crossings across the fence. In these areas, new fence would be constructed.
- Construction of five fence crossings at various locations along the trail, including at the three trailheads, to allow passage of trail users but prevent cattle from crossing (see Section 3.2, Livestock Grazing).
- Trail signage and interpretive signs for the El Camino Real de Tierra Adentro National Historic Trail.
- Incorporation of the Chili Line, an abandoned railroad grade, where possible, as it provides a consistent grade and drainage.

Figure 6. Plan View of the BLM Dead Dog Trailhead Parking Improvements



The trail in Segment 2 would not be constructed across arroyos because storm events would wash away the trail. The trail would be constructed to the edge of each arroyo and then resume on the opposite side. These crossing points would be marked, possibly with rock cairns or carsonite posts, so users would know where the trail ends and resumes.

The typical terrain along Segment 2 is shown in Figure 7.

Figure 7. Typical terrain along Segment 2



Table 3 contains the mitigation measures for the Proposed Action analyzed in this EA. A detailed analysis of project impacts is presented in Chapter 3.

Table 3. Mitigation Measures for the Proposed Action

Resource Area	Mitigation Measures
Livestock Grazing	<ul style="list-style-type: none"> ▪ All relocated fence will be constructed to BLM and USFS standards. ▪ All fence crossings will include measures, such as self-closing gates and combination bike/hiker cattle guards, to minimize livestock leaving a designated allotment. ▪ Existing leash laws will be maintained.
Cultural Resources	<ul style="list-style-type: none"> ▪ FHWA CFLHD, BLM, and USFS will complete Section 106 consultation with SHPO prior to construction. ▪ Prior to the beginning of construction activities, a surface inspection of the disturbance area will be completed by a certified a USFS and BLM approved archeologist to identify the locations of any surface artifacts. ▪ An approved archeological monitor will be on onsite during construction activities near petroglyphs, the Chili Line Railroad, and the Dead Dog Trailhead. ▪ In the event that construction activities expose buried archaeological resources, work will be stopped and the New Mexico Historic Preservation Division contacted to evaluate the significance of these remains.
Soils/Geology/Minerals	<ul style="list-style-type: none"> ▪ A National Pollutant Discharge Elimination System (NPDES) permit will be obtained from New Mexico Environment Department (NMED) prior to construction. ▪ Best management practices, including but not limited to minimizing ground disturbance and placing fiber rolls and inlet protection, will be implemented to minimize erosion during construction. ▪ Permanent water quality control measures, including rip rap andrevet mattresses, which is essentially riprap encased in wire mesh, will be used at select culverts to minimize erosion of the channel. ▪ FHWA CFLHD will adhere to all terms and conditions of the Section 404 Nationwide Permit, some of which are specific to erosion control. ▪ FHWA CFLHD will adhere to all terms and conditions of the NMED Section 401 Water Quality certification. ▪ FHWA CFLHD will provide access to NMED, BLM, and USFS for inspection purposes. ▪ All spills of fuel or other pollutants in excess of five gallons will be reported to NMED within 24-hours at (505) 827-9329.
Floodplains	<ul style="list-style-type: none"> ▪ Coordination with the Santa Fe County Floodplain Administrator will occur as final design progresses to ensure there are no adverse impacts to regulated floodplains.

Table 3. Mitigation Measures for the Proposed Action

Resource Area	Mitigation Measures
Wetlands and Waters of the U.S.	<ul style="list-style-type: none"> ▪ A Section 404 Nationwide Permit will be obtained prior to construction. The exact type of permit, be it specific to linear transportation projects or recreation projects, will be determined in coordination with USACE. ▪ FHWA CFLHD will adhere to all terms and conditions of the NMED Section 401 Water Quality certification. ▪ FHWA CFLHD will provide access to NMED, BLM, and USFS for inspection purposes. ▪ All spills of fuel or other pollutants in excess of five gallons shall be reported to NMED within 24-hours at (505) 827-9329. ▪ Machinery servicing and refueling areas will be located away from streambeds and washes to reduce the possibility and minimize the impacts of accidental spills or discharges.
Water Resources	<ul style="list-style-type: none"> ▪ An NPDES permit will be obtained from NMED prior to construction. ▪ Best management practices, including but not limited to minimizing ground disturbance and placing fiber rolls and inlet protection, will be implemented to minimize erosion during construction. ▪ Permanent water quality control measures, including rip rap andrevet mattresses, riprap encased in wire mesh, will be used at select culverts to minimize erosion of the channel. ▪ FHWA CFLHD will adhere to all terms and conditions of the Section 404 Nationwide, some of which are specific to erosion control. ▪ FHWA CFLHD will adhere to all terms and conditions of the NMED Section 401 Water Quality certification ▪ FHWA CFLHD will provide access to NMED, BLM, and USFS for inspection purposes. ▪ All spills of fuel or other pollutants in excess of five gallons will be reported to NMED within 24-hours at (505) 827-9329. ▪ Machinery servicing and refueling areas will be located away from streambeds and washes to reduce the possibility and minimize the impacts of accidental spills or discharges. ▪ Submit a "Spill Prevention, Control, and Countermeasure (SPCC) Plan" if required at least 2 days before beginning work. If a SPCC plan is not required, submit a hazardous spill plan at least 2 days before beginning work. Describe preventative measures including the location of refueling and storage facilities and the handling of hazardous material. Describe actions to be taken in case of a spill. ▪ Do not use equipment with leaking fluids. Repair equipment fluid leaks immediately. Keep absorbent material manufactured for containment and cleanup of hazardous material on the job site. ▪ Notify the contracting officer of hazardous spills.

Table 3. Mitigation Measures for the Proposed Action

Resource Area	Mitigation Measures
Vegetation and Weeds	<ul style="list-style-type: none"> ▪ The area beyond the construction limits will not be disturbed. Trees, shrubs, or vegetated areas damaged by construction operations will be replaced as directed. ▪ All temporarily impacted habitats on the project site shall be re-contoured and revegetated or reseeded so that they become available for use. A seed and plant list will be developed in collaboration with a BLM and USFS authorized officer. Any seed used will be tested as certified weed-free by a credentialed lab. All plants will be sourced locally and certified as a cultivar that exists within the project area as a native plant. ▪ Permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction in accordance with the contract erosion control plan. ▪ Before grubbing and grading, all erosion controls around the perimeter of the project including filter barriers, diversion, and settling structures will be constructed. ▪ Temporary erosion control measures will be maintained in working condition until the project is complete or the measures are no longer needed. ▪ All vehicles and equipment entering the project area must be clean of noxious weeds and free from oil leaks and are subject to inspection. ▪ Remove dirt, plant, and foreign material from vehicles and equipment before mobilizing to/from work site; this can be done by hand, if necessary. Prevent introduction of noxious weeds and non-native plant species into the work site. Follow applicable Federal land management agency requirements and state requirements. Maintain cleaning and inspection records. ▪ The Federal Seed Act and Federal Noxious Weed Act in addition to applicable state and local seed and noxious weed laws will be followed.
Wildlife	<ul style="list-style-type: none"> ▪ All temporarily impacted habitats on the project site shall be re-contoured and revegetated or reseeded so that they become available for use. A seed and plant list will be developed in collaboration with a BLM and USFS authorized officer. Any seed used will be tested as certified weed-free by a credentialed lab. All plants will be sourced locally and certified as a cultivar that exists within the project area as a native plant. ▪ Construction activities will occur during daylight hours. ▪ Existing leash laws will be maintained.
Special Status Species and Migratory Birds	<ul style="list-style-type: none"> ▪ The Project Engineer shall immediately report to the appropriate land management agency and FHWA CFLHD Biologist any active nest, den or permanent occupation of wildlife species that are determined by the FHWA/CFLHD Biologist to be adversely affected by construction activities associated, whereupon the land management agency, in coordination with NMDGF and USFWS, as appropriate, will decide appropriate changes

Table 3. Mitigation Measures for the Proposed Action

Resource Area	Mitigation Measures
	<p>needed to reduce or avoid impacts to the occupied habitat and population.</p> <ul style="list-style-type: none"> ▪ No vegetation clearing should occur during the migratory bird breeding season (March 1–September 15). If vegetation clearing must occur between March 1 and September 15, pre-construction surveys for active migratory bird nests will be conducted by a qualified biologist in all suitable habitat types that will be disturbed. The contractor’s biologist shall contact BLM Taos Field Office and SFNF Espanola Ranger District biologists prior to conducting nesting migratory bird surveys. ▪ If active bird nests are identified within the project limits, construction activities will avoid disturbing any active nest. A qualified biologist will determine the appropriate avoidance strategy, in coordination with the land management agency, until the nestlings have fledged from the nest and the nest is no longer active. ▪ Between March 1 and August 31, prior to any ground disturbance near active and inactive prairie dogs colonies along Caja del Rio Road, a qualified biologist shall conduct a survey to identify if Western burrowing owls are present in any of the colonies. If owls are not observed, all active burrows should be inspected for indications of use by the presence of owl pellets, droppings, or feathers. The burrowing owl survey must be conducted no more than 30 days prior to the onset of construction. If owls are present CFLHD will notify the appropriate land management agency and/or NMDFG to determine the appropriate avoidance strategy. ▪ Between September 1 and February 28, prior to any ground disturbance near active and inactive prairie dogs colonies along Caja del Rio Road, the Project Engineer will observe the area prior to construction for evidence of Western burrowing owls. If owls are present CFLHD will notify the appropriate land management agency and NMDFG to determine the appropriate avoidance strategy. ▪ All temporarily impacted habitats on the project site shall be re-contoured and revegetated or reseeded so that they become available for use. A seed and plant list will be developed in collaboration with a BLM and USFS authorized officer. Any seed used will be tested as certified weed-free by a credentialed lab. All plants will be sourced locally and certified as a cultivar that exists within the project area as a native plant. ▪ Existing leash laws will be maintained. ▪ During construction, one lane of active traffic will be maintained at all times. ▪ During construction informational signs explaining the project will be placed at the Diablo Canyon Trailhead and the Caja del Rio Headquarters Well Trailhead. ▪ Construction activities within 500 feet of sensitive noise receptors (trailheads) will be limited to between 30 minutes after sunrise and 30 minutes before sunset. ▪ Stationary noise sources will be located as far from sensitive receptors (trailheads) as practicable.
Recreation	
Noise	

Table 3. Mitigation Measures for the Proposed Action

Resource Area	Mitigation Measures
Air Quality	<ul style="list-style-type: none">▪ A dust abatement plan will be developed.
Visual Resources	<ul style="list-style-type: none">▪ FHWA CFLHD will continue ongoing coordination during final design with BLM, USFS, NPS, and Santa Fe County to ensure visual standards are maintained for project elements, such as signage.

2.3 Design Elements and Alignment Alternatives Considered but Eliminated

Alignment alternatives that were considered but eliminated from detailed analysis are discussed below and presented in Figure 8.

Alignment alternatives were only considered for Segment 2. The Segment 1 alignment would be the same under all action alternatives. Additional features, such as parking, signage, and interpretive messaging, would be the same as under the proposed action and, therefore, are not described below. Many of the alignment alternatives overlap with the proposed action so discussion focuses on areas where the alignments differ.

2.3.1 Inclusion of Restroom Facilities

A restroom facility at BLM's Dead Dog Trailhead was considered per request of BLM and the general public. It was eliminated from consideration as this area is located within the floodplain, which introduced sanitary concerns should the restroom facility become flooded.

2.3.2 Upper West Alignment

The Upper West Alignment climbs to the top of the Caja del Rio Plateau and follows its eastern edge. Because of its location on the mesa top, the Upper West Alignment would offer sweeping views of the valley. It would require less maintenance because it would be less susceptible to erosion and have fewer arroyo crossings. However, its location on top of the mesa does not meet the goal of a retracement trail as the historic travel route was through the valley; therefore, this alignment alternative was eliminated from detailed analysis.

2.3.3 West Alignment (Variation)

The West Alignment (Variation) follows the same alignment for the most part as the proposed action. The variation would avoid some of the erosion and unsustainable areas that are part of the proposed action. While the implementation of the West Alignment (Variation) would avoid some erosion and unsustainable areas, it would also be more costly and result in greater impacts to resources than the proposed action. In addition, certain parts of the alignment to the north may not be feasible. As a result, this alignment alternative was eliminated from detailed analysis.

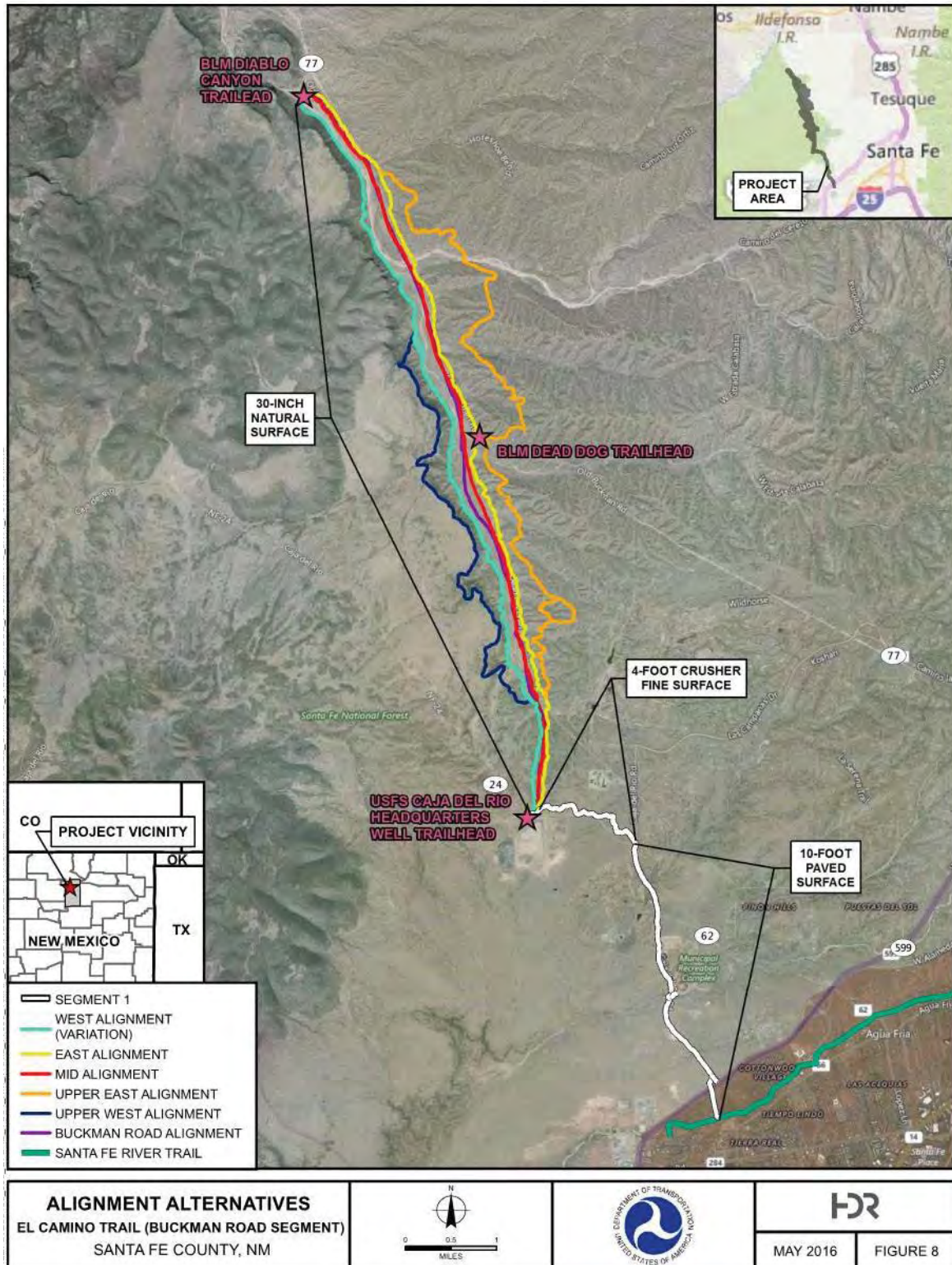
2.3.4 Mid Alignment

The Mid Alignment would most closely follow the El Camino Real de Tierra Adentro National Historic Trail. It would be located between the arroyo and CR 77. Because of the limited topography, elevation change, and existing soil conditions, this alignment would be susceptible to erosion. It would have no trail surfacing so the trail would be at risk of washing away after each storm event, which would require frequent maintenance. In addition, the alignment would be close enough to CR 77 to prevent safety issues for non-motorized users. This proximity would also detract from the trail experience. Therefore, this alignment alternative was eliminated from detailed analysis.

2.3.5 East Alignment

The East Alignment would be located east of CR 77. This alignment would also be susceptible to erosion and would result in the largest number of drainage crossings. As a result, this alignment alternative was eliminated from detailed analysis.

Figure 8. Alignment Alternatives Considered, but Eliminated from Detailed Analysis



2.3.6 Upper East Alignment

The Upper East Alignment would be located east of CR 77, traveling through the small hills on the east side of the valley. This location offers greater resilience from erosion and storm events but does not meet the goal of a retracement trail as the historic travel route was through the valley. Therefore, this alignment alternative was eliminated from detailed analysis.

2.3.7 Buckman Road Alignment

The Buckman Road Alignment would follow Buckman Road, creating a shared use facility between motorized and non-motorized users. Public input included the desire for a separate facility to minimize conflicts between motorized and non-motorized users; and per NPS input; this separation is preferable for a National Historic Trail. As a result, this alignment alternative was eliminated from detailed analysis.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

The chapter identifies (1) resource topics that were eliminated from detailed analysis and the reasoning thereof, (2) the existing condition of resource topics carried forward for detailed analysis, (3) potential impacts that may be experienced as a result of project alternatives, and (4) measures to avoid, minimize, and mitigate adverse effects to the extent feasible and practicable.

3.1 Unaffected Resources

The following resource topics were eliminated from detailed analysis because they are not present in the project area or would be not be impacted by the project.

- BLM Natural Areas
- Fuels and Fire Management
- Wild and Scenic Rivers
- Climate Change/GHG
- Prime and Unique Farmlands
- Wild Horse and Burro
- Coastal Areas
- Section 6(f) Properties
- Wilderness

The following resource topics were eliminated from detailed analysis because potential direct or indirect impacts would be negligible. The rationale for dismissing these resources from detailed analysis is described below.

Environmental Justice. The implementation of the proposed action would increase and facilitate safe access to federal lands and other recreational resources along Caja del Rio Road. It would be sited within proximity, but not adjacent to, residential areas and would introduce increased access to recreational and educational activities. Benefits associated with increased access to recreational and educational activities would be experienced by all populations, including those low-income and minority populations. Construction impacts would be localized, minor, and short term and would not affect nearby residents or reduce access. Negative impacts of the project include temporary air quality and noise impacts resulting from construction; however, none of these rise to the level of high and adverse. As a result, the proposed action would not result in disproportionately high and adverse impacts on minority and/or low-income populations in the area. Project benefits could be experienced by all populations, regardless of race or income. Therefore, this resource topic was eliminated from detailed analysis.

Hazardous Materials. A query of the Environmental Data Resources database, which is a repository of federal and state hazardous site listings, was performed in November 2015 to identify the presence of hazardous or potentially hazardous waste sites within proximity to the project corridor. The only identified site is the Caja del Rio Landfill located just south of the USFS Caja del Rio Headquarters Well Trailhead. The proposed action would not impact this property. Therefore, this resource topic was eliminated from detailed analysis.

Lands and Realty. Santa Fe County would enter into an agreement with BLM and USFS to maintain the part of the proposed action that would be sited on federal lands. In addition, Santa Fe County previously entered into easement agreements for portions of the trail that would be sited on state-owned land. No acquisitions would be necessary to support the implementation of the proposed action. Therefore, this resource topic was eliminated from detailed analysis. Fence removal and relocation are discussed in Section 3.1, Livestock Grazing.

Paleontological Resources. The majority of Segment 1 is adjacent to Caja del Rio Road and in an area previously disturbed by the construction of a water pipeline. Excavation would generally be shallow, except in areas of steep sideslope, in which case excavation may be several feet deep. Segment 2 would pass through areas with the potential to yield fossils. In this segment, excavation depths would generally

be shallow, but have the potential to be up to 1-foot deep in areas with sideslopes. Because of the previously disturbed nature of Segment 1 and the limited excavation required for trail construction in Segment 2, it is anticipated that paleontological resources, if present, would not be disturbed by construction activities. As a result, this resource topic was eliminated from detailed analysis.

Transportation. The discussion of transportation resources generally describes motorized use. Because the proposed action is specific to non-motorized use and would not affect existing travel patterns, this resource was eliminated from detailed analysis. Information specific to non-motorized use as part of the proposed action is further described in Section 2.2, Proposed Action and Section 3.12, Recreation.

Socioeconomics. The southern terminus of the proposed action would be sited adjacent to residential areas within proximity to El Camino Real Trailhead at Santa Fe River Trail and in less densely populated areas along Caja del Rio Road. There are no homes within proximity to the proposed action once on federal lands. The introduction of the proposed action would not preclude access to residential areas or affect community cohesion.

The number and range of recreational activities and opportunities to interpret cultural resources in the Santa Fe area to be enjoyed by local and non-local users would increase with the introduction of the proposed action. It is anticipated that the proposed action would result in a minor increase in economic activity in local and regional markets; however, this is not likely to be significant enough to generate new employment opportunities. As a result, this resource topic was eliminated from detailed analysis.

Utilities. CR 77 has been identified as a corridor for future transmission development. The proposed action would be sited adjacent to this corridor and in some places, the future transmission line may cross El Camino de Tierra Adentro National Historic Trail. The proposed action would not preclude the future development of this transmission corridor, irrespective as to whether those facilities are above or below ground.

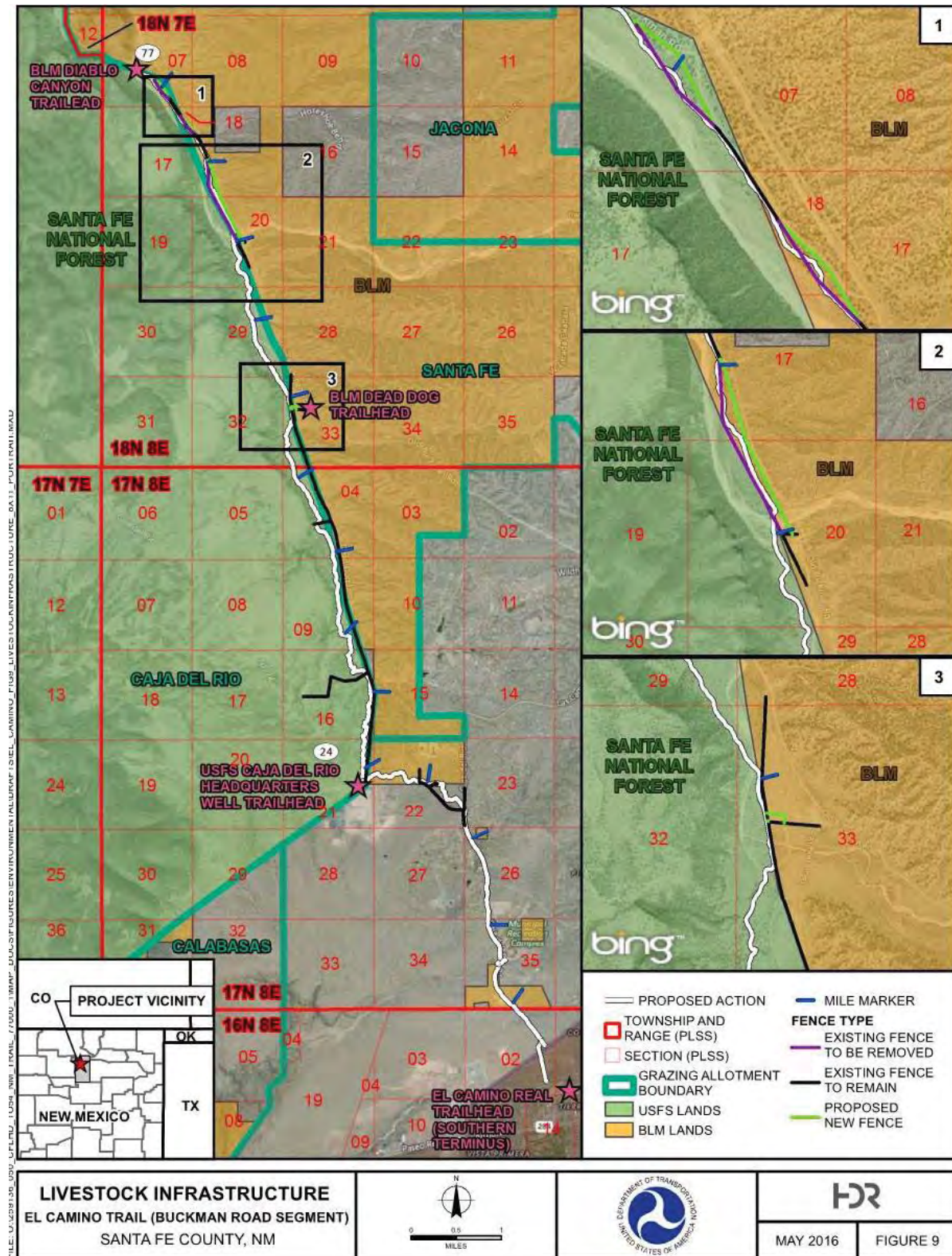
The proposed action would have no known involvement with existing transmission lines or other utilities within or near the project corridor. As a result, this resource topic was eliminated from detailed analysis.

3.2 Livestock Grazing

The project corridor is located within two grazing allotments—one on BLM- and one on USFS-managed lands (see Figure 9). A summary of each is provided below.

- BLM's Santa Fe grazing allotment totals 20,496 acres and is located on public, state, and private lands. The allotment permits 271 head of cattle and five horses totaling 3,180 animal unit months (AUMs). The allotment includes seven wells, two corrals, several storage tanks and troughs, and five pastures (Dutch, Home, Midway, Boondocks, and Artesian).
- USFS's Caja del Rio grazing allotment totals 66,873 acres and is located on Santa Fe National Forest lands in Santa Fe and Sandoval Counties. The Santa Fe National Forest Plan identifies the allotment as being in Management Areas G (Wildlife-Range-Firewood) and L (Semi-Primitive, Non-Motorized Recreation). There are 492 head of cow/calf pairs and 28 bulls (8,305 AUMs) year round. There are currently 12 permit holders and the grazing system is a four pasture deferred rotational system (USFS, 2009). There is livestock fencing in the project area.

Figure 9. Grazing Allotments and Livestock Fencing



3.2.1 Impacts of the No Action Alternative

Under the No Action Alternative, no improvements to fencing would be made and no change to existing livestock grazing practices would occur. Fencing that has been trampled by livestock, washed away during storm events, or altered by visitors would remain as is pending maintenance activities by ranchers. Any one or combination of these factors has the potential to allow livestock to enter non-designated areas. As a result, the No Action Alternative would result in minor impacts to livestock grazing.

3.2.2 Impacts of the Proposed Action

The implementation of the proposed action would require the removal of approximately 1.5 miles and relocation of approximately 1.7 miles of livestock fencing (see Table 4 and Figure 9). The majority of fence removal and relocation would occur at two locations north of BLM’s Dead Dog Trailhead. There would also be some changes to fencing infrastructure in the vicinity of BLM’s Dead Dog Trailhead where parking improvements are proposed. These changes would include a self-closing gate in combination with a biker/hiker friendly cattle guard to preclude cattle from leaving the designated allotment.

Table 4. Removed and Relocated Livestock Fencing

Management Agency	Existing Livestock Fencing (miles)	Removed Livestock Fencing (miles)	Relocated Livestock Fencing (miles)
BLM Lands	5.9	0.8	1.4
USFS Lands	2.0	0.7	0.3
Santa Fe County/City of Santa Fe	2.1	0.0	0.0

Source: Loris and Associates, Inc., 2016.

Because the proposed action would be sited on both BLM and USFS lands, the removal and relocation of livestock fencing would change the overall acreage of grazing allotments in the project area. The USFS grazing allotment would be increased by approximately 43 acres, and the BLM allotment decreased by 43 acres, representing less than a one percent change to either allotment. In addition, the construction of a trail would remove approximately 2.9 acres of existing grazing land and convert it to a trail. The changes in acreage in allotments would alter the total amount of cattle that could be grazed on each allotment.

In some locations, fencing removed as part of the proposed action has been trampled by livestock or downed for other reasons. Replacement of damaged fencing would result in a benefit to individual agencies and permit holders. Gated fence crossings would be installed at five locations along the trail. The gate type would be determined during final design in coordination with Santa Fe County, BLM, and USFS.

The trail is anticipated to increase visitation, which would result in additional interactions between livestock and trail users and their pets. This could result in additional stress to livestock when grazing in areas within proximity to the proposed action.

3.3 Area of Critical Environmental Concern

Areas of Critical Environmental Concern (ACEC) are designated areas within BLM-managed lands that are designed to provide special management attention to areas with relevant and important values to ensure values are protected and preserved from irreparable harm. The values for which ACECs are designated are considered the highest and best use for those lands, and protection of those values takes precedence over multiple uses.

The majority of the project corridor that would be sited on BLM lands is within the Santa Fe Ranch ACEC. The Santa Fe Ranch ACEC is designated to include contiguous land around the Santa Fe/Diablo Canyon area to protect cultural resources, unique geological features, visual resources, wildlife habitat, and special status species. This 21,030-acre area is managed as two zones—the Diablo Canyon/Buckman zone (710 acres) and the Ranch zone (20,320 acres).

Recreational activities in the Diablo Canyon area are permitted in accordance with the guidelines of the Diablo Canyon Special Recreation Management Area (SRMA) (see Section 3.12, Recreation). Mineral rights within the Diablo Canyon zone have been withdrawn (BLM, 2012).

Additional discussion of existing conditions and impacts to the values for which the ACEC was established to protect can be found under the respect resource topic:

- Section 3.4, Cultural Resources
- Section 3.10, Wildlife
- Section 3.11, Special Status Species and Migratory Birds
- Section 3.17, Visual Resources

3.3.1 Impacts of the No Action Alternative

The No Action Alternative would result in no new impacts to the ACEC. The public would continue to access this area, and the values of the ACEC would continue to be protected as under existing conditions.

3.3.2 Impacts of the Proposed Action

The proposed action would be sited at the western edge of the ACEC where BLM and USFS lands meet. While only a portion of the approximately 14.7-mile trail would be sited on BLM lands, access would be improved and, subsequently, visitation would increase to the Diablo Canyon/Buckman zone of the ACEC and the Santa Fe Ranch ACEC.

Increased visitation would result in additional disturbance to wildlife, introduce new visual elements into the landscape, and place additional pressure on sensitive cultural resources. Off-setting these impacts are project benefits, which include a greater understanding and respect for the values the ACEC was designated to protect. This would be achieved by the inclusion of interpretive signage, which is included as part of project design.

The implementation of the proposed action would be in accordance with federal land management agency plans, although adverse effects would result to ACEC-specific resources. These impacts would be offset by resource specific mitigation measures and ongoing resource management efforts by BLM, USFS, and Santa Fe County.

3.4 Cultural Resources

A cultural resources survey of the Area of Potential Effect (APE) was conducted on March 2, 2016 and April 15, 2016. The APE includes an area 25 feet wide either side of the trail centerline for most of the proposed trail length, and an area 75 feet wide through BLM lands. In addition to the trail, the APE includes a parking area and trailhead. Seven previously unrecorded cultural resource sites were identified on the Santa Fe National Forest. Seven previously recorded sites were also located and their records updated. Of these 14 sites, 12 were determined eligible or potentially eligible, and are shown in Table 5. In addition to the archaeological sites 17 “Isolated Manifestations” were identified on federal land and determined to have no further research potential.

Table 5. Eligible or Potentially Eligible Historic Sites

Resource #	Owner	Description
Previously Recorded Sites		
AR-03-10-06-01793 LA 172390	USFS	The site is about 8,100 square feet, and previously recorded as a lithic debitage scatter containing over 100 flakes. No diagnostic artifacts or features were found. The site boundary was expanded from the previous survey because of the identification of additional features. The research potential of this site has not been exhausted by initial surface recording of the artifacts and features. This site is recommended eligible for listing in the NRHP.
LA 124491 and LA 128580	BLM	<p>LA 124491 was previously recorded as part of a research project to locate an oxcart camp. The site has been disturbed by an electrical transmission line and buried fiber optic cable, water, and natural gas lines. Historic artifacts were either collected or reburied so these were not found on the current survey.</p> <p>In 1941, the Chili Line railroad ties, tie plates, spikes, rails, and other materials were removed, leaving only the railroad bed (LA 128580: Segment I). The railroad bed is dirt, with no rock ballast. It was created using the cut and fill technique. The current condition of the Chili Line railroad bed in this site area ranges from good to non-existent. The good area is stable with some erosion across the railroad bed. To the north, the road bed has been impacted by an underground water line and severe erosion that has washed away the level railroad bed.</p> <p>The artifacts associated with the railroad bed are several pieces of galvanized two-inch diameter pipe that have been driven vertically into the ground. In the eroded area of the railroad bed, a vertical pipe was the only indicator of the approximate location of the railroad bed. These pipes may have served as markers for the edge of the Chili Line ROW.</p> <p>The second part is the more recent Dead Dog Well, which consists of a corral and windmill complex associated with ranching activities. There is no gate for livestock to get into this pen from the adjacent pens. However, there are two sets of double swinging gates on the east side of the pen. One is adjacent to the current windmill and other adjacent to an abandoned well head. The Dead Dog Well was originally drilled in the 1930s when Frank Bond and son owned Santa Fe Ranch.</p> <p>LA 124491 and LA 128580 have been determined to be eligible for listing on the NRHP.</p>
LA 76778	BLM	<p>The surveyed area includes a long section of Site LA 76778, the Chili Line Railroad, and the associated railroad bed. This section of the railroad bed is raised above the surrounding landscape and was built by moving materials from the upslope and downslope locations towards each other. Previous surveys determined the site eligible for listing on the NRHP in August 2005.</p> <p>The railroad bed is covered with a variety of grasses, rabbitbrush, and cholla. Numerous juniper trees are growing adjacent to the upslope side of the railroad bed, where the runoff water accumulates against the east side of the railroad bed. A series of juniper fence post stubs were found along one section of the raised railroad bed. These fence post stubs may be the remains of the private fence.</p>

Table 5. Eligible or Potentially Eligible Historic Sites

Resource #	Owner	Description
LA 137075	Private	<p>The site is about 9,000 square feet, was previously identified, and consisted of a small scatter of less than 100 pieces of lithic debitage. The recorded site location includes the western shoulder of Caja del Rio Road, a gravel road bed, a buried cable line, a buried water pipeline, and manhole. No artifacts were observed within the recorded site boundary or vicinity and the site was not relocated. Given the combined impacts from road construction, buried utility lines, the gravel path, and erosion, less than 25.0 percent of this area appears undisturbed.</p> <p>During the previous survey, the site was recommended as eligible for inclusion on the NRHP; however, no diagnostic artifacts or features were identified. No cultural material was observed at the site during the revisit. Based on the current observations, the site may have been destroyed by a combination of disturbances. Because the site was not relocated no further NRHP eligibility recommendations can be made at this time.</p>
Newly Recorded Sites		
AR-03-10-06-1870 LA 184831	USFS	The site is about 13,000 square feet and includes a cluster of petroglyph features carved into four separate basalt boulders. Three boulders include one petroglyph feature each while the fourth boulder has three petroglyph features. The petroglyphs appear to be in good condition with the exception of one feature that has been defaced. No artifacts were found associated with the features; however, the site does not appear to be heavily eroded and artifacts may be buried underneath colluvial material from the adjacent slope. This site was recommended eligible for listing on NRHP.
AR-03-10-06-1871 LA 184832	USFS	The site is about 3,800 square feet, and includes four petroglyph features carved into four separate basalt boulders. The petroglyphs appear to be in good condition with the exception of one feature that has been defaced. No artifacts were found associated with the features; however, some may be buried underneath alluvial soils or obscured by vegetation. This site was recommended eligible for listing on NRHP.
AR-03-10-06-1872 LA 184833	USFS	The site is about 2,300 square feet, and includes three rock art features on three large basalt boulders within a small area at the base of a slope. The features appear to be in good condition with the exception of one feature that demonstrates natural damage. No artifacts were found associated with the features, possibly due to dense ground vegetation at this location. However, buried deposits are potentially present underneath colluvial material from the adjacent slopes. This site was recommended eligible for inclusion on the NRHP.
AR-03-10-06-1873 LA 184834	USFS	The site is about 1,100 square feet, and includes two basalt boulders with rock art features. One boulder has petroglyph panels on three sides while the other has three distinct groupings or panels of petroglyphs. Although natural weathering has likely impacted the features, they appear to be in good condition. No artifacts were found associated with the feature, possibly due to dense ground vegetation at this location. However, buried deposits are potentially present underneath colluvial material from the adjacent upland slope. This site is recommended eligible for listing in the NRHP.
AR-03-10-06-1874 LA 184835	USFS	The site includes a petroglyph feature carved into the east facing side of a large basalt boulder. The feature consists of three petroglyphs in a row.

Table 5. Eligible or Potentially Eligible Historic Sites

Resource #	Owner	Description
		The combined panel measures 20 inches by 8 inches. Although natural weathering has likely impacted the features, they appear to be in fair condition. No artifacts were found associated with the features. Artifacts may be present but buried underneath alluvial soils or obscured by vegetation. This site was recommended eligible for listing on NRHP.
AR-03-10-06-1875 LA 184836	USFS	The site is about 6,500 square feet, and includes a concentration of petroglyph features on several large basalt boulders. There are about 15 petroglyph elements on one feature and 2 petroglyph elements on the other two features. Although natural weathering has likely impacted the features, they appear to be in good condition. A single white chert core reduction flake was identified on the surface. Other artifacts may be buried by alluvial deposition or obscured by vegetation. Cattle grazing is evident in the area. This site is recommended eligible for listing in the NRHP.
AR-03-10-06-1876 LA 184837	USFS	The site is about 1,100 square feet and includes four rock art features in an area of concentrated basalt outcrops. Features, with the exception of one, are on a sloped area and obscured by dense juniper vegetation. Although natural weathering has likely impacted the features, they appear to be in good condition. Artifacts were not observed; however, the site does not appear to be heavily eroded and buried deposits are potentially present underneath colluvial material from the adjacent upland slopes. This site is recommended eligible for inclusion on NRHP.

3.4.1 Impacts of the No Action Alternative

Under the No Action Alternative, neither a trail following a portion of the congressionally designated El Camino Real de Tierra Adentro National Historic Trail nor a shared-use trail along CR 62 and Caja del Rio Road would be implemented. No interpretive signage would be installed informing visitors of the historical significance of the area. Cultural resources would continue to be managed under existing conditions.

3.4.2 Impacts of the Proposed Action

The project would result in direct impacts to the Chili Line (LA 128580). Approximately 2,000 feet of the trail would be on top of the railroad grade. This section of the railroad grade is raised and provides a good example of the construction and engineering of the rail line, but it lacks distinctive features such as trestles or culverts. The trail would not diminish the integrity of the Chili Line, therefore CFLHD, BLM, and USFS have determined that the proposed action would have no adverse effect on the historic property and the NRHP eligibility of the resource would not change.

The project would result in direct impacts to the Dead Dog Well (LA 124491). Improvements at the Dead Dog Trailhead include improving the existing road and a gravel surface parking lot with spaces for both passenger vehicles and vehicles with trailers. In this area there are no surface artifacts or features present, and given the shallow soil it is unlikely that subsurface artifact or features are present either. The trailhead improvements would not diminish the integrity of the Dead Dog Well, therefore CFLHD, BLM, and USFS proposed action would have no adverse effect on the historic property and the NRHP eligibility of the resource would not change.

Seven petroglyph features were identified at sites (AR-03-10-06-1870-1876, LA 184831-LA 184837) on lands managed by the Santa Fe National Forest. The trail was realigned to avoid direct impacts to resources in these sites that would be directly affected including areas where cultural materials might be buried below the surface. With an increase in human presence, indirect effects could include vandalism. Conversely, an increase in positive use through the presence of recreationists could serve as a deterrent to such actions. As a result of trail realignment the trail would not diminish the integrity of these features and potentially associated subsurface remains, therefore CFLHD, BLM, and USFS proposed action would have no adverse effect on the historic properties and the NRHP eligibility of the resources would not change.

Coordination with SHPO is ongoing as of September 2016 and CFLHD, BLM, and USFS will continue to coordinate with SHPO. The results of this coordination will be included in the decision document and will include any correspondence between the respective agencies regarding historic resources; any changes in the analysis required based on SHPO input, final cultural resource clearance authorization by the BLM and USFS, and SHPO concurrence on eligibility and effects determinations as well as proposed treatments.

3.5 Soils/Geology/Minerals

The proposed action would be sited in New Mexico’s Western Soil Region, which consists of deep canyons and dry washes interspersed with broad mesas, plateaus, and lava flows. While soils on the steeper slopes are generally shallow, moderately fine-textured, and contain a high percentage of coarse fragments, cobbles and stones are more representative of the soils developing on floodplains of the Rio Grande and Cañada Ancha (BLM, 1988).

There are no active minerals sites located within the project area.

Soils along Buckman and Dead Dog Roads generally have a thin, sandy clay loam A horizon and a gravelly, sandy clay loam C horizon that grades into a sandy, gravelly parent material with depth. In general, the soils are poorly developed on the ridges and show more development on the flat areas (BLM, 1972). In areas, the soil is fragile and easily windblown once disturbed. Areas with steep slopes show evidence of erosion and downcutting because of runoff from storm events.

Productivity of these soils is relatively low, supporting a community of piñon juniper savannah. Interspersed between the trees are drought tolerant grasses, shrubs, and forbs as well as several cactus species. In areas where there is, and has historically been livestock grazing, there are obvious signs of disturbance, and very little grass is left at the most highly impacted sites. Where most of the grasses have been removed, signs of erosion are present (BLM and USFS, 2006).

Soils approximately 50 feet from centerline of the proposed action are presented in Table 6.

Table 6. Soils Present within the Project Area

Soil Type	Percent of Project Area
Fine-loamy, mixed, calcareous Fluventic Ustochrepts	60.2
Clayey-skeletal, mixed Typic Haplustalfs	20.9
Alire loam, 2 to 6 percent slopes	1.9
Altazano loamy sand, 0 to 2 percent slopes, flooded	0.0

Table 6. Soils Present within the Project Area

Soil Type	Percent of Project Area
Buckhorse-Altazano complex, 2 to 8 percent slopes, flooded	1.0
Calabasas loam, 1 to 3 percent slopes	0.6
Chupe-Riverwash complex, 1 to 3 percent slopes, flooded	0.1
Devargas-Urban land complex, 1 to 3 percent slopes	0.7
Khapo fine sandy loam, 0 to 2 percent slopes	1.3
Khapo sandy loam, 3 to 8 percent slopes	1.1
Latierra-Lamesilla-Levante complex, 2 to 15 percent slopes, flooded	5.1
Panky loam, 1 to 4 percent slopes	1.8
Pits	0.5
Predawn loam, 1 to 4 percent slopes	1.1
Riovista gravelly loamy sand, 0 to 1 percent slopes	0.3
Tanoan-Encantado complex, 5 to 25 percent slopes	0.5
Tetilla loam, 1 to 5 percent slopes	0.3
Vitrina-Haozous complex, 5 to 15 percent slopes, flooded	1.1
Zepol silt loam, 0 to 2 percent slopes, flooded	0.1
Zia fine sandy loam, 0 to 2 percent slopes	0.8
Zozobra-Jaconita complex, 5 to 25 percent slopes	0.7
Total Acres	28.6

Source: National Resources Conservation Service (NRCS), 2016. USFS, 2016.

Note: Soil information is not reported for approximately 5.0 percent of the project area

3.5.1 Impacts of the No Action Alternative

Under the No Action Alternative, erosion, while less so than under the proposed action, would continue in response to weather events, livestock grazing activity, dispersed recreation use, and off highway vehicle use.

3.5.2 Impacts of the Proposed Action

Approximately 14.7 miles of new trail would be introduced as a result of the proposed action. Segment 1 is relatively flat with little existing vegetation. In this area, soils are generally stable with little erosion. Implementation of the proposed action in Segment 1 would disturb these soils. The introduction of approximately 4.7 acres of additional impervious surface may have minor effects on drainage patterns during storm events. However, given the low productivity of these soils and their presence within the existing roadway ROW, it is not anticipated that the implementation of the proposed action would result in adverse effects.

Segment 2 is generally located on undisturbed lands. Erosion and compaction would result from trail use, although the trail alignment would be designed and graded along a cross-slope to help stabilize soils and maintain the trail surface. The trail would be constructed to the edges, but not within arroyos, which would limit soil disturbance across drainages.

No impacts to mineral resources are anticipated.

Temporary ground disturbance during construction could lead to short-term increases in erosion. Such erosion would have the potential to introduce additional sediment and increase the turbidity of local surface waters.

Overall, impacts to geologic resources would be minimal, and further reduced by implementation of resource specific mitigation measures described below.

3.6 Floodplains

Executive Order (EO) 11988: Floodplain Management requires that any potential impacts to floodplain areas be assessed to reduce the risk of flood loss, minimize the impact of floods, and preserve the values served by floodplains. The following three regulated floodplains are located within the project area:

- **Arroyo de los Frijoles.** This floodplain is located south of the MRC (see Figure 10). Flows are carried east to west, typically conveyed beneath Caja del Rio Road in twin box culverts.
- **Calabasas Arroyo.** This floodplain is located north of Caja del Sol Road. Flows are carried east to west, typically conveyed beneath Caja del Rio Road in twin culverts.
- **Cañada Ancha.** This floodplain is in the valley flood east of the Caja del Rio Plateau and is paralleled by Buckman Road on the east. It extends for approximately seven miles in the project area.

3.6.1 Impacts of the No Action Alternative

The No Action Alternative would result in no impacts to regulated floodplains.

3.6.2 Impacts of the Proposed Action

The proposed action would result in minimal encroachment into regulated floodplains. No adverse upstream or downstream impacts would result as this encroachment would not exceed local regulations in regards to base flood elevation

- **Arroyo de los Frijoles.** The existing box culverts under Caja del Rio Road would be lengthened, a 1-foot thick concrete floor added to the northern culvert and a floodwall to force water through the southernmost culvert during 2-year storm events, a trail constructed through the northern culvert, and scour protection added. All of these improvements would occur within the floodplain.

Floodplain modeling indicates that an increase of approximately 0.5 feet (6 inches) in base flood elevation for water passing through the culvert during a 100-year event would occur. This increase is below the 1-foot threshold prescribed for 100-year floodplains, per the Santa Fe County Floodplain Administrator.

- **Calabasas Arroyo.** Additional fill in the floodplain would result from the construction of the paved trail in this area. Because of the minor nature of trail construction, there would be no change in the base flood elevation.

Figure 10. Arroyo de los Frijoles 100-year Floodplain



- **Cañada Ancho.** The proposed action is located in the floodplain for approximately seven miles. Improvements in the floodplain would include rock cairns, signage, fencing, and parking improvements at the BLM Dead Dog Trailhead. There is existing parking at the BLM Dead Dog Trailhead, but the proposed action would formalize that parking through the inclusion of a gravel surface, fencing, and delineation of the parking area. These improvements would not result in an increase in the base flood elevation.

Overall, the implementation of the proposed action would not change the base elevation in two of the three regulated floodplains in the project area. The third floodplain would experience an increase in base elevation that is below the threshold for 100-year floodplains.

3.7 Wetlands and Waters of the U.S.

Field reconnaissance to determine the presence of wetlands and Waters of the U.S. (WOUS) was completed between November 3, 2015 and November 5, 2015. No wetlands were identified; however, multiple arroyos (ephemeral streams) were identified. Because of downstream connectivity to the Santa Fe River and Rio Grande, these arroyos are considered jurisdictional.

3.7.1 Impacts of the No Action Alternative

The No Action Alternative would not result in any impacts to wetlands and other WOUS.

3.7.2 Impacts of the Proposed Action

The proposed action would result in the placement of approximately 0.15 acres of fill in the Arroyo de los Frijoles, a jurisdictional WOUS. This fill results from the lengthening of the existing box culverts under Caja del Rio Road, a 1-foot thick concrete floor added to the northern culvert and a floodwall, a trail constructed through the northern culvert, and scour protection, which would eliminate ongoing scour at this location.

Impacts to arroyos elsewhere would be avoided by trail realignment or by precluding construction within arroyos. On BLM and USFS lands, the soft surface trail would be constructed to the edge of each side but not within arroyos. It would be marked with rock cairns or carsonite posts located outside the ordinary high water mark, but no construction would occur within the arroyo itself. This minimization measure would avoid impacts to WOUS and minimize maintenance needs related to reconstructing a trail after storm events.

Overall, impacts to waters of the U.S. are minor, in that no wetlands are present and only an ephemeral stream with limited habitat function and ongoing scour concerns would be affected.

3.8 Water Resources

There are no perennial streams within the project area. Arroyos and ephemeral streams, which include named and unnamed features, convey stormwater runoff to the Santa Fe River and Rio Grande.

Infrastructure for the Buckman Direct Diversion Facility, which diverts water from the Rio Grande for county use, is located throughout the project area. The buried water pipeline generally follows Caja del Rio and Buckman roads and travels across BLM land south of BLM's Dead Dog Trailhead. In addition to the pipeline, there are multiple wells and pump stations on federal land.

3.8.1 Impacts of the No Action Alternative

The No Action Alternative would not result in any impacts to water resources.

3.8.2 Impacts of the Proposed Action

Approximately 14.7 miles of new trail would be introduced as a result of the proposed action. Segment 1 is relatively flat with little existing vegetation. In this area, soils are generally stable with little erosion. Implementation of the proposed action in Segment 1 would disturb these soils. The introduction of approximately 4.7 acres of additional impervious surface may have minor effects on drainage patterns during storm events. However, given the low productivity of these soils and their presence within the existing roadway ROW, it is not anticipated that the implementation of the proposed action would result in adverse effects.

Segment 2 is generally located on undisturbed lands. Erosion and compaction would result from trail use, although the trail alignment would be designed and graded along a cross-slope to help stabilize soils and maintain the trail surface. The trail would be constructed to the edges, but not within arroyos, which would limit soil disturbance across drainages.

Temporary ground disturbance during construction could lead to short-term increases in erosion. Such erosion would have the potential to introduce additional sediment and increase the turbidity of local surface waters. Given the erosive nature of soils within the project area, the potential increase in sedimentation is minimal.

Overall, there would be limited long-term impacts to water resources as a result of erosion. Short-term impacts would be minimized through the implementation of the mitigation measures.

3.9 Vegetation and Weeds

The project area is located within the juniper-savanna vegetation community and is dominated by one-seed juniper (*Juniper monosperma*) and pinyon pine (*Pinus edulis*) at an elevation of approximately 6,500 feet above mean sea level (Griffith et al., 2006). Tree densities and diversity are very low and no riparian vegetation occurs in the project area. Other species observed during biological surveys in the project area include sand sagebrush (*Artemisia filifolia*), four-wing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Ericameria nauseosa*), ring muhly (*Muhlenbergia torreyi*), broom snakeweed (*Gutierrezia sarothrae*), tree cholla (*Cylindropuntia imbricata*), plains yucca (*Yucca glauca*), Apache plume (*Fallugia paradoxa*), plains pricklypear (*Opuntia polyacantha*), blue grama (*Bouteloua gracilis*), purple three awn (*Aristida purpurea*), net-leaf hackberry (*Celtis reticulata*), squawbush sumac (*Rhus trilobata*), New Mexico locust (*Robinia neomexicana*), sideoats grama (*Bouteloua cuttipendula*), and squirreltail (*Elymus elymoides*).

Per field reconnaissance conducted between as 3, 2015 and November 5, 2015, several species listed by the New Mexico Department of Agriculture Noxious Weeds List (NMDA, 2009) were found within the project area including Canada thistle (*Cirsium arvense*), cheatgrass (*Bromus tectorum*), tree of heaven (*Ailanthus altissima*) and dalmatian toadflax (*Linaria genistifolia ssp. dalmatica*). Russian thistle (*Salsola tragus*) was present in the project area, but is not listed on the New Mexico Department of Agriculture Noxious Weeds List.

3.9.1 Impacts of the No Action Alternative

The No Action Alternative would not result in any ground disturbance. Therefore, no impacts to vegetation or noxious weeds would occur.

3.9.2 Impacts of the Proposed Action

The proposed action would permanently impact approximately 8.3 acres of juniper-savanna vegetation for the construction of the trail. Vegetation adjacent to the trail alignment may be destroyed or damaged during construction activities but is expected to recover within one to two years. Additional impacts were

minimized by routing the proposed action around trees where practicable and by designing a narrow trail through BLM and USFS lands that minimizes vegetation removal.

Construction activities in previously undisturbed areas may increase the potential for noxious weed establishment. In addition, an increase in trail users accessing areas that previously saw little visitation has the potential to spread noxious weeds.

Overall, the proposed action minimizes vegetation removal by being located in previously disturbed right-of-way or designed as such on federal lands to avoid mature vegetation to the extent practicable.

3.10 Wildlife

The project area provides habitat for a variety of birds, mammals, and reptiles that are common in the juniper-savannah habitat in the project area. Common mammal species in the area include Colorado chipmunk (*Neotamias quadrivittatus*), Gunnison's prairie dog (*Cynomys gunnisoni*), black-tailed jackrabbit (*Lepus californicus*), western spotted skunk (*Spilogale gracilis*), badger (*Taxidea taxus*), desert cottontail (*Sylvilagus audubonii*), mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus elaphus*), gray fox (*Urocyon cinereoargenteus*), and coyote (*Canis latrans*).

A variety of migratory and resident bird species use the project area for nesting, wintering, foraging and sheltering. Common bird species that can be found in the project area include juniper titmouse (*Baeolophus ridgwayi*), chipping sparrow (*Spizella passerina*), mountain bluebird (*Sialia currucoides*), pinyon jay (*Gymnorhinus cyanocephalus*), northern flicker (*Colaptes auratus*), loggerhead shrike (*Lanius ludovicianus*), common nighthawk (*Chordeiles minor*), spotted towhee (*Pipilo maculatus*), mourning dove (*Zenaidura macroura*), Eurasian collared dove (*Streptopelia decaocto*), broad-tailed hummingbird (*Selasphorus platycercus*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), and brown-headed cowbird (*Molothrus ater*) (Sullivan et al., 2009; Breeding Bird Atlas Explorer, 2016).

The cliffs in Diablo Canyon and the adjacent Caja del Rio Plateau provide suitable roosting and nesting habitat for several birds of prey including golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and peregrine falcon (*Falco peregrinus anatum*). Other raptors that may forage in the project area include bald eagle (*Haliaeetus leucocephalus*) in winter months, Swainson's hawk (*Buteo swainsonii*), and prairie falcon (*Falco mexicanus*). Guano (whitewash) was observed on the cliff walls indicating the presence of large birds using the area and one large inactive stick nest was observed but the nest was dilapidated and no signs of recent whitewash were present.

Common reptiles that may be found in the project area include New Mexican whiptail (*Aspidoscelis neomexicanus*), roundtail horned lizard (*Phrynosoma modestum*), collard lizard (*Crotaphytus collaris*), striped whipsnake (*Masticophis taeniatus*), western diamondback rattlesnake (*Crotalus atrox*), prairie rattlesnake (*Crotalus viridis*), and bullsnake (*Pituophis melanoleucus*).

3.10.1 Impacts of the No Action Alternative

The No Action Alternative would result in ongoing existing impacts to wildlife within the project area. These impacts include potential disturbance or displacement of wildlife through ongoing recreation activities, both motorized and non-motorized.

3.10.2 Impacts of the Proposed Action

The proposed action could result in temporary construction impacts and long-term disturbance from recreation traffic to wildlife species in the project area. Construction activities, including noise and human

activity, would temporarily displace wildlife from the project area throughout the duration of construction activities. Segment 1 would be constructed with typical roadway construction equipment: graders, bulldozers, excavators, rollers and paving machines. Segment 2 would be constructed with typical trail construction equipment: mini-excavator, mini-dozers, skid steer/bobcat, power buggy, all-terrain vehicles, and hand tools. The operation of the proposed action would permanently impact approximately 8.3 acres of juniper-savanna vegetation. Temporary habitat loss would occur adjacent to the trail during construction activities but is expected to recover within one to two years. Areas where temporary impacts occur will be revegetated or reseeded in coordination with the BLM and USFS range and wildlife program staff.

Because construction would occur during daylight hours only there would be minimal impact to nocturnal species, such as owls and bats. If there was no construction between April 15 and September 15 there would be minimal to no impacts to breeding bird species. See Section 3.11, Special Status Species and Migratory Birds for additional discussion of wildlife impacts.

The trail would not create any barriers to wildlife movement; however, the physical presence of a trail may cause avoidance by some species. Injury or mortality to small mammals could occur as a result of recreation traffic, but the potential for direct effects is low. Disturbance by recreation traffic could result in behavioral changes in certain bird and mammal species, such as displacement and nest abandonment. Hikers, bicyclists, and equestrians may contribute to the spread of noxious weeds, reducing habitat quality for some species. Off-leash dogs may chase or otherwise disturb wildlife.

Over the long term, the presence of the proposed action and associated visitation has the potential to cause avoidance and/or displacement for some species. Construction activities associated with the proposed action would temporarily displace wildlife from the project area while such activities are ongoing.

3.11 Special Status Species and Migratory Birds

As required by Section 7 of the Endangered Species Act of 1973, interagency consultation has been initiated between FHWA CFLHD, BLM, USFS, and U.S. Fish and Wildlife Service (USFWS) regarding federally listed species that could potentially be affected by the proposed action. In addition, state listed species were analyzed. The following sources were reviewed to determine special status species with the potential to occur in the project area:

- Santa Fe National Forest Service Region 3 Sensitive Plants and Animal Species List (USFS, 2013) and Santa Fe National Forest Management Indicator Species (MIS) Assessment (USFS, 2012).
- USFWS IPaC interactive program which lists federal species potentially found in the project area (USFWS, 2016).
- BLM New Mexico State Office, Taos Field Office sensitive and watchlist species (BLM, 2011).
- NMDGF State Listed Species for Santa Fe County (NMDGF, 2014).

A Biological Assessment and Evaluation (BAE) was prepared to analyze the impacts of the project on state- and federally listed species that may occur in the project area (HDR, 2016). Biological surveys were conducted between November 1, 2015 and November 3, 2015. The purpose of the biological surveys was to assess the project area for the presence and suitability of potential habitat for listed and sensitive species. Habitat preferences and known distribution (based on the above sources and conversation with the resource agencies) for listed species were reviewed prior to conducting surveys. The BAE concluded that there is no potential habitat for any of the four USFWS federally listed species

(Southwestern willow flycatcher [*Empidonax trailii extimus*], New Mexico meadow jumping mouse [*Zapus hudsonius luteus*], Mexican spotted owl [*Strix occidentalis lucida*], or Western yellow-billed cuckoo [*Coccyzus americanus occidentalis*]) and therefore these species will not be discussed further.

During the biological surveys, several old nests located in cholla were observed, and signs of potential nesting, perching and roosting activity (whitewash) were noted along the cliff face within 0.5 miles of the trail. Although no active nests were observed, suitable nesting habitat exists within and immediately adjacent to the trail alignment.

Seventeen of the 51 sensitive and watchlist species for the BLM Taos Field Office have the potential to occur in the project area. Eight of the 31 Santa Fe National Forest Service Region 3 sensitive plant and animal species have the potential to occur in the project area and twelve of the 29 NMDFG listed species have potential habitat in the project area. For the rest of the listed species, the project area is either clearly beyond the known geographic range or elevation range of the species, or it does not contain vegetation or landscape features known to support these species. Habitat requirements and effect determinations for all these species are shown in Table 7. For further information on the sensitive species and impact analyses, see the BAE (HDR, 2016).

USFS Management Indicator Species

In addition to the species listed above, the Santa Fe National Forest lists eight MIS that are selected for their association with plant communities or seral stages, which management activities on the Santa Fe National Forest are expected to affect (USFS, 2012). The MIS are evaluated in detail in the BAE (HDR, 2016). The MIS that may occur in the project area include Rocky mountain elk (*Ovis canadensis canadensis*), Pinyon jay, and Mourning dove (*Zenaida macroura*). The remaining species either do not occur in the action area or will not be affected by construction activities.

Migratory Birds

The Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] 703–712), EO 13186 for migratory bird protection, and the Bald and Golden Eagle Protection Act (16 USC 668–668d) establish protections for migratory birds and their parts (e.g., eggs, nests, and feathers) from taking, hunting, capture, transport, sale, or purchase. Most species of birds are classified as migratory under the MBTA, except for some upland game and introduced birds.

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Mammals							
American marten (<i>Martes americana</i> <i>origenes</i>)		S		SS	Mature dense forests of mixed Douglas-fir, lodgepole, and spruce.	Unlikely to occur. No suitable habitat is present in action area.	No impact
American pika (<i>Ochotona princeps</i> <i>saxatilis</i>)		S			Talus slides and boulder fields in alpine and subalpine areas.	Unlikely to occur. No suitable habitat is present in action area.	No impact
American water shrew (<i>Sorex palustris</i>)		S			Small cold streams with thick overhanging riparian growth. Also around lakes, ponds, marshes, bogs, and other lentic habitats. Rarely far from water.	Unlikely to occur. No suitable habitat is present in action area.	No impact
Cinereus (masked) shrew (<i>Sorex cinereus</i>)		S			Confined to the Sangre de Cristo, Jemez, and San Juan Mountains, where they prefer areas with very little or no vegetation, usually above 9,500 feet.	Unlikely to occur. No suitable habitat is present and action area is below known elevation tolerances.	No impact
Fringed myotis (<i>Myotis thysandoes</i>)				SS	Pinyon-juniper, desert, riparian, grassland, and coniferous woodlands. Caves, buildings, underground mines, rock crevices in cliff faces, bridges and hollow trees are used for maternity and night roosts.	May occur. No suitable roosting habitat is present in action area; however, suitable foraging habitat is present.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Goat peak pika (<i>Ochotona princeps nigrescens</i>)		S			Steep, rocky banks and hillsides in alpine and subalpine habitats.	Unlikely to occur. No suitable habitat is present in action area.	No impact
Gunnison's prairie dog (<i>Cynomys gunnisoni</i>)		S	S	SS	Shortgrass and midgrass prairies and grass is ss-shrub habitats to montane meadows.	Known to occur. Inactive prairie dog colonies were observed along Caja del Rio Road adjacent to the project area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Least shrew (<i>Cryptotis parva</i>)			WL		Cropland/hedgerow, grassland/herbaceous, old field, savanna, shrubland/chaparral, suburban/orchard, woodland—hardwood and woodland-mixed. The least shrew is a common species over much of its range, but in New Mexico it is generally local and uncommon (Frey, 2005).	Unlikely to occur. No suitable habitat is present in action area.	No impact
Long-legged myotis (<i>Myotis volans</i>)				SS	Ponderosa pine forests and pinyon-juniper woodlands, but also may be found in riparian and desert habitats. Roosts in trees, buildings, crevices in rock faces, and even fissures in the ground in evenly eroded areas. Caves and mines do not appear to be important as day roosts, but are used as night roosts if available.	May occur. No suitable roosting habitat is present in action area; however, suitable foraging habitat is present.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
New Mexico meadow jumping mouse (<i>Zapus hudsonius</i>)	E	S	S	SE	Nests in dry soils but uses moist, streamside, dense riparian/wetland vegetation up to an elevation of about	Unlikely to occur. No suitable habitat is present in action	No effect

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
<i>luteus</i>)					8,000 feet.	area.	
Pale Townsend's big-eared bat (<i>Corynorhinus townsendia pallescens</i>)		S	S	SS	Caves and rocky outcroppings in scrub deserts, pinyon-juniper woodlands, and coniferous forests.	May occur. No suitable roosting habitat is present in action area; however, suitable foraging habitat is present.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Prebles shrew (<i>Sorex preblei</i>)		S			Arid and semiarid shrub-grass associations, openings in montane coniferous forests dominated by sagebrush.	Unlikely to occur. No suitable habitat is present in action area.	No impact
Red fox (<i>Vulpes vulpes</i>)				SS	Open woodlands, pasturelands, riparian, and agricultural lands. Margins of urbanized areas and open space and other undeveloped areas adjacent to cities. Semidesert shrublands are not utilized to any great extent, except local riparian wetlands and areas adjoining irrigated agriculture.	Unlikely to occur. No suitable habitat is present in action area.	No impact
Ringtail (<i>Bassariscus astutus</i>)				SS	Typically in rocky areas with cliffs or crevices for daytime shelter; desert scrub, chaparral, pine-oak and conifer woodland. Usually occurs near a perennial water source. The species is most common in the southern half of New Mexico.	Unlikely to occur. No suitable habitat is present in action area and no perennial water source.	No impact
Spotted bat (<i>Euderma maculatum</i>)		S	S	ST	Riparian communities, pinyon-juniper woodlands, and ponderosa pine and spruce-fir forests, and in burned areas of ponderosa pine forest.	May occur. There was no evidence of bat use in the action area;	May impact individuals, but is not likely to result in a trend toward

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Western small-footed myotis (<i>Myotis ciliolabrum</i>)				SS	Coniferous and Mixed Woodland and Montane Coniferous Forest. Also in desert badland, and semiarid habitats, riparian zones, and areas near cliffs and outcrops. In summer it has been found roosting in rock crevices, caves, dwellings, burrows, among rocks, under bark, and even beneath rocks scattered on the ground.	however, pinyon-juniper woodlands in the area provide potential foraging habitat. May occur. There was no evidence of bat use in the action area; however, pinyon-juniper woodlands in the area provide potential foraging habitat.	federal listing or loss of viability May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Western spotted skunk (<i>Spilogale gracilis</i>)				SS	Montane forest and shrubland, semidesert shrubland, and pinyon-juniper woodlands.	May occur. Suitable habitat is present within action area	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
White-tailed jackrabbit (<i>Lepus townsendii campanius</i>)			WL		Plains and prairie and in alpine meadows with scattered coniferous trees up to an elevation of about 10,000 feet.	Unlikely to occur; no suitable habitat in action area.	No impact
Yellow-faced pocket gopher (<i>Cratogeomys castanops</i>)			WL		Prefers deep firm soils; rich soils of river valleys and streams, agricultural land. Fossorial, usually in deep sandy or silty soils that are relatively free of rocks.	Unlikely to occur; no suitable habitat in action area.	No impact
Yuma myotis (<i>Myotis yumanensis</i>)				SS	Wide variety of upland and lowland habitats, including riparian, desert scrub, moist woodlands, and forests.	Unlikely to occur; no suitable habitat in action area.	No impact

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Birds							
American bittern (<i>Botaurus lentiginosus</i>)			WL		Herbaceous wetland and riparian habitat.	Unlikely to occur; no suitable habitat in action area.	No impact
American peregrine falcon (<i>Falco peregrinus anatum</i>)		S		ST	Open habitat where there are suitable nesting cliffs, mountains, open forested regions, and human population centers. Nests on ledge or hole on face of rocky cliff or crag. River banks, tundra mounds, open bogs, large stick nests of other species, tree hollows, and man-made structures. Breeds from April to June (NMPIF, 2016).	May occur. Potential nesting habitat in Diablo Canyon.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Baird's sparrow (<i>Ammodramus bairdii</i>)				ST	Grassland, ungrazed or lightly grazed mixed-grass prairie, wet meadows of eastern Montana, North Dakota, and lower central Canada.	Unlikely to occur; no suitable habitat in action area.	No impact
Bald eagle (<i>Haliaeetus leucocephalus</i>)		S	S	ST	The bald eagle is a winter migrant along the Rio Grande. Most of the preferred roost sites are in snags and cliffs along the river in the section between Banderler National Monument and the Cochiti Reservoir delta.	May occur. Winter and suitable transient roosting habitat is present in the nearby Rio Grande.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Bendire's thrasher			S		Desert habitats with fairly large shrubs or cacti and open ground, or open	May occur. Suitable habitat is	May impact individuals, but is

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
(<i>Toxostoma bendirei</i>)					woodland with scattered shrubs and trees.	present in action area.	not likely to result in a trend toward federal listing or loss of viability.
Cassin's finch (<i>Carpodacus cassinii</i>)			WL		Breeds in open coniferous forest and less commonly in open sagebrush shrubland with scattered western junipers. Migration and winter habitat consists of deciduous woodland, second growth, scrub, brushy areas, partly open situations with scattered trees. This species winters in New Mexico and south into Baja California and mainland Mexico.	May occur. Species occurs in the action area during migration and winter months.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Chestnut-collared longspur (<i>Calcarius ornatus</i>)			S		Open prairie and avoids excessively shrubby areas. However, scattered shrubs and other low elevated perches such as Canada thistle often are used for singing. Winters in open cultivated fields.	Unlikely to occur; no suitable habitat in action area.	No impact
Common black-hawk (<i>Buteogallus anthracinus</i>)			WL		This species is an obligate riparian nester and prefers lowland forest, swamps and mangroves, in both moist and arid habitats but generally near water (along rivers and streams). Forages in open woodland. It occasionally nests along the Rio Grande as far north as Albuquerque (NMPIF, 2016).	Unlikely to occur; no suitable habitat in action area.	No impact
Ferruginous hawk (<i>Buteo regalis</i>)			WL		Open country, primarily prairies, plains and badlands; sagebrush, saltbrush-greasewood shrubland, periphery of	May occur. Species has potential to occur	May impact individuals, but is not likely to result

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Golden eagle (<i>Aquila chrysaetos</i>)			WL		pinyon-juniper and other woodland, desert. In New Mexico, breeding occurs across the northern two-thirds of the state, and may be found statewide during winter.	in the action area year-round.	in a trend toward federal listing or loss of viability.
Gray vireo (<i>Vireo vicinior</i>)		S	WL	ST	During the breeding season, Golden Eagle occurs primarily in areas of mountain cliffs or canyons. Foraging habitat is open grassland or shrubland habitat.	May occur. Suitable foraging habitat is present in action area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Juniper titmouse (<i>Baeolophus ridgwayi</i>)			WL		Dry foothills and bajadas west of the Great Plains. Prefers juniper, pinyon pine, and oak trees.	May occur. Much of the project area contains suitable nesting habitat for this species.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Lesser prairie-chicken (<i>Tympanuchus pallidicinctus</i>)			S		Pinyon-juniper woodlands. Nests in natural tree cavities, in old woodpecker holes, or bird boxes.	Known to occur. Species was observed in action area during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Loggerhead shrike (<i>Lanius ludovicianus</i>)				SS	Mixed grass-dwarf shrub communities that occur on sandy soils; principally the sand sagebrush; Leks typically occur on knolls or ridges with relatively short and/or sparse vegetation.	Unlikely to occur; no suitable habitat in action area.	No impact
					Habitats include desert scrub and open grasslands, though it prefers to nest in trees of medium to tall height.	Known to occur. Species was observed in action	May impact individuals, but is not likely to result

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NIM			
McCown's longspur (<i>Rhynchophanes mccownii</i>)			WL		Loggerhead shrikes are fairly common year-round residents throughout Santa Fe County. Sparse short-grass plains, plowed and stubble fields, and areas of bare or nearly bare ground	area during biological surveys. Unlikely to occur; no suitable habitat in action area.	in a trend toward federal listing or loss of viability. No impact
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	T			SS	Nesting and roosting occurs in both forested and rocky-canyon habitats. Nest placed in mature or old-growth stands with complex structure; typically they are uneven-aged, multistoried, and have high canopy cover; nest trees are typically large Douglas-fir.	Unlikely to occur. Pinyon-juniper habitat in action area is low-density and no steep canyons with mixed coniferous forests are present in action area.	No effect
Mountain plover (<i>Charadrius montanus</i>)			WL	SS	Large areas of flat grassland expanses with sparse, short vegetation, and bare ground. The species is primarily associated with shortgrass prairie dominated blue grama, often mixed with buffalo grass or western wheatgrass. It also occupies semi-desert scrub and grassland habitat.	May occur. Breeding documented in Santa Fe County (Breeding Bird Atlas 2016). May also occur in project area during spring and fall migration.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Northern goshawk (<i>Accipiter gentilis</i>)		S		SS	Ponderosa pine, aspen, mixed-conifer, and spruce-fir forests along the edge of mountain valleys and stream bottoms.	Unlikely to occur. No suitable habitat in action area.	No impact
Pinyon jay (<i>Gymnorhynchus cyanocephalus</i>)			S		Pinyon-juniper woodland, less frequently pine; in nonbreeding season, also occurs in scrub oak and	Known to occur. Species was observed in action	May impact individuals, but is not likely to result

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Sage thrasher (<i>Oreoscoptes montanus</i>)			WL		sagebrush. Nests in shrubs or trees. In winter, uses arid and semi-arid scrub, brush and thickets. Breeds in shrub-steppe dominated by big sagebrush; the species is considered a sagebrush obligate.	area during biological surveys. May occur. Breeding has not been documented in Santa Fe County (Breeding Bird Atlas, 2016); however, foraging habitat for this species occurs within the action area.	in a trend toward federal listing or loss of viability. May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Southwestern willow flycatcher (<i>Empidonax trailii extimus</i>)	E			SE	Breeding habitat typically contains dense riparian habitat, with willow, salt cedar, Russian olive and a cottonwood overstory. Nests near slow moving streams, river backwaters, oxbows, or marshy areas. Within New Mexico, nesting populations occur along the Rio Grande and Gila drainages. Species winters in Mexico, Central America, and perhaps northern South America.	Unlikely to occur. No suitable riparian habitat in action area. No documented nesting occurrences in Santa Fe County (Breeding Bird Atlas, 2016). Closest nesting habitat is the Rio Grande.	No effect
Virginia's warbler (<i>Vermivore virginiae</i>)			WL		Primarily associated with pinyon-juniper and oak woodlands, though in New Mexico, it extends upward into mixed conifer habitat containing Gambel Oak, New Mexico locust, maple or other	May occur. Virginia's warbler is a confirmed breeder in Santa Fe County and has been documented	May impact individuals, but is not likely to result in a trend toward federal listing or

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Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Western burrowing owl (<i>Athene cunicularia hypugea</i>)		S	S		shrubby deciduous vegetation. Found in open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation. It occurs as a summer resident and is fairly common in Santa Fe County. Typically nests in abandoned mammal burrows and is often associated with prairie dog towns.	in the action area (Breeding Bird Atlas, 2016; Sullivan et al., 2009). Known to occur. Species has been documented nesting adjacent to Caja Del Rio road on the south end of the project area (Sullivan et al., 2009).	loss of viability. May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)		S	S	SS	Nest in large, dense patches of riparian vegetation, particularly with a cottonwood/Goodding's willow overstory. In New Mexico, habitat is generally within the San Marcial Reach of the Rio Grande.	Unlikely to occur. No suitable riparian habitat in action area. No documented nesting occurrences in Santa Fe County (Breeding Bird Atlas, 2016).	No effect
White-tailed ptarmigan (<i>Lagopus leucura</i>)		S		SE	Alpine tundra, especially in rocky areas with sparse vegetation.	Unlikely to occur. No suitable habitat in action area.	No impact
Fish							
Bigscale Logperch (<i>Percina macrolepida</i>)			S		Deep rivers, preferably with a strong current and rubble-gravel substrate; however, it is also found in rivers with	Unlikely to occur. No aquatic habitat in action area.	No impact

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Smallmouth buffalo (<i>Ictiobus bubalus</i>)			S		nearly imperceptible flow and in impoundments. Larger pools of higher order rivers with low velocity current and lower elevation impoundments.	Unlikely to occur. No aquatic habitat in action area.	No impact
Peppered chub (<i>Macrhybopsis tetranema</i>)			S		Low gradient, main channel streams with a substrate of fine gravel or sand.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande chub (<i>Gila Pandora</i>)		S	S	SS	Coolwater reaches of the Rio Grande and Pecos River (including tributaries) in northern New Mexico.	Unlikely to occur. No aquatic habitat in action area.	No impact
Roundtail chub (<i>Gila robusta</i>)			S		Pools and rapids of moderate to large rivers with cobble-rubble, sand-cobble, or sand-gravel substrata in association with undercut banks, fallen logs, or other overhead cover.	Unlikely to occur. No aquatic habitat in action area.	No impact
Speckled chub (<i>Macrhybopsis aestivalis</i>)			S		Low gradient, main channel streams with a substrate of fine gravel or sand.	Unlikely to occur. No aquatic habitat in action area.	No impact
Southern redbelly dace (<i>Phoxinus erythrogaster</i>)			WL		Clear, cool, and shaded streams and spring runs.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande silvery minnow (<i>Hybognathus amarus</i>)			WL		Medium to large-sized rivers of New Mexico and Texas.	Unlikely to occur. No aquatic habitat in action area.	No impact
Suckermouth minnow (<i>Phenacobius mirabilis</i>)			S		Riffles in small to moderate-sized clear water streams with substrates ranging from sand and gravel to large boulder.	Unlikely to occur. No aquatic habitat in action area.	No impact
Gray redborse			S		Low gradient streams, with warm,	Unlikely to occur.	No impact

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
<i>Moxostoma congestum</i>					usually clear water.	No aquatic habitat in action area.	
Arkansas river shiner (<i>Notropis girardi</i>)			S		Shallow, often turbid channels, in High Plains reaches of major streams of the Arkansas drainage.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande shiner (<i>Notropis jemezianus</i>)			S		Large open rivers with laminar flows and a minimum of aquatic vegetation and larger streams with gravel, sand or rubble bottoms which are sometimes overlain with silt.	Unlikely to occur. No aquatic habitat in action area.	No impact
Blue sucker (<i>Cyprinella elongates</i>)			S		Deep river channels, pools with moderate currents, and deep lakes.	Unlikely to occur. No aquatic habitat in action area.	No impact
Bluehead sucker (<i>Catostomus discobolus discobolus</i>)			S		Occupies a variety of habitats from headwater streams to large rivers, it is almost always in moderate to fast flowing water above a rubble-rock substrate.	Unlikely to occur. No aquatic habitat in action area.	No impact
Flannelmouth sucker (<i>Catostomus latipinnis</i>)			S		Occurs in a wide variety of habitats, ranging from riffles to backwater areas, in larger rivers and streams.	Unlikely to occur. No suitable habitat in action area.	No impact
Rio Grande sucker (<i>Catostomus plebeius</i>)		S	S		Cool, mid-elevation streams with rocky substrates and backwaters with pools below riffles. Rarely found in water with heavy silt or organic matter.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande cutthroat trout (<i>Oncorhynchus clarki virginalis</i>)		S	S	SS	Clear, cold streams and lakes. Distribution limited to headwater tributaries within native range.	Unlikely to occur. No aquatic habitat in action area.	No impact

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Amphibians and Reptiles							
Northern leopard frog (<i>Lithobates piapiens</i>)		S	WL		Aquatic habitats, including marshes, streams, ponds, irrigation ditches, wet meadows, and shallow portions of reservoirs.	Unlikely to occur. No aquatic habitat in action area.	No impact
Plains leopard frog (<i>Lithobates blairi</i>)			WL		Usually in the vicinity of streams, ponds, creek pools, reservoirs, irrigation ditches, and marshes in areas of prairie and desert grassland, farmland, and prairie canyons, oak and oak-pine woodland.	Unlikely to occur. No aquatic habitat in action area.	No impact
Texas horned lizard (<i>Phrynosoma cornutum</i>)			WL		Inhabits flat, open, generally sandy and dry country with little plant cover, except for bunchgrass and cactus. Seeks shelter under rocks. Range includes southwestern Missouri and central Kansas to southeastern Colorado, and south and west throughout most of Oklahoma and Texas, eastern and southern New Mexico, and southeastern Arizona to Mexico.	Unlikely to occur. Project action area outside known range.	No effect
Great Plains narrowmouth toad (<i>Gastrophryne olivacea</i>)			WL		Semi-arid and arid lowlands such as mesquite and shrublands. It is also known from grasslands, rocky wooded hills, marsh edges, near springs, streams, and rain pools, river floodplains, scrub desert, and cultivated fields. It hides in rotten logs and stumps, burrows, and under rocks and other cover when inactive. Range includes southern Nebraska, southeastern Colorado, and southern	Unlikely to occur. Project action area outside known range.	No effect

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Clams & Snails							
Liljeborg peaciam (<i>Pisidium liljeborgi</i>)		S		ST	Large lakes and is common in the sublittoral zones and in the mud of profundal zones of lakes, including the Great Lakes; it is also found in fine sand of river.	Unlikely to occur. No aquatic habitat in action area.	No impact
Arthropods							
Yuma skipper (<i>Ochlodes yuma</i> <i>Anasazi</i>)			S		Restricted to marshes, watercourses, pond edges, seeps, sloughs, springs and irrigation canals.	Unlikely to occur. No aquatic habitat in action area.	No impact
Plants							
Gamma grass cactus (<i>Sclerocactus</i> <i>papyracanthus</i>)			S		Pinyon-juniper woodlands and in desert grasslands and is almost always associated with grama (<i>Bouteloua</i> spp.), especially blue grama (<i>B. gracilis</i>). It may also be associated with dropseed (<i>Sporobolus</i> spp.).	May occur. Suitable pinyon-juniper woodlands are present in action area but no plants were observed during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Santa Fe cholla (<i>Opuntia viridiflora</i>)			S	SE	South- and west-facing slopes in pinyon-juniper woodlands in between 5,800 and 7,200 feet in Santa Fe County.	May occur. Suitable pinyon-juniper woodlands occur but no individuals were observed during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Ripley's milkvetch (<i>Astragalus ripleyi</i>)			S		Pine-oak communities, pinyon-juniper sagebrush, sagebrush communities, and <i>Chrysothamnus viscidiflorus</i> meadows from 7,000 to 8,250 feet. Found growing under the canopy, or amongst the stems, of shrubs such as big sage, gambel oak, rabbit brush, and juniper.	Only three populations known to exist near Chimayo, none near the project area.	No impact
Tufted sand verbena (<i>Arbronia bigelovii</i>)		S	S		Hills and ridges of calcareous Toddlito formation at elevations from 5,700 to 7400 feet.	Unlikely to occur. No suitable substrate and action area is below known elevation tolerances.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Greene milkweed (<i>Asclepias uncialis</i> ssp. <i>Uncialis</i>)		S			Occurs on lower side slopes at the base of mesas or escarpments; it is absent from highly disturbed habitats such as sand dunes, erosion channels, wash slopes, and badlands; associated with species typical of shortgrass prairie.	Unlikely to occur. No suitable habitat within action area.	No impact
Chaco milkvetch (<i>Astragalus micromerius</i>)		S			Pinyon-juniper woodland and Great Basin desert scrub. This species is associated with calcareous sandstone or gypsum substrates and specifically is	Unlikely to occur. No suitable habitat within action area.	No impact

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Pecos mariposa lily (<i>Calochortus gunnisonii</i> var. <i>perpulcher</i>)		S			found on sandstone mixed with Toddlito gypsum or limestone.	Unlikely to occur. No suitable habitat within action area.	No impact
Yellow lady's-slipper (<i>Cypripedium</i> <i>parviflorum</i> var. <i>pubescens</i>)		S	SE		Boggy areas, swampy areas, damp woods (often with a rich layer of humus and decaying leaf litter), near rivers or canal banks.	Unlikely to occur. No suitable habitat within action area.	No impact
Robust larkspur (<i>Delphinium robustum</i>)		S			Canyon bottoms and aspen groves in lower and upper montane coniferous forest.	Unlikely to occur. No suitable habitat within action area.	No impact
Heil's alpine whitlowgrass (<i>Draba heilii</i>)		S			Alpine tundra growing in association with other low, caespitose or pulvinate alpine plants.	Unlikely to occur. No suitable habitat within action area.	No impact
Pecos fleabane (<i>Erigeron subglaber</i>)		S			Rocky, (generally greater than 50% exposed rock) open meadows in subalpine-montane conifer forest at 9,950 to 11,600 feet.	Unlikely to occur. No suitable habitat within action area.	No impact
Wood lily (<i>Lilium philadelphicum</i> var. <i>adinum</i>)		S	SE		Wetland obligate found in high-mountain meadows	Unlikely to occur. No suitable habitat within action area.	No impact
Lady tresses orchid (<i>Spiranthes</i> <i>magnicamporum</i>)		S	SE		Habitat variable, but often associated with calcareous soils: dry or wet prairie and riverbanks and floodplains.	Unlikely to occur. No suitable habitat within action area.	No impact
Chama blazing star		S			On road cuts and steep barren hillsides	Unlikely to occur.	No impact

Table 7. Federally listed, State listed, and Sensitive Species and Potential to Occur within the Project Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
(<i>Mentzelia conspicua</i>)					of gray to red shales and clays of the Mancos and Chinle formations in piñon-juniper woodland from 5,900-7,200 feet.	No suitable habitat within action area.	
Springer's blazing star (<i>Mentzelia springeri</i>)		S			Volcanic and unconsolidated pyroclastic ash in piñon-juniper woodland and lower montane coniferous forest from 7,000 to 8,000 feet.	Unlikely to occur. No suitable habitat within action area and action area is below known elevation tolerances.	No impact
Blumer's dock (<i>Rumex orthoneurus</i>)		S			Near perennial springs in unshaded meadows or along streambanks in canyons with organic, moist soils.	Unlikely to occur. No suitable habitat within action area.	No impact
Arizona willow (<i>Salix arizonica</i>)		S			High elevation (subalpine) wet meadows, low gradient streambanks, wet drainage ways, and cienegas, typically within a subalpine coniferous forest matrix. Plants are also sometimes found in drier sites adjacent to forest edges or within the riparian zone where subsurface channels provide moisture.	Unlikely to occur. No suitable habitat within action area and action area is below known elevation tolerances.	No impact

Source: USFWS, 2016; BLM, 2015; USFS, 2013, NMGF, 2016.

¹Status designations are: FWS—Endangered (E), Threatened (T); SFNF—Sensitive (S); BLM—Sensitive (S), Watch List (WL); and State of New Mexico - State endangered (SE), State threatened (ST)

²Unless indicated otherwise, all of the wildlife species habitat information contained in this table was obtained from the New Mexico Game and Fish BISON-M, Biota Information System of New Mexico Web site at <http://nmhnp.unm.edu/bisonnm/bisonquery.php> and the New Mexico Partners in Flight Species Accounts at <http://www.nmpartnersinflight.org/species.html>

³Sensitive and listed plant habitat information was obtained from New Mexico Rare Plants Website (NMRPTC, 1999) at http://nmrareplants.unm.edu/rarelist_single.php?SpeciesID=61

3.11.1 Impacts of the No Action Alternative

The No Action Alternative would result in no effect to special status species.

3.11.2 Impacts of the Proposed Action

The proposed action would result in a “no effect” to federally threatened and endangered species.

Direct effects include the temporary displacement of some special status species during construction from increased noise and human activity should they occupy the project area, the removal of approximately 8.3 acres of habitat, including limited vegetation removal, resulting in a minor loss of and breeding habitat for special status species, and loss of migratory or corridors of movement of wildlife, including resting and thermal cover for some species across the project area. Potential indirect effects include increased human recreation activity which may result in disturbance and displacement of some special status species on or adjacent to the trail.

USFS Management Indicator Species and BLM Sensitive Species

As shown in Table 7 there is the potential the project may impact individuals, but is not likely to result in a trend toward federal listing or loss of viability of any USFS MIS or BLM Sensitive Species. For additional information see the *El Camino Real de Tierra Adentro National Historic Trail Buckman Road Segment, Retracement Trail Project Biological Assessment and Evaluation* (Appendix C).

Migratory Birds

If vegetation removal takes place during the nesting season for migratory birds, nest abandonment may occur in adjacent habitat depending on the species level of tolerance to the disturbance. Active nest loss is not anticipated because of the mitigation measures discussed in Table 3.

Construction of the new trail would require minor vegetation (mostly grasses and shrubs) removal within the trail corridor. The trail alignment has been designed to avoid trees where practicable. No riparian habitat or wetlands are located in the project area. Temporary habitat loss would occur directly adjacent to the trail during construction activities but is expected to recover within one to two years. This minor loss of habitat is not expected to impact migratory birds because an abundance of available habitat surrounding the trail.

Overall, the project is not anticipated to threaten the ongoing viability of any special status species or migratory birds.

3.12 Recreation

The Caja del Rio Plateau provides a range of recreational opportunities and has historically been used mainly by residents of Santa Fe County and surrounding communities. Recreational activities available in and around the project area include hiking, biking, horse back riding, hunting, jeep and all-terrain vehicle driving, para gliding, using radio controlled aerial devices, pinyon nut gathering, studying geology, wildlife viewing, rock climbing, hang gliding, and visiting cultural sites.

On BLM lands within proximity to Diablo Canyon, motor vehicle use is limited to accessing the Diablo Canyon Trailhead. Use of portions of the arroyo is allowed for permitted uses, primarily filming. USFS management policies limit motor vehicle use to designated roads only.

Table 8 provides an overview of recreational resources within proximity to the proposed action. Recreational resources are located on federal as well as City of Santa Fe and Santa Fe County lands.

Table 8. Recreational Resources within the Project Area

Resource	Description
USFS Caja del Rio Headquarters Well Trailhead	The USFS Caja del Rio Headquarters Well Trailhead is located just north of the Caja del Rio Landfill on CR 62. There is a parking lot, shade shelter, and restroom at this location. From the trailhead, visitors can access a number of different trails in the area. USFS estimates that the trailhead has approximately 750 visitors per month.
USFS/BLM Dead Dog Trail	This redesigned trail is accessible from CR 77 and leads to the top of the Caja Plateau. Recent maintenance activities have helped stabilize the trail. There are numerous switchbacks and it is steep in certain locations. The trail is wide enough to accommodate horses; however, this is a bit more challenging in certain locations. Because of its destination location on top of the plateau, views of the surrounding area are impressive.
BLM's Diablo Canyon Special Recreation Management Area	<p>SRMAs are part of the BLM classification system and are officially designated areas where it has been determined that resources require special management and control measures for their protection. Within SRMAs, recreation and visitor services are recognized as the predominant land use planning focus. A portion of the Diablo Canyon SRMA is located in proximity to the proposed action. This area is managed to provide opportunities to access diverse trails, learning, and unstructured play in a middle country setting. Recreational activities should be distant from improved roads but proximate to residences. One of the objectives of the SRMA is to collaborate with USFS to help users reconnect to the Rio Grande through environmental education and interpretation.</p> <p>BLM's Diablo Canyon Trailhead is located in the northwestern part of the SRMA. BLM estimates that Diablo Canyon Trailhead has approximately 500 visitors per month. This area includes hiking trails and rock climbing.</p>
West Santa Fe Extensive Recreation Management Area (ERMA)	This new recreation area just north of CR 62 provides opportunities for off-highway vehicle, equestrian, cycling, hiking, and camping uses. Management of ERMA areas is commensurate with the management of other resources and resource uses.
Santa Fe Humane Society Dog Park	The dog park is located just south of the MRC on Caja del Rio Road. It includes a seven-acre community dog park and separate area called Samantha's Park of Small Dogs for those under 30 pounds. Three other dog parks are reserved for single use and are ideal for dogs lacking the necessary social skills to interact in the larger areas.
Municipal Recreation Complex	The MRC, located on either side of Caja del Rio Road just north of the Santa Fe Humane Society Dog Park, is owned and maintained by the City of Santa Fe. The complex includes five regulation adult soccer fields surrounded by a walking trail; one large jungle gym on a sand-covered lot; six softball fields (four under lights); two rugby fields; two flag football fields; one bicycle motocross track; and a concession stand.
Marty Sanchez Links de Santa Fe Golf Course	The Marty Sanchez Links de Santa Fe Golf Course, a municipal facility, is located 2.1 miles north of NM 599 on Caja del Rio Road. Open since 1998, the facility has an 18-hole course, 5-station all-grass driving range, practice greens, putting area, and a par three course. Users have a view of the Sangre de Cristos, Jemez, Ortiz, and Sandia mountains.
Santa Fe River Trail	An existing 10-mile greenway and collaborative effort between Santa Fe County

Table 8. Recreational Resources within the Project Area

Resource	Description
	and the City of Santa Fe, this trail is described as one of the primary urban spine trails in the region. The greenway is the southern terminus of the proposed action.

With the exception of the Santa Fe River Trail, there are no designated non-motorized accesses to recreation resources located in the project area. Hikers, bicyclists, and equestrians must use existing roadways to access non-motorized recreational resources on federal lands.

3.12.1 Impacts of the No Action Alternative

No change in access to federal lands would result under the No Action Alternative. Non-motorized users wishing to access recreational uses such as the MRC or federal lands on the Caja del Rio Plateau would have to share the roads with motorized users, potentially resulting in conflicts between user groups. No interpretive messaging or other trail signage educating visitors of the historical significance of the area would be implemented.

3.12.2 Impacts of the Proposed Action

The proposed action would provide improved access to recreational resources via a dedicated non-motorized corridor adjacent to Caja del Rio Road, as well as improved connectivity between the West Santa Fe ERMA and USFS Caja del Rio Headquarters and BLM Dead Dog and Diablo Canyon trailheads. Connecting to other trails within the Santa Fe County network, the proposed action would enhance the regional trail system by providing access to not only federal lands but also the MRC, Santa Fe Humane Society Dog Park, Marty Sanchez Links de Santa Fe Golf Course, and Santa Fe River Trail.

The proposed action would include parking improvements at BLM’s Dead Dog Trailhead, which would accommodate horse trailers, define the use pattern, and separate motorized and non motorized use. Six spaces for vehicles with trailers and 24 spaces for passenger vehicles would be provided.

The proposed action would provide an alternative transportation corridor through an area of federal lands, which although not managed by the NPS, has been recognized by NPS culturally and historically significant in regards to their agency’s oversight of the National Historic Trails program. The trail would provide an opportunity for visitors to travel along one of the oldest routes of a National Historic Trail in the country. Given the generally undeveloped nature of the BLM and USFS lands, trail users would experience similar views recognizable to the original colonists, providing a vicarious experience made even more unique because of its proximity to large urban populations.

The area in and around the proposed action is a popular destination for hikers, bicyclists, and equestrians. Improved safety and connectivity that would be introduced as a result of the proposed action would further contribute to additional trail users being present. Signage and other interpretive messaging would be implemented to increase visitors’ respect for the landscape and to provide educational opportunities about the historical significance of the area. Overall, the proposed action would result in long-term benefits for users providing a range of visitor opportunities in an environment with enhanced safety.

Short-term delays to traffic would result when construction is occurring in or adjacent to traffic lanes.

Overall, the project enhances recreation opportunities both locally and regionally.

3.13 Health and Human Safety

Health and human safety issues include conflicts between motorized and non-motorized users, safe access for all users, and potential injuries and/or the need for medical assistance on the trail.

Currently there are no dedicated non-motorized trails located along Caja del Rio that provide access to local land uses, including the MRC, or to the federal lands on the Caja del Rio Plateau. Cyclists wishing to access these areas must share the road with traffic. On BLM and USFS lands, there is no dedicated, direct, non-motorized trail access that connects the USFS Headquarters and BLM's Dead Dog and Diablo Canyon trailheads. Users wishing to access these areas must use Buckman Road, sharing space with motorized users.

3.13.1 Impacts of the No Action Alternative

The No Action Alternative would result in the continuance of non-motorized and motorized users having to share the road, potentially resulting in conflicts between user groups. For east and west connectivity at the MRC, park users would be required to cross Caja del Rio Road at the existing at grade-crossing.

3.13.2 Impacts of the Proposed Action

The entire trail would be maintained to minimize hazards. The trail would be kept to the same standard as other trails with a similar designation on federal and other public lands. Along the paved portion of the trail, access for emergency service providers would be maintained. Emergency vehicles would also have access to the BLM Dead Dog Trailhead, as well as all other existing trailheads and roads. The addition of trail users would provide a benefit to safety. The more users, the quicker emergency services can be notified in the event of an emergency.

The trail would separate motorized and non-motorized users, thereby reducing potential conflicts. In addition, the trail creates a grade separated connection to the east and west sides of the MRC, eliminating the need for park users to cross Caja del Rio Road.

Overall, the proposed action results in a benefit to health and human safety by providing dedicated space for cyclists and pedestrians.

3.14 Section 4(f)

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 (49 USC § 303) specifies that the FHWA may approve a transportation project or program requiring use of publicly owned land of a public park, recreation resource, or wildlife and waterfowl refuge of national, state, or local significance, or land from a historic property only if:

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic property resulting from the use; or
3. The Administration determines that the use of the property, including measures to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a de minimis impact, as defined in § 774.17, on the property.

Section 4(f) further requires consultation with the officials with jurisdiction over Section 4(f) properties when developing transportation projects and programs that use properties protected by Section 4(f).

The project area includes both recreational and historic properties protected by Section 4(f), as follows:

- **Recreational Resources:**
 - **Diablo Canyon SRMA.** Managed by the BLM land at the northern terminus of the proposed action, this recreation area provides connection to the Rio Grande River and accommodates hiking, equestrian and climbing uses.
 - **West Santa Fe ERMA.** Managed by the BLM, located north of CR 62, this recreational area accommodates off-highway vehicle, equestrian, cycling, hiking, and camping uses.
 - **MRC.** Managed by the City of Santa Fe, this facility has soccer fields, a playground, softball fields, rugby fields, flag football fields, and a bicycle motocross track.
- **Historic Sites:** Nine properties that would be affected by the proposed action have been determined eligible for listing on the NRHP and qualify as Section 4(f) properties. These sites include seven petroglyphs panels, the Chili Line Railroad, and the Dead Dog Well. For addition information see *Section 3.4, Cultural Resources*.

Section 4(f) has various exceptions to the requirement for Section 4(f) approval (23 CFR 774.13). These exceptions include transportation enhancement projects and mitigation activities, where:

- The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection.
- The official(s) with jurisdiction over the Section 4(f) resource agrees in writing to paragraph (g)(1) of this section.

3.14.1 Impacts of the No Action Alternative

The No Action Alternative would not include any improvements, resulting in ongoing limited non-motorized access to the resources described above.

3.14.2 Impacts of the Proposed Action

The proposed action would result in the conversion of existing open space of park and/or recreational lands to a trail at the MRC, Diablo Canyon SRMA, and West Santa Fe ERMA. Therefore, it has been determined that the proposed action qualifies for the Section 4(f) exception per 23 CFR 774.13(g). In a letter received May 18, 2016, the official with jurisdiction over the MRC concurred that the proposed action met the requirements of an enhancement to that facility. In a letter dated March 31, 2016, the official with jurisdiction over the Diablo Canyon SRMA and West Santa Fe ERMA concurred that the proposed action met the requirements of an enhancement to these facilities. These letters are contained in Appendix A.

Certain uses of Section 4(f) land may have a minimal or *de minimis* impact on the protected resource. When this is the case, FHWA can make a *de minimis* impact determination and compliance with Section 4(f) is greatly simplified. The *de minimis* criteria for historic sites is as follows:

- For historic sites, *de minimis* impacts are based on the determination that no historic property is affected by the project or that the project will have no adverse effect on the historic property in accordance with Section 106 of the NHPA. FHWA must notify SHPO of its intent to make a *de minimis* finding, and SHPO must concur with the determination.

The proposed action would affect nine historic properties that include seven petroglyphs panels, the Chili Line Railroad, and the Dead Dog Well. However, as described in *Section 3.4, Cultural Resources*, trail development would not diminish the integrity of these properties and there would be no change in the eligibility of these properties. Therefore, it was determined that the proposed action would have no

adverse effect on these properties. For this reason, CFLHD intends to make *de minimis* determinations for all affected historic properties and will do so as part of the ongoing SHPO coordination.

3.15 Noise

The project area encompasses both urban areas and undeveloped federal lands. As a result, the aural landscape varies throughout the project area and is primarily influenced by nearby land uses. In the southern portion of the project area, the predominant noise source is vehicular traffic on Caja del Rio Road. In the northern portion of the project area on federal lands, both on- and off-road motorists in much lower numbers than in the southern portion of the project area cause intermittent noise. Wells and pump stations associated with the Buckman Direct Diversion facilities also generate intermittent and generally low noise levels.

In compliance with 23 U.S.C. Section 109(h) and (i), the FHWA CFLHD established guidelines for the assessment of noise generated by highway traffic. These noise analysis procedures are published as Part 772 of Title 23 (23 CFR 772). In accordance with the Noise Control Act of 1972, 23 CFR 772, and FHWA’s Highway Traffic Noise: Analysis and Abatement Guidance (Guidance) issued in July 2010 (revised January 2011), FHWA CFLHD evaluated the proposed action to determine the project classification and required noise analysis. Table 9 details the project classifications defined in 23 CFR 772.

Table 9. Project Classification for Noise Analysis

Project Type	Description
Type I	A federal-aid project that generally adds capacity or significantly alters the horizontal or vertical alignment.
Type II	A federal-aid project to abate noise on an existing facility.
Type III	A federal or federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require the preparation of a noise study or abatement of highway noise impacts.

As prescribed in the Guidance, if any portion of a project is determined to be a Type I project, the entire project area as defined in the National Environmental Policy Act (NEPA) document is a Type I project. If one or more of the criteria in Table 9 are true, the proposed action is a Type I project and, therefore, is subject to a noise analysis.

The proposed action meets the criteria for a Type III project established in 23 CFR 772 because it does not (1) involve construction of new through or auxiliary lanes (other than turn lanes), (2) involve changes in the horizontal or vertical alignment of the roadway that would halve the distance between the roadway and noise-sensitive receptors, (3) expose noise sensitive land uses to a new or existing highway noise source, and (4) involve any other activity classified as a Type I or Type II project. Therefore, the proposed action does not require analysis for highway traffic noise impacts. FHWA acknowledges that a noise analysis is required if refinements in project design would result in reclassification to a Type I project.

3.15.1 Impacts of the No Action Alternative

The No Action Alternative would result in no additional noise impacts.

3.15.2 Impacts of the Proposed Action

Increased recreational use would result in increased traffic noise because some, although not all, trail users would drive to the available trailheads. Trail users including hikers, mountain bikers, runners, equestrians, and/or their pets, would also generate intermittent noise, which would typically only be audible to recreationists in the immediate vicinity. Noise from recreationists is anticipated to be primarily limited to daytime hours, as overnight use in this area is limited.

Construction activities would generate noise during the day from the periodic use of equipment, such as excavators, compressors, generators, and trucks as well as diesel-powered earth-moving equipment, such as dump trucks and bulldozers. These impacts would affect recreationists, including golfers, and a limited number of residences near the intersection of Caja del Rio Road and CR 62.

3.16 Air Quality

Santa Fe County is in attainment for all criteria pollutants. Traffic volumes in the project area are insufficient to cause a concentration of any air pollutants, including mobile source air toxics. The Buckman Direct Diversion infrastructure is not of a size to have an adverse effect on local air quality. Dust entrainment, meaning dust particles becoming airborne, occurs along Buckman Road because of vehicular traffic.

3.16.1 Impacts of the No Action Alternative

The No Action Alternative would result in no new measurable air quality impacts.

3.16.2 Impacts of the Proposed Action

The proposed action would not result in permanent adverse impacts to air quality. The increased access for non-motorized users has the potential to eliminate vehicle trips, resulting in a minor benefit to air quality. This would likely be offset by an increase in visitation by other users opting to drive to trailheads.

A temporary increase in entrained dust particles would occur as a result of the construction, as well as the localized increase in vehicle emissions due to the use of construction equipment.

3.17 Visual Resources

In the southern portion of the project corridor, the visual landscape is primarily dominated by transportation infrastructure, including Caja del Rio Road, access roads, and NM 599 visible in the foreground. The ROW on the west side of Caja del Rio Road, where much of Segment 1 would be sited, has been disturbed by a previous pipeline project, so vegetation is limited to grasses. Foreground views include recreational facilities and limited residential views. The piñon-juniper scrubland is dominant in the foreground and background views include the Sangre de Cristo mountains to the east and the Caja del Rio Plateau to the west.

The northern portion of the project corridor has less transportation infrastructure. While there are roads, they are soft surface and better blend with the landscape. Other anthropogenic influences on the visual landscape include infrastructure associated with the Buckman Direct Diversion Facility, livestock fencing, trailhead facilities, and overhead high-voltage transmission lines and their towers. Vegetation is primarily a mix of piñon-juniper and oak, and foreground views are dominated by desert grassland. Middleground and background views include the low hills to the east and hills, escarpments, and cliffs rising to the Caja del Rio Plateau on the west.

On BLM land, visual resource management (VRM) is conducted in accordance with BLM Manual H-8410-1 (BLM 1986). VRM classes are used as minimum management objectives for identified visual

management units. Each VRM class describes differing degrees of modification allowable in basic landscape elements. VRM classifications are:

- **Class I.** Preserve the existing character of the landscape. The level of change should be very low and must not attract attention.
- **Class II.** Retain the existing character of the landscape. The level of change should be low. Management activities may be seen, but should not attract the attention of the casual observer.
- **Class III.** Partially retain the existing character of the landscape. The level of change should be moderate. Management activities may attract attention, but should not dominate the view of the casual observer.
- **Class IV.** Allow management activities requiring major modifications to the existing character of the landscape. The level of change may be high. Management activities may dominate the view. However, every attempt will be made to minimize the impact and aim to repeat the basic elements in the landscape.

BLM lands in the project area are predominantly VRM Class II, with two exceptions; the Diablo Canyon SRMA is VRM Class I and the area along CR 62 is VRM Class III.

All lands within Santa Fe National Forest are managed to achieve a desired level of visual quality. The standards to which they are managed are defined as Visual Quality Objectives (VQO). The project area is located in the “Caja” Management Area, which is classified as Roaded Natural and Semi-Primitive Motorized Acreage under the Recreation Opportunity Spectrum. The VQOs for this classification are Partial Retention and Modification. More recently, per the USFS Scenery Management System, the project area would meet the categories “low” and “moderate”, which indicates the landscape has been slightly and/or moderately altered.

3.17.1 Impacts of the No Action Alternative

The No Action Alternative would result in no new impacts to the visual character of the project area.

3.17.2 Impacts of the Proposed Action

The proposed action would introduce a new linear visual element along its entire length. In the southern portion, improvements would include the paved trail, a spur trail leading to the MRC, signage, and in select locations barriers between the trail and roadway. Given the previous level of disturbance, and that a majority of viewers would be motorists accustomed to roadway infrastructure, the visual impact would be low. The trail may be in view of four residences at the intersection of Caja del Rio Road and CR 62. The foreground view, which already includes Caja del Rio Road, would be altered to include the trail, located on the far side of Caja del Rio Road from the residences. Background views of the Caja del Rio Road would remain unchanged, and the dominant feature of the landscape. This would result in low visual changes for these residences.

In the northern portion of the project area, the proposed action would result in a new linear visual element on the landscape. For the trail user, much of the trail would be obscured by low hills, vegetation, and the curvilinear nature of the trail. The trail would be visible from portions of Buckman Road, but only those federal land users atop of the plateau or other high points within the area would be able to see a significant portion of the trail. The trail itself would result in a weak visual contrast, particularly when compared to the larger linear features, such as Buckman Road and the overhead transmission lines, already present in the project area.

Interpretive signage explaining the significance of El Camino Real de Tierra Adentro National Historic Trail would be introduced. Signage would follow existing design guidelines set forth by NPS. Additional interpretive signage, that meets federal agency standards, would be provided. Livestock fencing would be altered and new gates installed in existing active grazing areas. Trailhead improvements would introduce elements of the built environment into an informal parking area; however, there would be no change to the landform and contrast to line, color, and texture would be weak to low, meeting VRM Objectives for the area. BLM’s Dead Dog Trailhead is currently unimproved, so a formalized parking area with a gravel surface, signage, and fencing would limit further degradation of the surrounding landscape by limiting parking to designated areas.

In the context of the 11.2 miles of trail on federal lands, the visual impact would be weak to low. Localized and minor adverse impacts would be offset by signage throughout the project corridor which would highlight the historical significance of the area and create a sense of place on both county and federal lands. See Appendix D for the BLM Visual Contrast Worksheets.

3.18 Cumulative Impacts

Sections 1508.7 and 1508.25 (a)(2) of CEQ regulations for implementing NEPA require an assessment of cumulative effects in the decision-making process for federal actions. Cumulative actions are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions” (40 CFR 1508.7).

Cumulative effects were evaluated by combining the effects of the proposed action with other past, present, and reasonably foreseeable future actions in the project corridor. The past, present, and reasonably foreseeable future projects are shown in Table 10.

Table 10. Past, Present, and Reasonably Foreseeable Future Actions

Action/Responsible Parties	Description
Past Actions	
Buckman Direct Diversion, City of Santa Fe and Santa Fe County	The Buckman Direct Diversion diverts water from the Rio Grande to address the need for a sustainable means of accessing water supplies for the City of Santa Fe, Santa Fe County, and Las Campanas Limited Partnership. The project included a diversion structure at the Rio Grande; water transmission facilities including pumps and booster station buildings, water tanks, settling ponds and pipes; water treatment facilities; electric power improvements; and road improvements for ongoing maintenance and operation.
Caja del Rio Trailhead Improvement Project (Headquarters Trailhead) EA, USFS	The improvements associated with this project included the improvement of the a trailhead facility with a shade ramada, picnic area, toilets, fire pits, graveled parking area, and improvements to the access road.
Present	
Santa Fe River Trail, City of Santa Fe and Santa Fe County	When complete, the Santa Fe River Trail would be 15 miles of continuous greenway of public parks and trails from downtown Santa Fe to the Wastewater Treatment Plant west of NM 599. The project is a collaborative effort between Santa Fe County and the City of Santa Fe. A shared-use trail would be constructed adjacent to the river, and river restoration efforts would include channel stabilization and riparian

Table 10. Past, Present, and Reasonably Foreseeable Future Actions

Action/Responsible Parties	Description
	habitat enhancements. El Camino Real Park is part of the larger greenway system.
Buckman Area Riparian Restoration and Recreation Enhancement Project, BLM and USFS	This project included, Diablo Canyon and an area located along the east bank of the Rio Grande and within proximity of the Buckman Direct Diversion Facility (BLM and USFS lands). At Diablo Canyon improvements included include fencing, parking, and trail improvements, additional interpretative information, and potentially a future restroom facility. Near the Rio Grande, future improvements would include riparian restoration, trail improvements, shade structures, designated river access, and restroom facilities.
Verde Transmission Project	A proposed 33-mile long new 345 kilovolt transmission line that would interconnect the existing Public Service Company of New Mexico Ojo substation in southern Rio Arriba County to the existing Norton substation in Santa Fe County, New Mexico.
Future	
Rio Grande Trail, Rio Grande Trail Commission	In 2015, House Bill 563 became law. The law established the Rio Grande Trail Commission, which was created to implement the Rio Grande Trail. The trail would run from Colorado to Texas; a distance of almost 500 miles. It would follow the river for which it is named and pass through two national wildlife refuges, three national monuments, and six state parks. The first segments of the trail, totaling 20 miles, were recently established within the boundaries of six state parks.

In general the overall health of the environmental resources considered for analysis in this document is good. With much of the trail located in either previously disturbed areas or on federal lands, present stressors are limited, and the total impact of the proposed action is relatively minor. Because of these factors few cumulative impacts are anticipated to result from the implementation of the proposed action in consideration of past, present, and reasonably foreseeable future projects. A summary of anticipated impacts is shown in Table 11.

Table 11. Cumulative Effects Summary

Resource Area	Cumulative Impacts
Livestock Grazing	No cumulative effects are anticipated from implementation of the proposed action.
Area of Critical Environmental Concern	The BDD occurred within the Diablo Canyon/Buckman zone of the Santa Fe Ranch ACEC, altering visual conditions. The Buckman Area Riparian Restoration and Recreation Enhancement Project would occur, in part, within the Diablo Canyon/Buckman zone of the Santa Fe Ranch ACEC. Actions undertaken as part of the enhancement project would be in accordance with BLM policies for managing the ACEC. The proposed action, including those parts within the Santa Fe Ranch ACEC, would also be managed in accordance with these policies. While the introduction of additional visitors to the ACEC may have some minor adverse impacts on ACEC resources, it is anticipated that management actions would ensure that impacts to the values for which the ACEC was designated do not rise to the level of significance.
Cultural Resources	The Santa Fe River Trail, once complete, would reintroduce the corridor as a transportation route and inform users of the historical role of the Santa Fe River in connecting communities along El Camino Real de Tierra Adentro. The anticipated Rio Grande Trail would showcase the history of New Mexico and communities that have sustained life on the river for centuries. Both of these projects would educate visitors on the historical and cultural significance of the area and would encourage people to become stewards of the environment. These actions, in combination with the beneficial impacts of the proposed action, would result in long-term benefits to cultural resources that are present in the area.
Soils/Geology/Minerals	Additional impervious surface, through the construction of trails, parking lots, roadways, and structures, would result in an increase in runoff, impacting water quality and increasing the potential for erosion.
Floodplains	No cumulative effects are anticipated from implementation of the proposed action.
Wetlands and Waters of the U.S.	No cumulative effects are anticipated from implementation of the proposed action.
Water Resources	Additional impervious surface, through the construction of trails, parking lots, roadways, and structures, would result in an increase in runoff, impacting water quality and increasing the potential for erosion.
Vegetation and Weeds	No cumulative effects are anticipated from implementation of the proposed action.
Wildlife and Special Status Species and Migratory Birds	With the connector trails from the City of Santa Fe along the Santa Fe River, increased recreation in the area has the potential to displace some species that are more sensitive to disturbance, especially mid-sized carnivores (i.e., bobcat, coyote) and/or larger mammals, such as mountain lion or black-bear. Researchers studying trails around Boulder, Colorado found that populations of several songbirds, including Western meadowlarks, were lowest near trails. According to this study, humans and their pets create an avoidance area up to 100 m either side of a trail (Knight, 2011). Running and cycling negatively impacted birds in 90.0 percent of 69 studies reviewed in 2011 in the form of reduced nests, eggs laid and chicks hatched/fledged. Impacts from outdoor recreation and tourism are the fourth-leading reason species are listed by USFWS as

Table 11. Cumulative Effects Summary

Resource Area	Cumulative Impacts
Recreation	<p>threatened or endangered, behind threats in the form of non-native species, urban growth and agriculture. Actions identified as part of the Caja del Rio Trailhead Improvement Project include (1) a trailhead facility with a shade ramada; (2) a concrete double sealed vault toilet; (3) fire pits; (4) informational kiosk; (5) graveled parking area; (6) and improvement of 0.4 mile of access road.</p> <p>Improvements in the Diablo Canyon portion of the Buckman Area Riparian Restoration and Recreation Enhancement Project would include (1) fencing, parking, and trail improvements; (2) additional interpretative information; and (3) potentially restroom facilities. Near the Rio Grande, recreation enhancements would include trail improvements, shade structures, designated river access, and restroom facilities.</p> <p>In addition, the BLM and USFS authorize special recreation permits, providing additional recreation opportunity on a case by case basis.</p> <p>The completion of the Santa Fe River Trail and introduction of the Rio Grande Trail would contribute to the linear non-motorized transportation network in and around the Santa Fe area. In addition both would inform users of the history of each—the Santa Fe River Trail in connecting communities along El Camino Real de Tierra Adentro and the Rio Grande Trail as a source of sustenance and a foot corridor.</p> <p>The implementation of any one or combination of these actions would enhance recreational opportunities in the area. This would be further facilitated by the introduction of the proposed action. Overall, long-term, beneficial impacts to recreational resources would result from the implementation of these actions.</p>
Health and Human Safety	No cumulative effects are anticipated from implementation of the proposed action.
Section 4(f)	No cumulative effects are anticipated from implementation of the proposed action.
Noise	No cumulative effects are anticipated from implementation of the proposed action.
Air Quality	No cumulative effects are anticipated from implementation of the proposed action.
Visual Resources	<p>The Buckman Direct Diversion occurred within the Diablo Canyon/Buckman zone of the Santa Fe Ranch ACEC, altering visual conditions. The proposed Verde Transmission project would introduce new transmission lines, adjacent to the existing lines, in the area near and north of the Dead Dog Trailhead. The implementation of new trails and other recreational resources would introduce new visual features into the landscape. Actions on federal lands will be designed in accordance with applicable VQO and/or VRM Objectives. New linear features would result in weak to low impacts to visual resources. Adverse effects would be offset with interpretative signage highlighting the historical significance of the area and create a sense of place on both county and federal lands. Because these and the proposed action would be managed in accordance with applicable VQO and/or VRM Objectives and include interpretative signage, the overall cumulative impact is anticipated to be minor.</p>

4 LIST OF PREPARERS

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- Tami Torres, Outdoor Recreation Planner
- Sarah Schlanger, Field Manager
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- Kathy Lemberg, GIS Analyst
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- Mary Speck, Technical Editor

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- Scott Belonger, Trail Design Manager

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Appendix A.
Agency Coordination



U.S. Department
of Transportation

**Federal Highway
Administration**

Central Federal Lands Highway Division

March 29, 2016

12300 West Dakota Avenue
Suite 380
Lakewood, CO 80228
(720) 963-3728
Fax: (720) 963-3596
tom.puto@dot.gov

In Reply Refer To:
HFPM-16

Rob Carter
Parks and Recreation Director,
City of Santa Fe Parks & Recreation Department
PO Box 909
Santa Fe, NM 87504-0909

RE: El Camino Real Buckman Road Retracement Project, Section 4(f) Enhancement Exception

Dear Mr. Carter,

The Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in cooperation with Santa Fe County, Bureau of Land Management (BLM), United States Forest Service (USFS), and National Park Service (NPS) which jointly administers the El Camino Real de Tierra Adentro National Historic Trail (NHT) with BLM, is proposing the development of a trail following a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Old Buckman Road (County Road (CR) 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road linking the oldest segment of El Camino Real to the Santa Fe River Trail. El Camino Real de Tierra Adentro NHT is the earliest Euro-American trade route in the United States and it was added to the National Trails System in 2000.

The Department of Transportation Act (DOT Act) of 1966 includes a special provision - Section 4(f) - which provides protections to publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. The law, now codified in 49 U.S.C § 303 and 23 U.S.C § 138, is implemented by FHWA through the regulation 23 CFR 774. The proposed project described above would impact a Section 4(f) resource, the City of Santa Fe Municipal Recreation Complex (MRC), which provides a variety of quality and affordable recreational opportunities to Santa Fe city, as well as county residents and visitors. It is the opinion of FHWA CFLHD that the impacts resulting from construction meet the conditions of an exception to the Section 4(f) requirements approval under 23 CFR 774.13(g). This exception applies to transportation enhancement projects as described below.

The proposed project would result in impacts to the MRC from the construction of two trail connections, which convert an existing portion of undeveloped park land to a transportation use. The trail would convert approximately 0.20 acre of the approximately 1,200 acre park. In the case of the proposed project, bicycle and pedestrian access to the MRC would be enhanced, as non-motorized users would be

able to access the MRC via a dedicated multi-use trail. In, addition, the project would provide a below grade connection between the east and west section of the MRC; a connection that currently requires an at-grade crossing of Caja del Rio Road, a 55 miles-per-hour roadway.

The purpose of the proposed project is (1) to improve federal lands access by enhancing trail connectivity between land uses in Santa Fe County and City of Santa Fe and recreational opportunities on BLM and USFS lands and (2) to enhance the safety of non-motorized users accessing federal lands and other recreational opportunities in the area. Therefore, we believe that these activities meet the requirements of the DOT Act of 1966 Section 4(f) exception in 23 CFR 774.13(g)(1):

“The use of the Section 4(f) property by the proposed project is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection.”

If you concur that the construction of the proposed project enhances the activity, feature, or attributes that qualify the City of Santa Fe Municipal Recreation Complex for Section 4(f) protection as noted under 23 CFR 774.13(g)(1), FHWA CFLHD requests that you sign and date this letter in the spaces below. We will maintain a copy of this letter in the project file.

After signing and dating this letter, please return a copy within 15 days of the date of this letter via email (timberley.belish@dot.gov) or U.S. Postal Service to the following address:

Timberley Belish
12300 West Dakota Avenue, Suite 380
Lakewood, CO 80228

FHWA is thankful for your assistance in making this transportation project possible. Should you have any questions or concerns, please contact Timberley at (720) 963-3683.

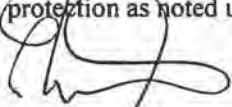
Sincerely,



Tom Puto
FHWA, CFLHD Project Manager

Concurrence of Enhancement

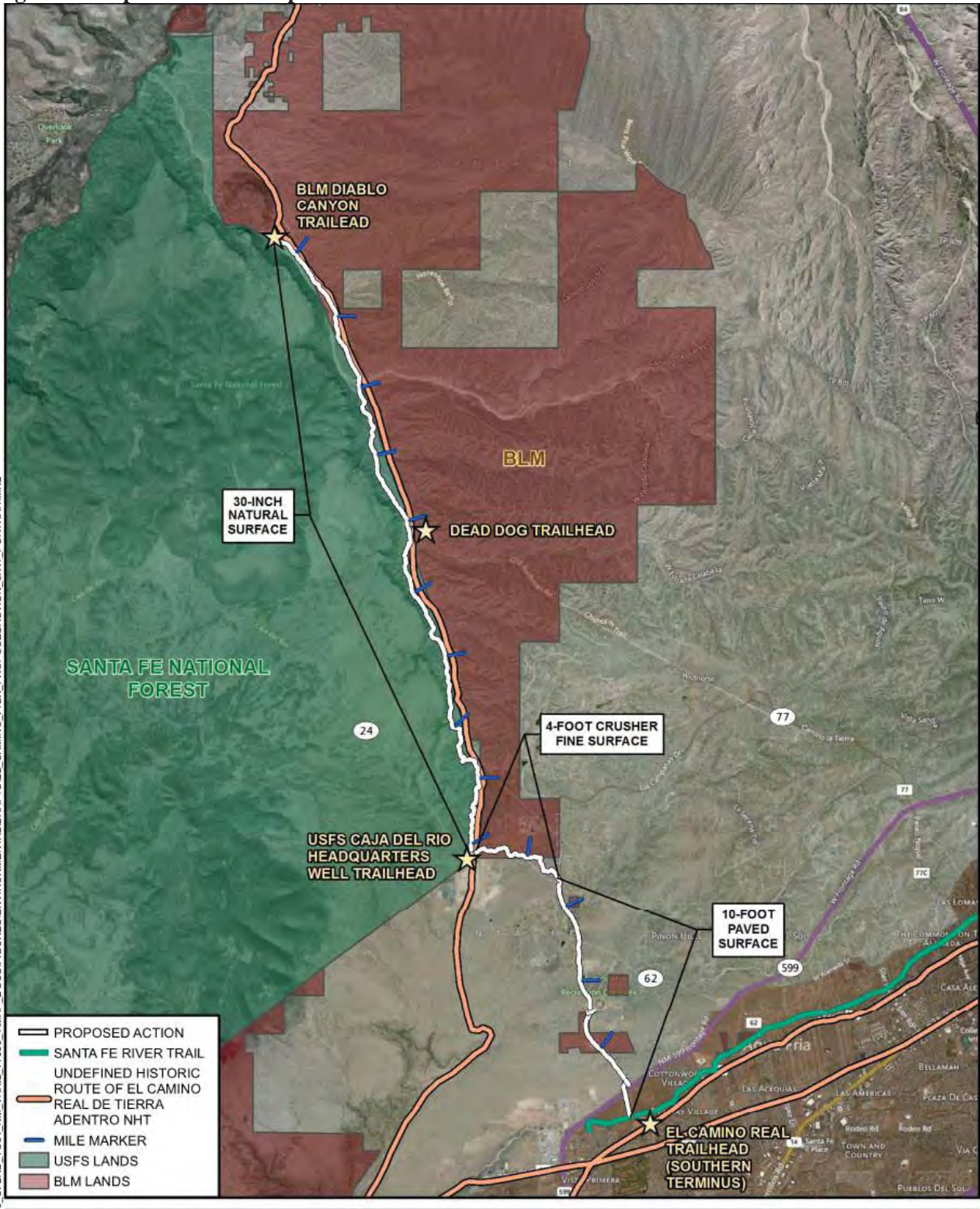
As the official with jurisdiction, I agree that the proposed trail construction enhances the activities, features, and/or attributes that qualify the City of Santa Fe Municipal Recreation Complex for Section 4(f) protection as noted under 23 CFR 774.13(g)(1).



Rob Carter
Parks and Recreation Director,
City of Santa Fe Parks & Recreation Department

Enclosure: Proposed Action Map

Figure 1. Proposed Action Map



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- PROPOSED ACTION
- SANTA FE RIVER TRAIL
- UNDEFINED HISTORIC ROUTE OF EL CAMINO REAL DE TIERRA ADENTRO NHT
- MILE MARKER
- USFS LANDS
- BLM LANDS

PROPOSED ACTION
EL CAMINO TRAIL (BUCKMAN ROAD SEGMENT)
 SANTA FE COUNTY, NM



HDR	
FEB 2016	FIGURE 1



U.S. Department
of Transportation

**Federal Highway
Administration**

Central Federal Lands Highway Division

March 31, 2016

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In Reply Refer To:
HFPM-16

Sarah Schlanger, Field Manager
BLM Taos Field Office
226 Cruz Alta Road
Taos, NM 87571-5983

RE: El Camino Real Buckman Road Retracement Project, Section 4(f) Enhancement Exception

Dear Ms. Schlanger,

The Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in cooperation with Santa Fe County, Bureau of Land Management (BLM), United States Forest Service (USFS), and National Park Service (NPS) which jointly administers the El Camino Real de Tierra Adentro National Historic Trail (NHT) with BLM, is proposing the development of a trail following a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Old Buckman Road (County Road (CR) 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road linking the oldest segment of El Camino Real to the Santa Fe River Trail. El Camino Real de Tierra Adentro NHT is the earliest Euro-American trade route in the United States and it was added to the National Trails System in 2000.

The Department of Transportation Act (DOT Act) of 1966 includes a special provision – Section 4(f) – which provides protections to publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. The law, now codified in 49 U.S.C § 303 and 23 U.S.C § 138, is implemented by FHWA through the regulation 23 CFR 774. The proposed project described above would impact two Section 4(f) resources on BLM lands – the Diablo Canyon Special Recreation Management Area (SRMA) and the West Santa Fe Extensive Recreation Management Area. It is the opinion of FHWA CFLHD that the impacts resulting from construction of the project meet the conditions of an exception to the Section 4(f) requirements approval under 23 CFR 774.13(g). This exception applies to transportation enhancement projects as described below.

The northern terminus of the proposed project would be BLM's Diablo Canyon Trailhead, located in the Diablo Canyon Special Recreation Management Area. The proposed project would require modification of the existing fence to include a gate and signage to identify the location of the trail. The trail, which would be a 30-inch wide soft surface trail, would provide a non-motorized connection between BLM's Diablo Canyon and Dead Dog trailheads and USFS's Caja del Rio Headquarters Well Trailhead and include interpretive signage highlighting the historic significance of the trail and region.

From the USFS Caja del Rio Headquarters Well Trailhead, the trail would follow CR 62 east and connect to Caja del Rio Road. This section of trail, which would be a 48-inch wide soft surface trail, would pass through the West Santa Fe Extensive Recreation Management Area. The trail would ultimately provide a non-motorized connection from federal lands on the Caja del Rio Plateau to the Santa Fe River Trail.

The proposed project would help support existing recreation opportunities by providing improved access for non-motorized users and additional recreation opportunities within both of these BLM recreation resources with the introduction of an additional trail network.

The purpose of the proposed project is (1) to improve federal lands access by enhancing trail connectivity between land uses in Santa Fe County and City of Santa Fe and recreational opportunities on BLM and USFS lands and (2) to enhance the safety of non-motorized users accessing federal lands and other recreational opportunities in the area. Therefore, we believe that these activities meet the requirements of the DOT Act of 1966 Section 4(f) exception in 23 CFR 774.13(g)(1):

“The use of the Section 4(f) property by the proposed project is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection.”

If you concur that the construction of the proposed project enhances the activity, feature, or attributes that qualify the Diablo Canyon SRMA and the West Santa Fe Extensive Recreation Management Area for Section 4(f) protection as noted under 23 CFR 774.13(g)(1), FHWA CFLHD requests that you sign and date this letter in the spaces below. We will maintain a copy of this letter in the project file.

After signing and dating this letter, please return a copy within 15 days of the date of this letter via email (timberley.belish@dot.gov) or U.S. Postal Service to the following address:

Timberley Belish
12300 West Dakota Avenue, Suite 380
Lakewood, CO 80228

FHWA is thankful for your assistance in making this transportation project possible. Should you have any questions or concerns, please contact Timberley at (720) 963-3683.

Sincerely,



Tom Puto
FHWA, CFLHD Project Manager

Concurrence of Enhancement

As the official with jurisdiction, I agree that the proposed trail construction enhances the activities, features, and/or attributes that qualify the Diablo Canyon Special Recreation Management Area and West Santa Fe Extensive Recreation Management Area for Section 4(f) protection as noted under 23 CFR 774.13(g)(1).

 3/31/16

Sarah Schlanger, Field Manager
BLM Taos Field Office

Enclosure: Proposed Action Map

Tribal coordination was initiated during the public scoping period and will continue throughout the planning process. The following Tribes, which were identified by BLM and USFS, were asked to participate in the decision-making process for the project.

- Cocohiti Pueblo
- Comanche Nation
- Hopi Tribe
- Isleta Pueblo
- Jicarilla Apache Nation
- Kiowa Tribe of Oklahoma
- Nambe' Pueblo
- Navajo Nation
- Ohkay Owingeh Pueblo
- Picuris Pueblo
- Pojoaque Pueblo
- San Ildefonso Pueblo
- Santa Ana Pueblo
- Santa Clara Pueblo
- Southern Ute Tribe
- Taos Pueblo
- Tesuque Pueblo
- Utu Mountain Utes Tribe
- Zia Pueblo

The following include an example of the letters sent to the abovementioned tribes.



U.S. Department
of Transportation
**Federal Highway
Administration**

Central Federal Lands Highway Division

March 29, 2016

12300 West Dakota Avenue
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Fax: (720) 963-3596
tom.puto@dot.gov

In Reply Refer To:
HFPM-16

<recipient>
<tribe>
<address1>
<address2>
<city>, <state> <zip>

Subject: El Camino Real de Tierra Adentro National Historic Trail, Buckman Road Segment, Retracement Trail Project

Dear <recipient>:

This letter is to inform you about the upcoming El Camino Real de Tierra Adentro National Historic Trail (NHT), Buckman Road Segment, Retracement Trail Project (hereafter “the project”), and request any information or issues relating to cultural or other resources you believe should be considered during project development. Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), which is leading project design and implementation, is initiating this government-to-government consultation with potentially affected Tribes in coordination with the two federal agencies managing lands crossed by the project – Bureau of Land Management (BLM) and United States Forest Service (USFS).

FHWA CFLHD, in cooperation with Santa Fe County, BLM, USFS, and National Park Service (NPS) which jointly administers the NHT with BLM, is proposing the development of a trail following a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Old Buckman Road (County Road (CR) 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road linking the oldest segment of El Camino Real to the Santa Fe River Trail in Santa Fe County, New Mexico. El Camino Real de Tierra Adentro NHT is the earliest Euro-American trade route in the United States and it was added to the National Trails System in 2000.

The purpose of the project is twofold: (1) to increase access to federal lands between downtown Santa Fe and recreation areas located west on the Caja del Rio Plateau and (2) to develop NHT retracement trail opportunities for the public in accordance with the purposes of the NHT and the National Trails System Act. The trail, which would be approximately 15 miles long, would be located on BLM, USFS, City of Santa Fe, and Santa Fe County lands. The project would improve the safety of pedestrian, bicycle, and equestrian access to lands managed by BLM and USFS and to the Santa Fe Municipal Recreation Complex on Caja del Rio Road.

Project Description

The project involves the development of a trail retracing a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Old Buckman Road (CR 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road linking this oldest segment of El Camino Real to the existing Santa Fe River Greenway Trail – a segment of El Camino Real NHT which is currently being developed and continues along the Santa Fe River to the historic Santa Fe Plaza. The project is the result of a multi-year partnership between Santa Fe County, City of Santa Fe, BLM, NPS, and USFS. A Development Concept Plan for this segment of El Camino Real de Tierra Adentro NHT was completed in 2014; a public meeting to support the development of the plan was held in December 2013.

This project would include the construction of an approximately 15 mile long trail retracing a portion of El Camino Real de Tierra Adentro NHT and connecting trail. The segment of trail located on City of Santa Fe and Santa Fe County lands would be an asphalt path. The segment of trail on BLM and USFS lands would be natural surface and would not be paved. Improvements would include new trail alignments, clearing and grubbing, linear earthwork grading, earth surfacing, wayfinding and interpretive signage, and limited grazing fence relocation. Improvements would connect existing trail systems and provide access to and improve the Headquarters, Dead Dog, and Diablo Canyon trailheads. The project does not include highway improvements, except as necessary, to provide for the multi-use trail at existing road crossings.

Comments

As part of this study, we would appreciate your guidance during project development. Your knowledge of the area is of great value and your feedback is important. We would welcome any information or concerns you may wish to share; in particular, if there are any resources or places of traditional cultural or religious importance to members of your tribe that might be affected by the proposed project. As we are still in the early stages of project development, neither a cultural resources survey and report, nor coordination with the State Historic Preservation Officer has been initiated at this time.

Early identification of Tribal concerns will allow FHWA CFLHD, BLM, and USFS to consider ways to avoid and minimize potential impacts to Tribal resources and practices as alternatives are developed and refined. We would be pleased to discuss details of the proposed project with you.

In addition to consulting with your community as part of scoping for the National Environmental Policy Act process, we are also asking if there are issues or concerns with historic properties in the project area under Section 106 of the National Historic Preservation Act. FHWA CFLHD, BLM, and USFS are working collaboratively to deliver this project. Understanding that you have different relationships with each respective agency, if your community wishes to participate as a consulting party under 36 CFR 800.2(c)(2)(ii) please notify one or all of the following individuals:

- Federal Highways Administration
 - Timberley Belish, FHWA CFLHD Environmental Protection Specialist (timberley.belish@dot.gov or 720-963-3683)
- U.S. Forest Service, Santa Fe National Forest
 - Sandy Hurlocker, District Ranger (shurlocker@fs.fed.us or 505-753-7331)

- J. Michael Bremer, Forest Heritage Program Lead (mbremer@fs.fed.us or 505-438-5380)
- Bureau of Land Management, Taos Field Office
 - Sarah Schlanger, Field Manager, Taos Field Office (sschlang@blm.gov or 575-758-8851)
 - Merrill Dicks, Cultural Resources Lead, Taos Field Office (adicks@blm.gov or 575-758-8851)

Your timely response will greatly assist us in incorporating your concerns into project development. For that purpose, we respectfully request that you submit any comments within 30 days of receipt of this correspondence.

Sincerely yours,



Tom Puto
FHWA CFLHD Project Manager



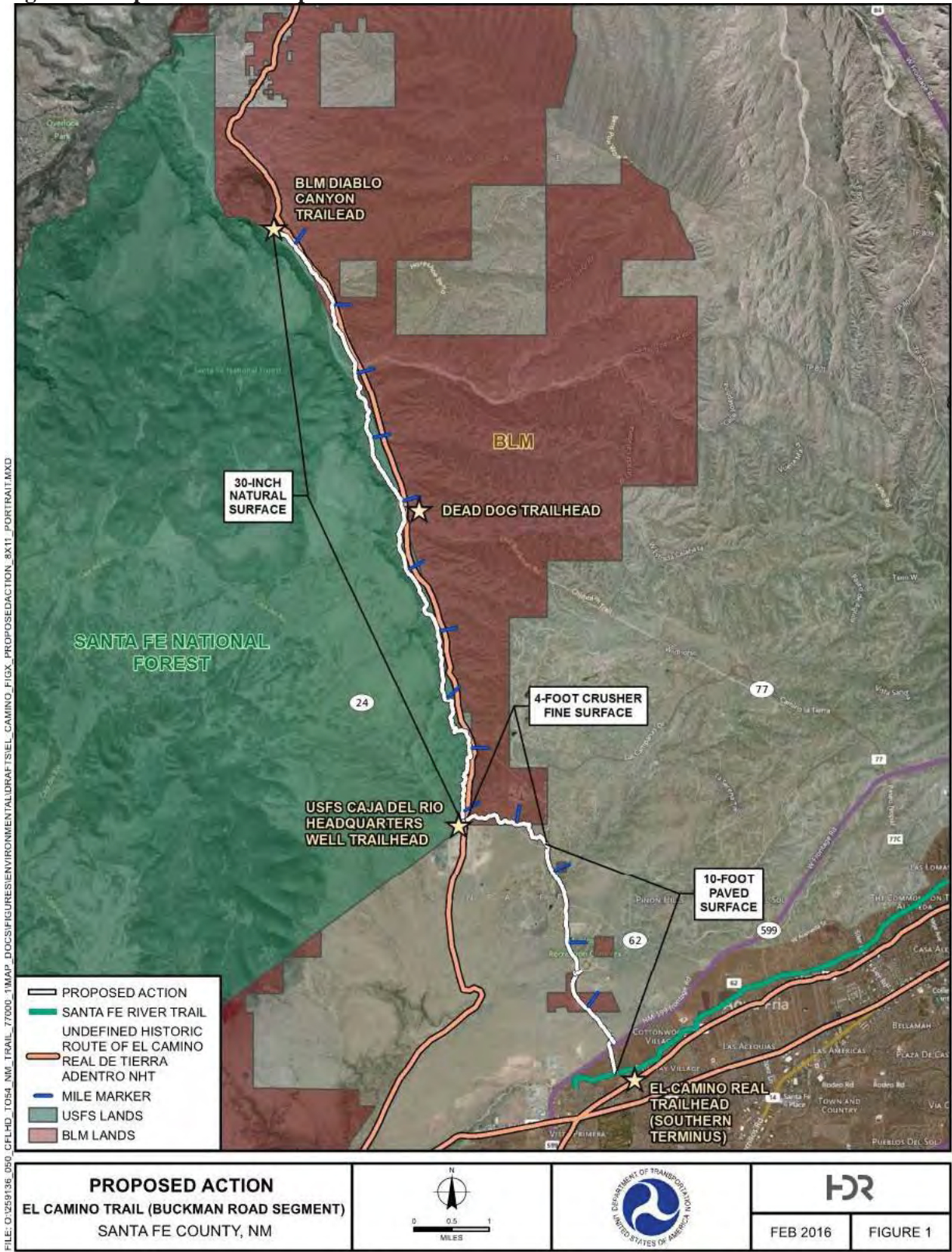
Sarah Schlanger, Field Manager, BLM Taos Field Office



Sandy Hurlocker, District Ranger, USFS, Santa Fe
National Forest

Enclosure: Proposed Action Map

Figure 1. Proposed Action Map



Braitman, Dara

From: Timberley.Belish@dot.gov
Sent: Tuesday, March 22, 2016 10:37 AM
To: Braitman, Dara; Beazley, Sandy
Subject: FW: In reply to HFPM-16 El Camino Real de Tierra Adentro NHT, Buckman Road Segment

From: Phillip Shelley [<mailto:Phillip.Shelley@santaana-nsn.gov>]
Sent: Friday, March 18, 2016 9:35 AM
To: Belish, Timberley (FHWA); 'shurlocker@fs.fed.us'; 'sschlang@blm.gov'
Cc: Julian T. Garcia; Tim Menchego
Subject: In reply to HFPM-16 El Camino Real de Tierra Adentro NHT, Buckman Road Segment

We have reviewed the above referenced project and the Pueblo of Santa Ana has no concerns with the project nor do we have any places of or traditional cultural or religious importance within the project area that we wish to share with you.

Thank you for consulting with us.

Phillip H. Shelley, PhD, RPA
Tribal Historic Preservation Officer
Pueblo of Santa Ana
02 Dove Road,
Santa Ana Pueblo, NM 87004
Phillip.Shelley@santaana-nsn.gov
505-280-5478

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Braitman, Dara

From: Braitman, Dara
Sent: Monday, February 15, 2016 12:22 PM
To: 'ddnaranjo@santaclarapueblo.org'
Cc: Beazley, Sandy; Timberley.Belish@dot.gov; 'shurlocker@fs.fed.us'; 'Bremer, Mike -FS'; Schlanger, Sarah; adicks@blm.gov
Subject: Google Earth Placemark: ECRT - Alignments 2016-02-10.kmz
Attachments: ECRT - Alignments 2016-02-10.kmz

Hi Danny -

I apologize, I sent this to the wrong address.
Please see below.
Thank you.

Dara

-----Original Message-----

From: Braitman, Dara
Sent: Monday, February 15, 2016 12:15 PM
To: 'ddnaranjo@santaclara.org'
Cc: Timberley.Belish@dot.gov; Beazley, Sandy; 'shurlocker@fs.fed.us'; 'Bremer, Mike -FS'; Schlanger, Sarah; adicks@blm.gov
Subject: Google Earth Placemark: ECRT - Alignments 2016-02-10.kmz

Good morning Danny -

Timberley Belish from FHWA asked that I send you a KMZ of the proposed alignment for El Camino Real Retracement Project. It is attached.

Please note that a loop trail is shown just south of the Dead Dog Trailhead. At this time, this element may or may not remain as part of project design.

For you identification of cultural resources, I think it's inclusion in the attached would be helpful.

Please contact me if you have questions or need additional information.

Thank you.

Dara

Dara L. Braitman, AICP
Environmental Planner / Task Manager
HDR
1670 Broadway, Suite 3400
Denver, Colorado 80202-4824
D 303-323-9827
dara.braitman@hdrinc.com
hdrinc.com/follow-us

Beazley, Sandy

From: Timberley.Belish@dot.gov
Sent: Monday, February 15, 2016 11:49 AM
To: Braitman, Dara; Beazley, Sandy
Subject: FW: El Camino Real

Hi,

Can you provide Danny with a KLM file of the project?

Thanks, timber

From: Danny D. Naranjo [<mailto:ddnaranjo@santaclarapueblo.org>]
Sent: Friday, February 12, 2016 2:12 PM
To: Belish, Timberley (FHWA); shurlocker@fs.fed.us; Bremer, Mike -FS; sschlanger@blm.gov; adicks@blm.gov
Subject: Re: El Camino Real

Good afternoon all,

We have recently received a notice of the El Camino Real Retracement Project. There was an included map of the project, I wanted to know if I can get a KLM file (Google Earth) to help determine if any cultural resources will be affected. Any other info you can provide will help as well thanks so much.

Danny Naranjo
Land and Cultural Resources Technician
ddnaranjo@santaclarapueblo.org
(505)692-6285 Ext.#1234



Herman G. Honanie
CHAIRMAN

Alfred Lomahquahu Jr.
VICE-CHAIRMAN

February 11, 2016

Tom Puto, Project Manager
Federal Highway Administration, Central Federal Lands Highway Division
12300 West Dakota Ave. Suite 380A
Lakewood, Colorado 80228-2583

Re: El Camino Real de Tierra Adentro National Historic Trail, Buckman Road Segment, Retracement Trail Project

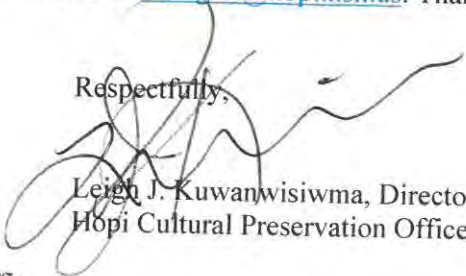
Dear Mr. Puto,

This letter is in response to your correspondence dated February 3, 2016, regarding the Federal Highway Administration (FHWA), Bureau of Land Management and Sana Fe National Forest proposing the El Camino Real de Tierra Adentro National Historic Trail, Buckman Road Segment, Retracement Trail Project in Santa Fe. The Hopi Tribe claims cultural affiliation to earlier identifiable cultural groups in New Mexico. The Hopi Cultural Preservation Office supports the identification and avoidance of our ancestral sites, and we consider the prehistoric archaeological sites of our ancestors to be Traditional Cultural Properties. Therefore, we appreciate the FHWA's continuing solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office understand the project would include the construction of an approximately 15 mile long trail retracing a portion of El Camino Real de Tierra Adentro National Historic Trail. We request consultation on any proposal with the potential to adversely affect prehistoric cultural resources. Therefore, if the cultural resource survey of the area of potential effect identifies prehistoric sites that may be adversely affected by project activities, please provide us with copies of the cultural resources survey reports and any proposed treatment plans for review and comment.

If you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office at 928-734-3619 or tmorgart@hopi.nsn.us. Thank you for your consideration.

Respectfully,


Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: New Mexico State Historic Preservation Office

Appendix B.
Public and Agency Involvement/Public Comments

- Public Scoping Meeting Notification Letter
- Public Scoping Meeting Flyer
- Public Scoping Meeting Boards
- Public Scoping Meeting Presentation
- Public Scoping Meeting Sign-In Sheet
- Public Scoping Meeting Comments
- Santa Fe New Mexican Article

Public Scoping Meeting Notification Letter



U.S. Department
of Transportation
**Federal Highway
Administration**

Central Federal Lands Highway Division

February 8, 2016

12300 West Dakota Avenue
Suite 380
Lakewood, CO 80228
(720) 963-3728
Fax: (720) 963-3596
tom.puto@dot.gov

In Reply Refer To:
HFPM-16

Subject: Public Scoping Meeting for El Camino Real de Tierra Adentro National Historic Trail, Buckman Road Segment, Retracement Trail Project

Dear Interested Public:

This letter initiates a 30-day public scoping period for El Camino Real de Tierra Adentro National Historic Trail (NHT), Buckman Road Segment, Retracement Trail Project (hereafter “the Project”). The Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in cooperation with Santa Fe County, Bureau of Land Management (BLM), United States Forest Service (USFS), and National Park Service (NPS) which jointly administers the NHT with BLM, is proposing the development of a trail following a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Old Buckman Road (County Road (CR) 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road linking the oldest segment of El Camino Real to the Santa Fe River Trail. El Camino Real de Tierra Adentro NHT is the earliest Euro-American trade route in the United States and it was added to the National Trails System in 2000.

The purpose of the Project is twofold: (1) to increase access to federal lands between downtown Santa Fe and recreation areas located west on the Caja del Rio Plateau and (2) to develop NHT retracement trail opportunities for the public in accordance with the purposes of the NHT and the National Trails System Act. The trail, which would be approximately 15 miles long, would be located on BLM, USFS, City of Santa Fe, and Santa Fe County lands. The Project would improve the safety of pedestrian, bicycle, and equestrian access to lands managed by BLM and USFS and to the Santa Fe Municipal Recreation Complex on Caja del Rio Road.

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, FHWA, as the lead agency, is preparing an environmental assessment (EA) to evaluate potential impacts to the natural and human environment that may result from Project alternatives. These alternatives include the No-Action and the Proposed Action. Modifications to the Proposed Action may result from public input, including issues or concerns identified during development of the EA.

There will be two opportunities to comment formally on the Project – once during the initial scoping period and again following release of the EA. The agencies are currently in the scoping phase, which is the process that leads to the identification of the issues to be addressed and the range of actions and alternatives to be analyzed in the EA. It is a process, not an event, which continues throughout the planning process and results

in the identification of the proper scope of the analysis. As part of this process, the agencies will hold a public scoping meeting regarding the Project. This meeting will provide an opportunity for the public to learn more about the Project; to discuss route alignment, construction details, resource mitigation, and safety concerns; and to address other questions or concerns that you may have about the Project. Comments received will be incorporated into the planning process and used to develop the scope of the EA.

You are invited to attend the public scoping meeting about the Project that will be held on February 17, 2016 from 5:30 pm to 7:30 pm at the Nancy Rodriguez Community Center, 1 Prairie Dog Loop, Santa Fe, New Mexico, 87507.

Proposed Action

The Project involves the development of a trail retracing a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Old Buckman Road (CR 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road linking this oldest segment of El Camino Real to the existing Santa Fe River Trail – a segment of El Camino Real NHT which is currently being developed and continues along the Santa Fe River to the historic Santa Fe Plaza. The Project is the result of a multi-year partnership between Santa Fe County, City of Santa Fe, BLM, NPS, and USFS. A Development Concept Plan for this segment of the El Camino Real de Tierra Adentro NHT was completed in 2014; a public meeting to support the development of the plan was held in December 2013.

This Project would include the construction of an approximately 15-mile long trail retracing a portion of El Camino Real de Tierra Adentro NHT and connecting trail. The segment of trail located on City of Santa Fe and Santa Fe County lands would be an asphalt path. The segment of trail on BLM and USFS lands would be natural surface and would not be paved. Improvements would include new trail alignments, clearing and grubbing, linear earthwork grading, earth surfacing, wayfinding and interpretive signage, and limited livestock grazing fence relocation. Improvements would connect existing trail systems and provide access to and improve the Headquarters, Dead Dog, and Diablo Canyon trailheads. The Project does not include highway improvements, except as necessary, to provide for the multi-use trail at existing road crossings.

Comments

If you have any information or comments regarding the Project, you may submit written comments to the following address:

FHWA Central Federal Lands Highway Division
Attention: Tom Puto
12300 West Dakota Avenue, Suite 380
Lakewood, Colorado 80228

Comments will also be accepted at the public scoping meeting. To be most helpful in addressing issues and concerns for the development of the EA, you should provide your comments by March 17, 2016. If you require additional information about the Project, please see the Project website (http://www.santafecountynm.gov/open_space_and_trails_program/flap) or contact Tom Puto, Project Manager, at (720) 963-3728.

Please note that the name and address of the person submitting comments must be included. Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record for this project and will be available for public inspection.

Comments submitted anonymously will be accepted and considered; however, those who submit anonymous comments will not have standing to appeal the subsequent decision under 36 CFR215, if the NEPA documentation results in an appealable decision.

Additionally, pursuant to 7 CFR 1.27(d), any persons may request the Agency to withhold a submission from the public record by showing how the Freedom of Information Act (FOIA) permits such confidentiality. Persons requesting such confidentiality should be aware that under the FOIA, confidentiality may be granted in only limited circumstances such as to protect trade secrets.

The EA will be available for review and comment electronically and by hard copy for anyone who specifically requests that it be mailed to them.

We greatly appreciate your interest in the management of public lands and hope to see you at the upcoming meeting on February 17, 2016 from 5:30 pm to 7:30 pm at the Nancy Rodriguez Community Center.

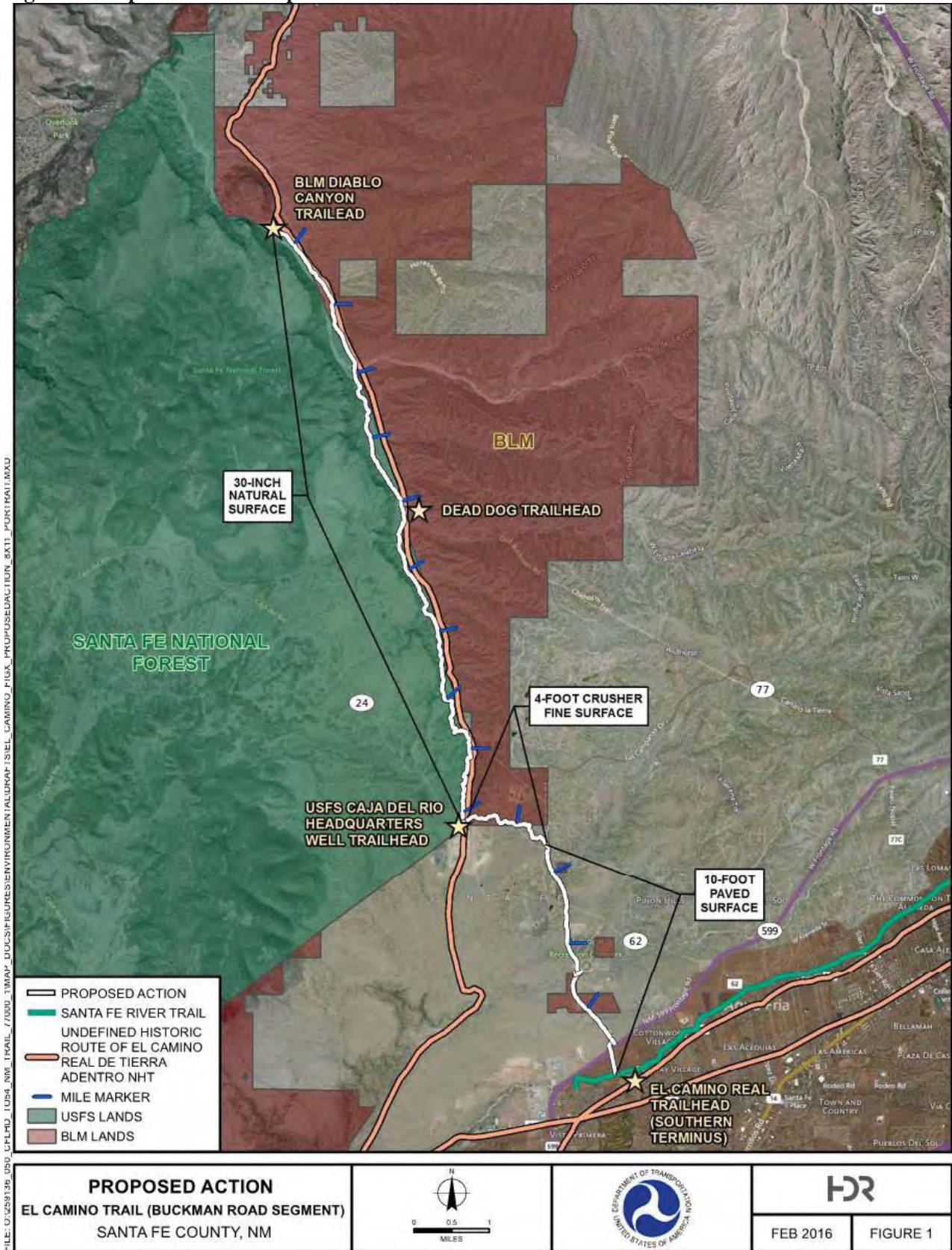
Sincerely,

A handwritten signature in blue ink that reads "Tom Puto". The signature is written in a cursive style with a light blue shadow effect behind the text.

Tom Puto
FHWA, CFLHD Project Manager

Enclosure: Proposed Action Map

Figure 1. Proposed Action Map



Public Scoping Meeting Flyer

El Camino Real de Tierra Adentro National Historic Trail



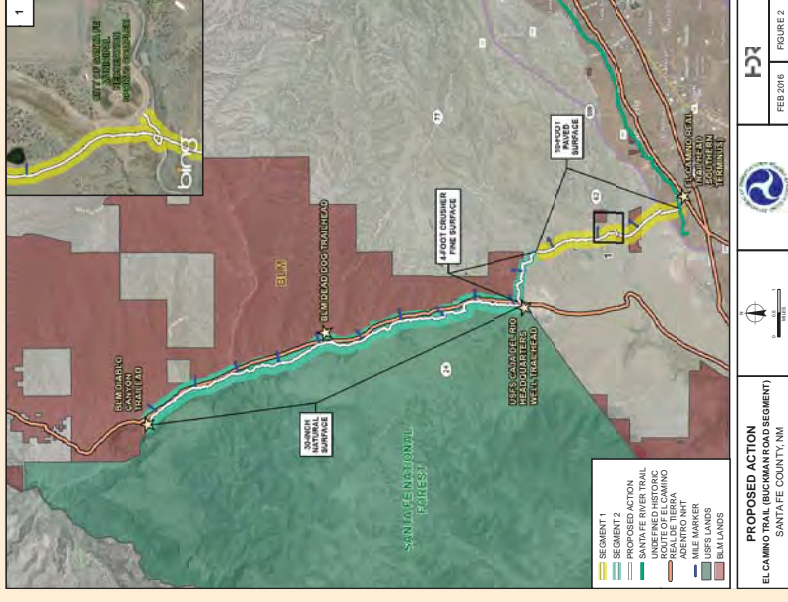
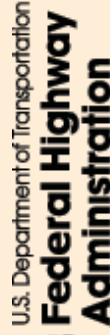
PUBLIC SCOPING MEETING: February 17, 2016

You are cordially invited to attend a public scoping meeting for: El Camino Real de Tierra Adentro National Historic Trail, Buckman Road Segment, Retracement Trail Project

Nancy Rodriguez Community Center

1 Prairie Dog Loop 5:30pm - 7:30pm
 Santa Fe, NM 87507 A presentation will start at 6pm

Join us to discuss the potential implementation of a trail that would (1) increase access to federal lands between downtown Santa Fe and recreation areas located west on the Caja del Rio Plateau and (2) follow a portion of the congressionally designated route of the El Camino Real de Tierra Adentro NHT along Old Buckman Road (County Road 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road linking the oldest segment of El Camino Real to the Santa Fe River Trail.



Questions? Contact Tom Puto, Project Manager: (720)963-3728 or tom.puto@dot.gov
 Visit us online at: http://www.santafecountynm.gov/open_space_and_trails_program/flap

Public Scoping Meeting Boards

El Camino Real de Tierra Adentro National Historic Trail



Welcome!

Welcome to the Federal Lands Access Program, El Camino Real de Tierra Adentro National Historic Trail, Buckman Road Segment, Retracement Trail Project Public Scoping Meeting

Agenda:

- 5:30 p.m. – 6:00 p.m. – Sign-in and Open House
- 6:00 p.m. – 6:30 p.m. – Presentation
- 6:30 p.m. – 7:30 p.m. – Questions and Comments

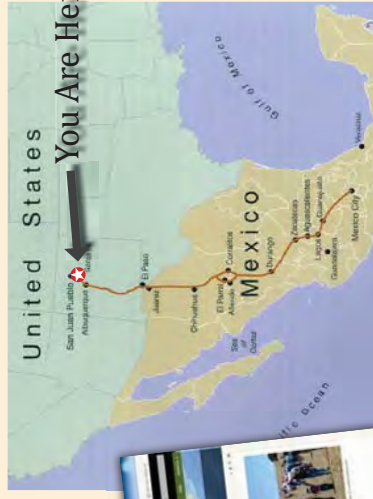
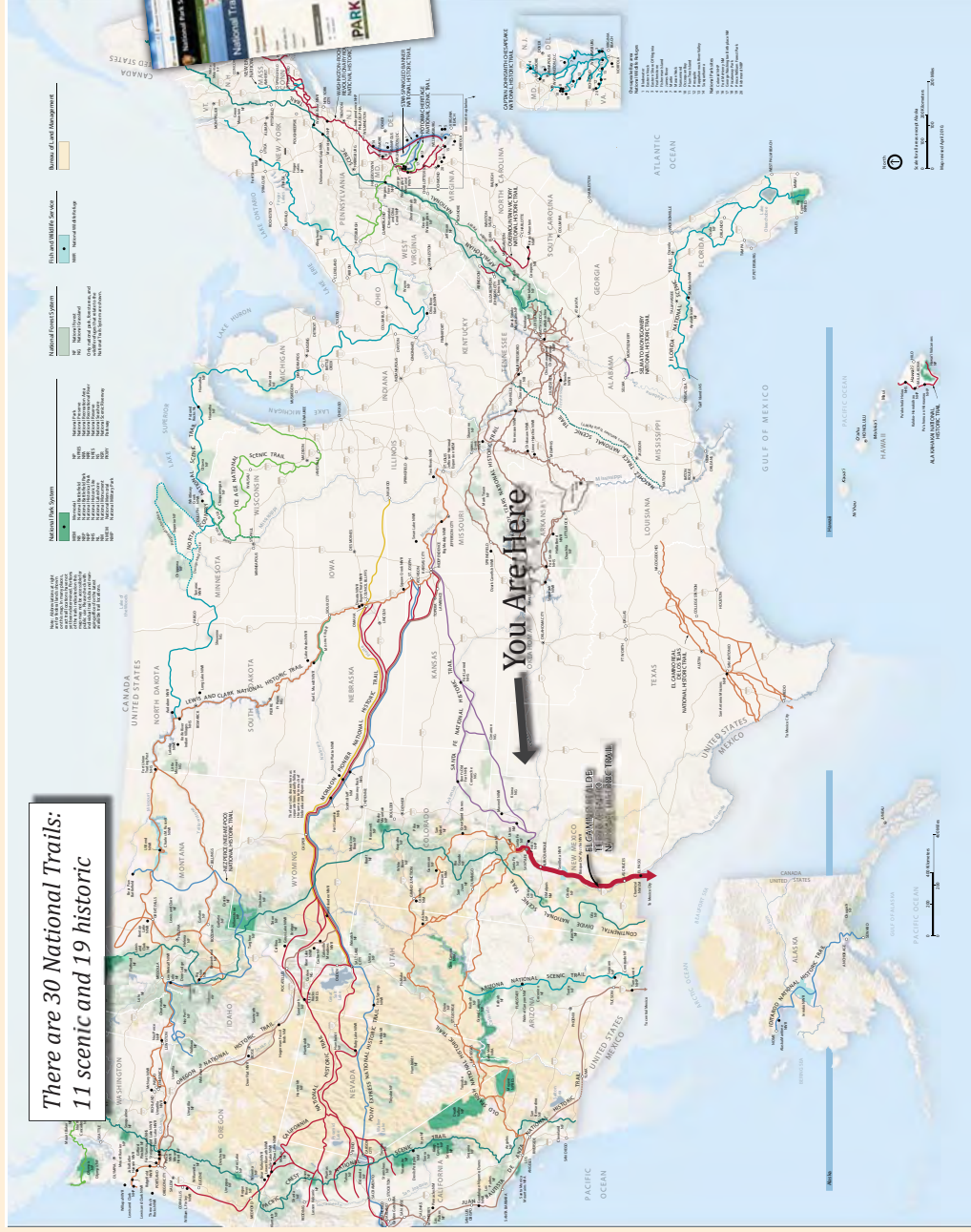


U.S. Department of Transportation
Federal Highway
Administration

El Camino Real de Tierra Adentro National Historic Trail



National Historic Trails Overview



National Trails Intermountain Region
administers 9 national trails:

1. Sante Fe
2. Oregon
3. California
4. Pony Express
5. Mormon Pioneer
6. Trail of Tears
7. **Old Spanish**
8. El Camino Real de los Tejas
9. **El Camino Real de Tierra**

2 trails jointly administered with BLM
www.nps.gov/ntir

El Camino Real de Tierra Adentro National Historic Trail

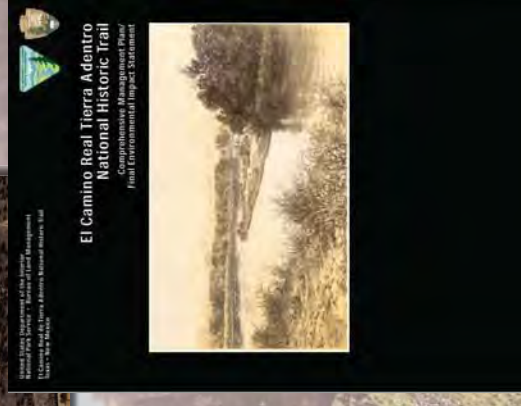


Project Background

El Camino Real Trail and multi-modal transportation projects on and accessing federal lands have been described in numerous local and regional studies, and have been the subject of public meetings.

This is what we have heard:

- Provide connections to other trails and trailheads, including the Santa Fe River, Dead Dog, and Soda Springs trails, and the City of Santa Fe Municipal Recreation Complex.
- Use the Chili Line to the extent possible.
- Accommodate equestrian use.
- Remove the trail from the road to minimize interactions between pedestrians, bicyclists, and equestrian users and motorized vehicles.
- Use “triangle” trail etiquette signs.
- Connect to local neighborhoods.
- Make the trail sustainable and aesthetically pleasing.
- Have water available at trailheads, if possible.



El Camino Real de Tierra Adentro National Historic Trail



Purpose and Need

The purpose of the Project is to:

- Improve federal lands access by enhancing trail connectivity between land uses in Santa Fe County and City of Santa Fe, and the recreational opportunities on BLM and USFS lands.
- Enhance the safety of non-motorized users accessing federal lands and other recreational opportunities in the area.
- Develop a trail retracing a portion of the congressionally designated route of El Camino Real de Tierra Adentro National Historic Trail (NHT) along Buckman Road.

The Project needs include:

- Improve access to federal lands for non-motorized users because the lack of existing trail infrastructure puts pedestrians and bicyclists in potential conflict with motorists. Based on growth projections, non-motorized use is expected to continue to increase.
- Assist local and federal agencies in meeting the congressional intent of the National Trails System Act by constructing one of the first segments of El Camino Real de Tierra Adentro NHT.
- Improve trail connectivity on federal lands. There is currently no non-motorized connection between Caja del Rio Road and the Caja del Rio Headquarters Well, Dead Dog, and Diablo Canyon trailheads.

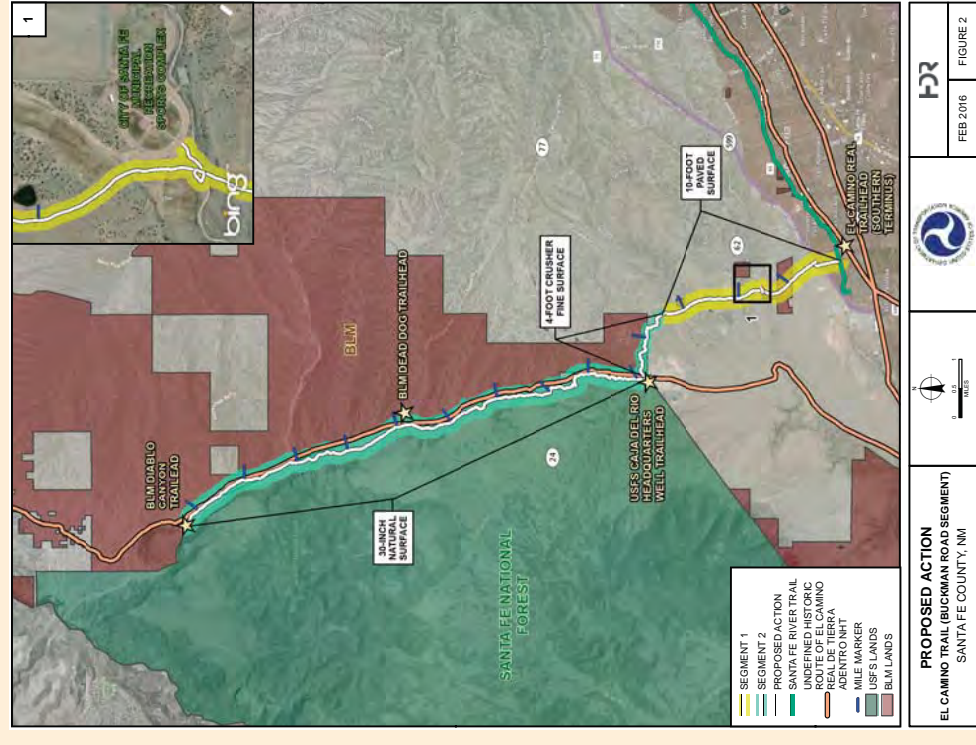


El Camino Real de Tierra Adentro National Historic Trail



Proposed Action

- Approximately 15 miles of new trail offering a non-motorized connection between the Santa Fe River Trail and the BLM Diablo Canyon Trailhead.
- The Project is described in two segments, generally based on surface type of the trail.
 - Segment 1
 - Generally follows Caja del Rio Road.
 - Creates a connection to the City of Santa Fe Municipal Recreation Complex, as well as USFS and BLM lands.
 - It is a 10-foot wide paved multi-use trail.
 - Installation of trail wayfinding and interpretive signage.
 - Segment 2
 - Primarily located on BLM and USFS lands.
 - A 4-foot wide crusher fine trail connecting Caja del Rio Road to the Caja del Rio Headquarters Well Trailhead.
 - A 30-inch wide natural surface trail between the Caja del Rio Headquarters Well and Diablo Canyon trailheads.
 - Improvements at the Dead Dog Trailhead.
 - Installation of trail wayfinding and interpretive signage.
 - Livestock fence relocation.



El Camino Real de Tierra Adentro National Historic Trail



Environmental Resources

Based on input from federal and local agencies the following resources have been identified for detailed analysis in the environmental assessment.

- Vegetation and Weeds
- Lands and Realty
- Livestock Grazing
- Area of Critical Environmental Concern
- Cultural Resources
- Soils
- Floodplains
- Wildlife and Special Status Species
- Socioeconomics
- Recreation
- Noise
- Air Quality
- Visual Resources
- Wetlands and Waters of the U.S.



El Camino Real de Tierra Adentro National Historic Trail



We Want to Hear from You

What are your questions, concerns, and comments about the Project?

- Are you aware of sensitive resources that may be affected by the Project?
- What concerns or questions do you have about the Project?
- Are you aware of individuals, groups, or organizations who should know about the Project?

Schedule

Jan 2014

FLAP Application
Submitted



June 2014

Initial Project Scoping

Fall 2015 - Spring/Summer 2016

30% Design and Environmental Assessment

February 2016

Public Scoping Meeting
(We Are Here)



Spring/Summer 2016

Public Hearing and Comment Period

Summer 2016

Agency Decision Documents

Late Summer 2016

100% Design

2017

Construction

Where to get additional information: http://www.santafecountynm.gov/open_space_and_trails_program/flap

Public Scoping Meeting Presentation

El Camino Real de Tierra Adentro National Historic Trail



**Buckman Road Segment, Retracement Trail Project
Public Scoping Meeting
February 17, 2016**

5:30 p.m. to 7:30 p.m.
Nancy Rodriguez Community Center
1 Prairie Dog Loop
Santa Fe, New Mexico 87507

El Camino Real de Tierra Adentro National Historic Trail



AGENDA

- Federal Lands Access Program
- Project Partners
- National Historic Trails (NHT) Overview
- Project Background
- Project Purpose and Need
- Proposed Action
- Environmental Impacts
- Your Input and Project Schedule
- Questions



El Camino Real de Tierra Adentro National Historic Trail



NEW MEXICO FEDERAL LANDS ACCESS PROGRAM

- Goal of the program is to improve transportation facilities that access federal lands.
- Federal and local match
 - Federal government: ~85%
 - Santa Fe County: ~15%
- To date, this program has delivered five projects in New Mexico.



El Camino Real de Tierra Adentro National Historic Trail



PROJECT PARTNERS

Five local and federal agencies have teamed up to deliver this project:

- Federal Highway Administration
- Bureau of Land Management
- U.S. Forest Service
- National Park Service
- Santa Fe County



U.S. Department
of Transportation
**Federal Highway
Administration**



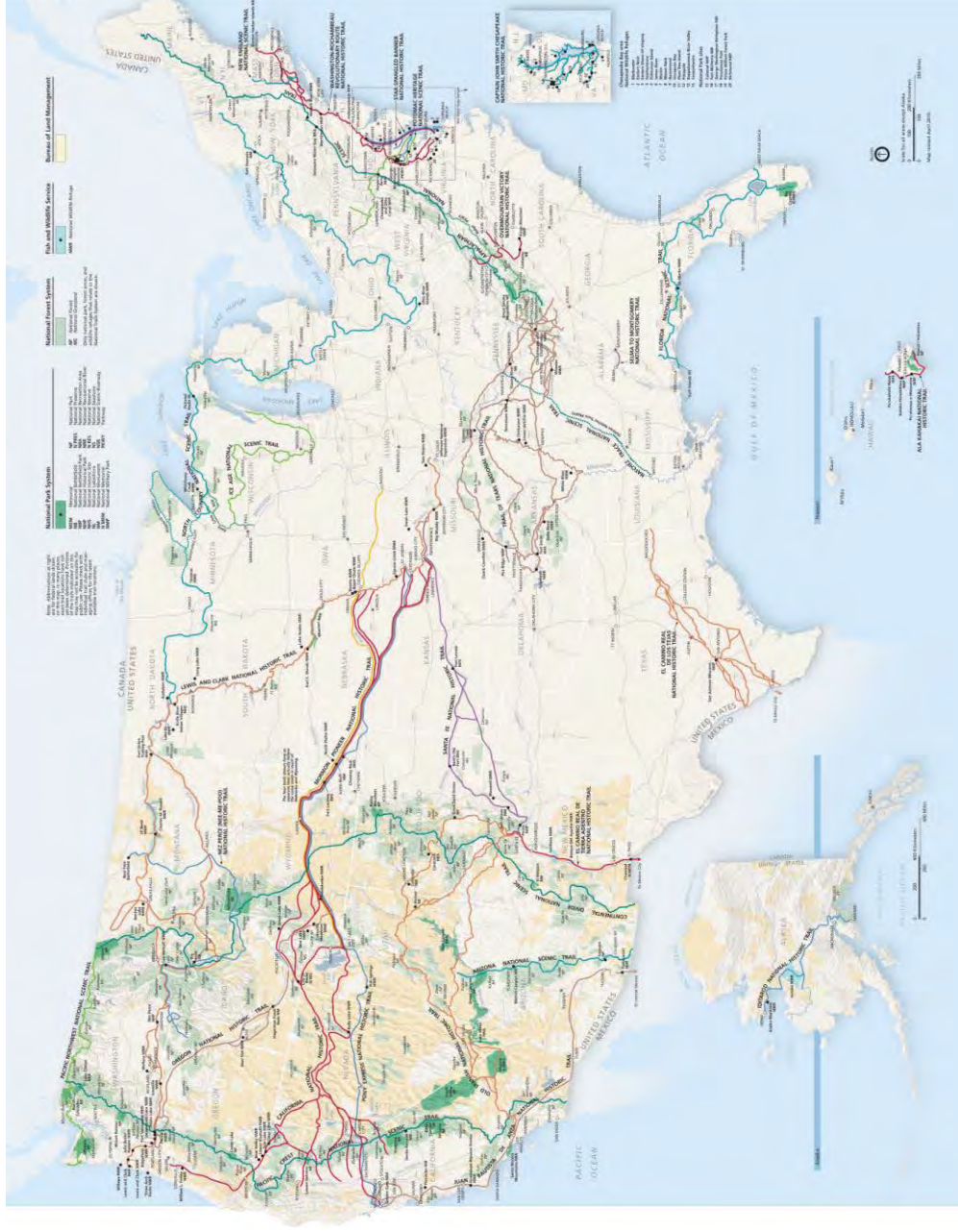
El Camino Real de Tierra Adentro National Historic Trail



NATIONAL HISTORIC TRAILS OVERVIEW

30 National Trails

- 11 scenic
- 19 historic



El Camino Real de Tierra Adentro National Historic Trail



NATIONAL PARK SERVICE TRAILS OFFICE

Administer 9 National Trails

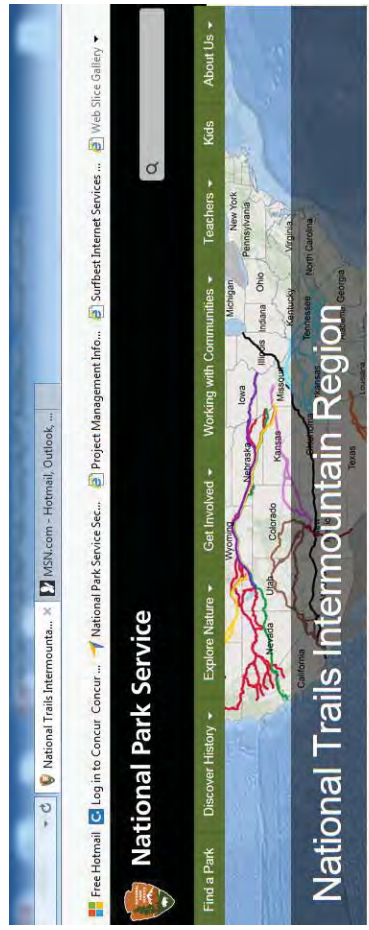


1. Santa Fe
2. Oregon
3. California
4. Pony Express
5. Mormon Pioneer
6. Trail of Tears
7. **Old Spanish**
8. El Camino Real de los Tejas

2 trails jointly administered with BLM

www.nps.gov/ntir

9. **El Camino Real de Tierra Adentro**




Explore This Organization

- Home
- What We Do
- Partners
- News

Organization Tools

- Contact Us
- Site Index



Take a walk on a national historic trail
NPS

National Trails Intermountain Region works with partners across nine national historic trails, one historic highway, 24,000 miles, and 25 states to protect, develop, and promote these special places.

Our staff of interdisciplinary experts works with community groups, private landowners, nonprofit organizations, tribes, and federal, state, county, and local agencies to identify the resources, provide site planning and design, map the trail on the ground, and develop educational opportunities.

Do you live near one of these historic routes? This website offers tools and services to develop and promote your historic sites and segments. It also shares best practices to help care for national historic trails.

Partnering is our passion. Visit the trail websites, and then contact us about working together

[California National Historic Trail](#)
[El Camino Real de Tierra Adentro National Historic Trail](#)
[El Camino Real de los Tejas National Historic Trail](#)
[Mormon Pioneer National Historic Trail](#)
[Old Spanish National Historic Trail](#)
[Oregon National Historic Trail](#)

El Camino Real de Tierra Adentro National Historic Trail



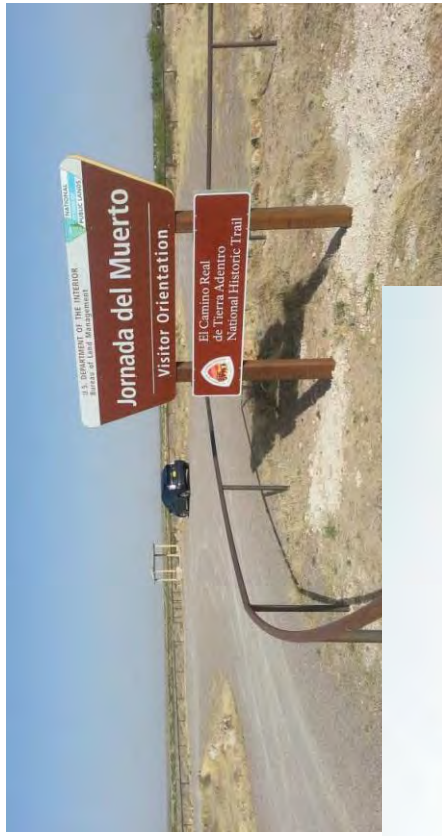
EL CAMINO DE TIERRA ADENTRO NHT



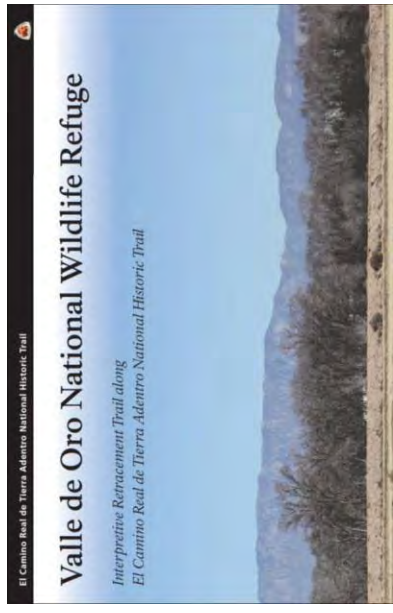
El Camino Real de Tierra Adentro National Historic Trail



EXISTING PUBLIC RETRAACEMENT TRAIL OPPORTUNITIES & PLANNED PROJECTS



- Jornada del Muerto



- Valle de Oro National Wildlife Refuge

El Camino Real de Tierra Adentro National Historic Trail



PROJECT BACKGROUND

The El Camino Real Trail and multi-modal transportation projects have a long history in Santa Fe County.

Previous Plans and Studies

El Camino Real de Tierra Adentro National Historic Trail Comprehensive Management Plan / Final Environmental Impact Statement

Santa Fe Metropolitan Transportation Plan, 2010-2025 (as amended)

BLM's Taos Resource Management Plan

Santa Fe Metropolitan Bicycle Master Plan

USFS's Santa Fe National Forest Plan

Santa Fe County Sustainable Growth Management Plan

The New Mexico 2040 Plan. NMDOT's Long-Range, Multi-Modal Transportation Plan

Santa Fe Open Land and Trails Plan

El Camino Real de Tierra Adentro National Historic Trail



PROJECT BACKGROUND (CONT.)

- Santa Fe County sought project-specific public input as follows:
 - December 2013 – a public scoping meeting to contribute to the development of a conceptual trail plan.
 - August 2015 – a “user group” meeting to discuss what elements would make for a successful trail experience.

This is what we heard:

- Provide connections to other trails and trailheads, including the Santa Fe River, Dead Dog, and Soda Springs trails.
- Use the Chili Line to the extent possible.
- Accommodate equestrian use.
- Remove the trail from the road to minimize interactions between non-motorized and motorized users.
- Use “triangle” trail etiquette signs.
- Connect to local neighborhoods.
- Make the trail sustainable and aesthetically pleasing.
- Have water available at trailheads, if possible.

El Camino Real de Tierra Adentro National Historic Trail



PROJECT PURPOSE

The purpose of the Project is to:

- Improve federal lands access by enhancing trail connectivity between land uses in Santa Fe County, City of Santa Fe, and the recreational opportunities on BLM and USFS lands.
- Enhance the safety of non-motorized users accessing federal lands and other recreational opportunities in the area.
- Develop a trail retracing a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Buckman Road.



El Camino Real de Tierra Adentro National Historic Trail



PROJECT NEED

The Project needs include:

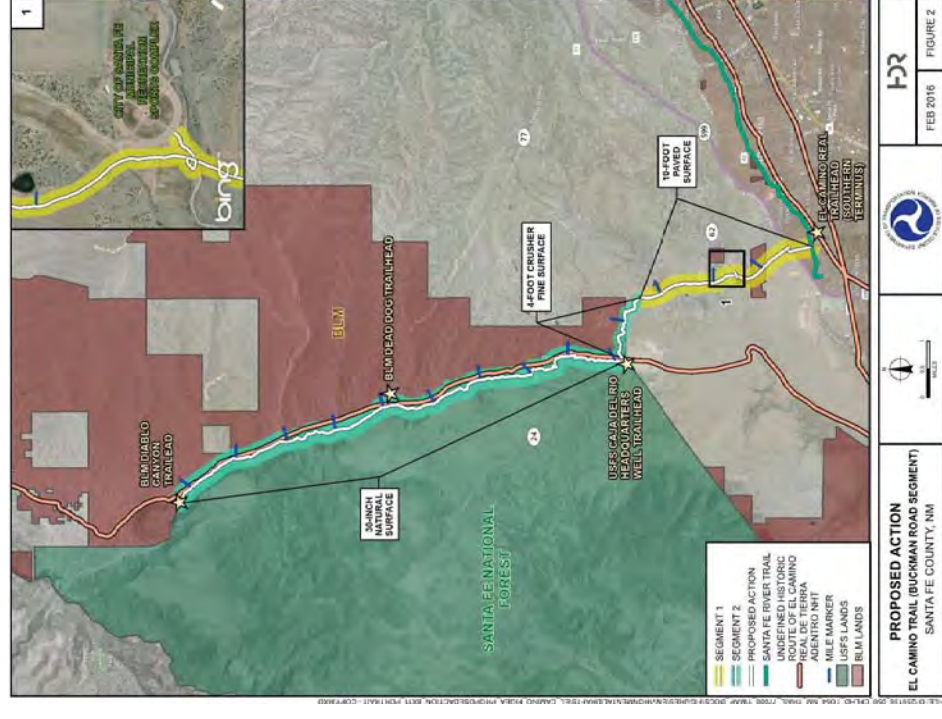
- Improve access to federal lands for non-motorized users because the lack of existing trail infrastructure puts pedestrians and bicyclists in potential conflict with motorists.
- Assist local and federal agencies in meeting the congressional intent of the National Trails System Act by constructing one of the first segments of El Camino Real de Tierra Adentro NHT.
- Improve trail connectivity on federal lands. There is currently no non-motorized connection between Caja del Rio Road and the Caja del Rio Headquarters Well, Dead Dog, and Diablo Canyon trailheads.

El Camino Real de Tierra Adentro National Historic Trail



PROPOSED ACTION

- Approximately 15 miles of new trail offering a non-motorized connection between the Santa Fe River Trail and the BLM Diablo Canyon Trailhead.
- Segment 1
 - Generally follows Caja del Rio Road.
 - Creates a connection to the City of Santa Fe Municipal Recreation Complex, as well as USFS and BLM lands.
 - It is a 10-foot wide paved multi-use trail.
 - Installation of trail wayfinding and interpretive signage.

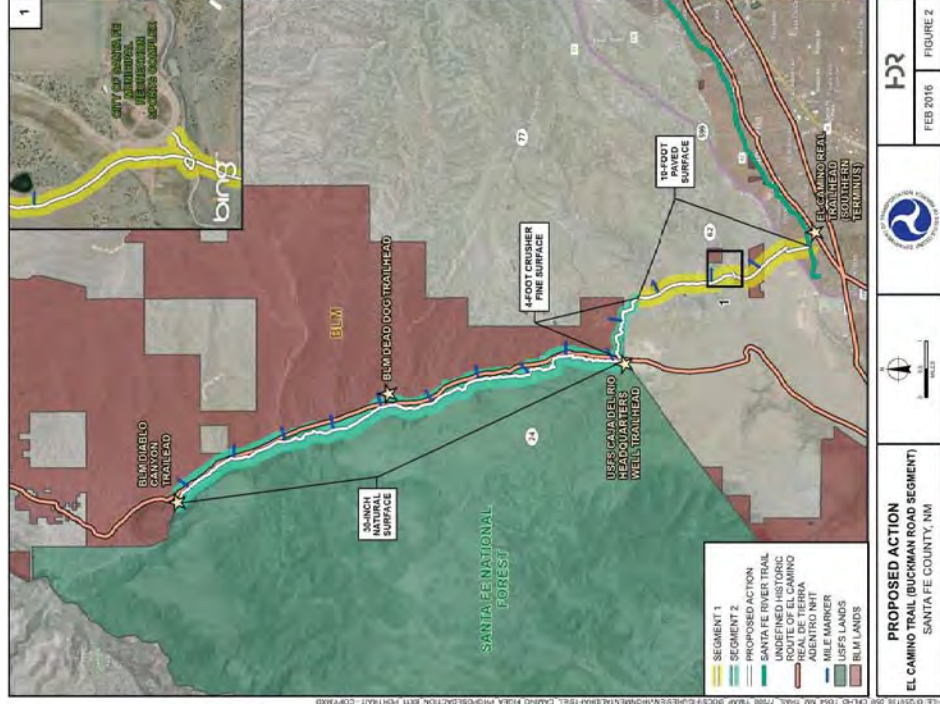


El Camino Real de Tierra Adentro National Historic Trail



PROPOSED ACTION (CONT.)

- Segment 2
 - Primarily located on BLM and USFS lands.
 - A 4-foot wide crusher fine trail connecting Caja del Rio Road to the Caja del Rio Headquarters Well Trailhead.
 - A 30-inch wide natural surface trail between the Caja del Rio Well and Diablo Canyon trailheads.
 - Dead Dog Trailhead improvements.
 - New trail wayfinding and interpretive signage.
 - Livestock fence relocation.



El Camino Real de Tierra Adentro National Historic Trail



ENVIRONMENTAL RESOURCES

- Based on input from federal and local agencies.
- Identified resources will be evaluated in detail in the environmental assessment.

Resources of Concern

Vegetation and Weeds

Wildlife and Special Status Species

Lands and Realty

Socioeconomics

Livestock Grazing

Recreation

Area of Critical Environmental Concern

Noise

Cultural Resources

Air Quality

Soils

Visual Resources

Floodplains

Wetlands and Waters of the U.S.

El Camino Real de Tierra Adentro National Historic Trail



INPUT AND PROJECT SCHEDULE

What are your questions, concerns, and comments about the Project?

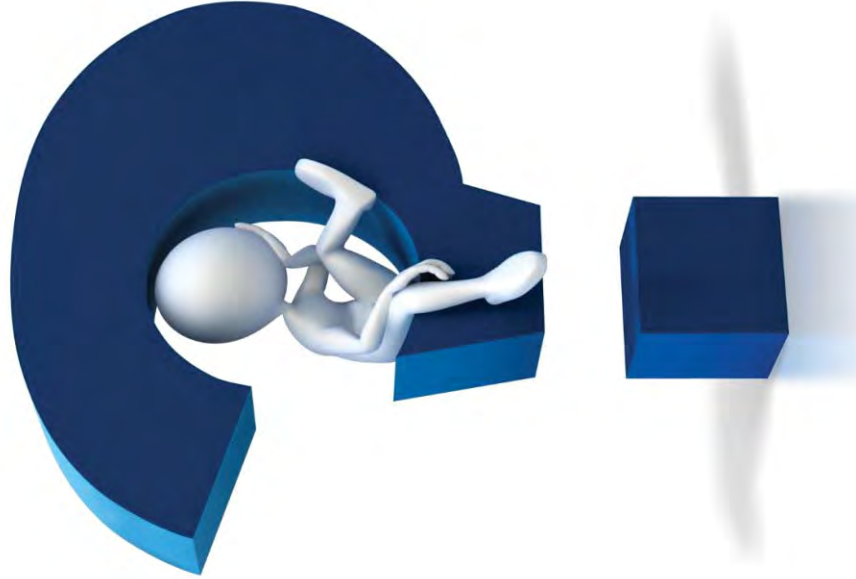
- Are you aware of sensitive resources that may be affected by the Project?
- What concerns or questions do you have about the Project?
- Are you aware of individuals, groups, or organizations who should know about the Project?



El Camino Real de Tierra Adentro National Historic Trail



QUESTIONS?



Public Scoping Meeting Sign-In Sheet

El Camino Real de Tierra Adentro National Historic Trail Buckman Road Segment, Retracement Trail Project

U.S. Department
of Transportation
Federal Highway
Administration



Public Scoping Meeting
February 17, 2016
5:30 to 7:30 P.M.
Sign-in Sheet

First Name	Last Name	Affiliation	Address	Email
STEVEN	HUNT	NMCHVA	19A DEANS CT SF, NM, 87508	HUNT4STEVE@GMAIL.COM
Melissa	HOUSER	SFCT	PO Box 23985 SF NM 87502	Melissa@sfct.org
MIKE	BREMER	SFNF	11 FOREST LN, SF 87508	mbremer@fs.fed.us
KEITH	WILSON	SANTA FE MPO	P.O. Box 909 SANTA FE, NM 87504	kpwilson@santafenm.gov
Maria Lohmann William Lois Mee	Mee	Santa Fe County Agua Fria Village Area	2073 Camino San Matoya	meloemann@santafecountynm.gov WilliamHenryMee@aol.com
JANA COMSTOCK		SFNF		jmcostock@fs.fed.us
James	Westmoreland	SF Striders	PO Box 1818 SF NM 87501	jambayast@gmail.com
PAUL	BRASHER	NMDOT - DIST. 5	7315 CERILLOS RD. SANTA FE	paul.brasher@statenm.us

El Camino Real de Tierra Adentro National Historic Trail Buckman Road Segment, Retracement Trail Project

U.S. Department
of Transportation
Federal Highway
Administration



Public Scoping Meeting
February 17, 2016
5:30 to 7:30 P.M.
Sign-in Sheet

First Name	Last Name	Affiliation	Address	Email
Miles	Standish	USFS		mstandish@fs.fed.us

Public Scoping Meeting Comments

Braitman, Dara

From: Colleen Baker <CBaker@santafecountynm.gov>
Sent: Tuesday, March 22, 2016 1:57 PM
To: Tom.Puto@dot.gov
Cc: Hahn, Philip; Beazley, Sandy; Braitman, Dara
Subject: FW: El Camino Real trail

It's nice to hear the enthusiasm for what **we** are all working on!

From: Enrique Montoya II [<mailto:dreeksmonto@yahoo.com>]
Sent: Tuesday, March 22, 2016 9:35 AM
To: Colleen Baker
Subject: Re: El Camino Real trail

Colleen, You are awesome. Thank you! So fired up for this new trail!

From: Colleen Baker <CBaker@santafecountynm.gov>
To: Tim Rogers <tim@sfct.org>; "dreeksmonto@yahoo.com" <dreeksmonto@yahoo.com>
Sent: Monday, March 21, 2016 11:38 AM
Subject: RE: El Camino Real trail

Mr. Montoya,
Please see the attached scoping letter that includes a map. If you need more information please feel free to contact me.
Best,
Colleen

Colleen Baker
Project Manager
Public Works Department, Projects Division
Santa Fe County
(505) 992-9868

From: Tim Rogers [<mailto:tim@sfct.org>]
Sent: Thursday, February 25, 2016 4:36 PM
To: Colleen Baker; dreeksmonto@yahoo.com
Subject: Fwd: El Camino Real trail

Thanks for your interest in local trails, Enrique. I am forwarding your question to Colleen Baker of Santa Fe County, who may be able to provide more details on the development of the Camino Real Trail.
If you are interested in the development of trails elsewhere in our area, please come to our "Grand Unified Trail System" meeting tomorrow at noon (details at http://www.sfct.org/event/guts-stakeholders-meeting-4?instance_id=81034), or if you can't make it let me know if you would like me to add you to the contact list for this activity.
Regards, Tim

Tim Rogers
Trails Program Manager
Santa Fe Conservation Trust

tim@sfct.org

www.sfct.org

P.O. Box 23985
Santa Fe, NM 87502

505.989.7019 o
505.988.1455 f



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----- Original Message -----

Subject:El Camino Real trail

Date:2016-02-22 07:54

From:Enrique Montoya II <dreeksmonto@yahoo.com>

To:"tim@sfct.org" <tim@sfct.org>

Hello Sir,
Is there a map of where the proposed trail will go?
Thanks,
Enrique Montoya

Braitman, Dara

From: Colleen Baker <CBaker@santafecountynm.gov>
Sent: Tuesday, March 08, 2016 2:15 PM
To: Tom.Puto@dot.gov
Cc: Beazley, Sandy; Braitman, Dara
Subject: FW: El Camino Real Trail

From: Colleen Baker
Sent: Tuesday, March 01, 2016 8:04 AM
To: 'Lois Mee'
Cc: williamhenrymee@aol.com
Subject: RE: El Camino Real Trail

Lois,
Thank you! I will make sure we contact these offices directly.
Colleen

From: Lois Mee [<mailto:loisbmee@aol.com>]
Sent: Monday, February 29, 2016 9:23 PM
To: Colleen Baker
Cc: williamhenrymee@aol.com
Subject: El Camino Real Trail

Hi Colleen,
I didn't get a chance to talk to you at the information meeting last week, but after we got home, I realized that there didn't seem to be anyone there from the Department of Game and Fish, just west of the proposed trail on Wildlife Way, or the Office of Archaeological Studies on the west side of Caja del Rio Road, or the SF Solid Waste Mgt. Agency (sfswwa.org). I got the following contact info in case you needed it:

I sent my daughter at Game & Fish, the comment form we got that night and your contact information so that she could send it on to the person who represents them when these types of projects come up. I'm not sure who she forwarded it to, but her contact info is Letitia "Tish" Mee @ 505-476-8066. The first thing she said when we told her we had gone to the meeting was that the big trash trucks that turn from Caja del Rio Road to Wildlife Way, to get to the landfill (SFSWMA), drive like maniacs and are very dangerous at that intersection.

I also got the contact information for the Office of Archaeological Studies: Eric Blinman, Director @ 505-476-4404.

SFSWMA: Randall Kippenbrock, Ex. Director 505-424-1850 x100 or Rosalie Cardenas, Admin. Asst. x150.

Thanks!

Lois Mee
loisbmee@aol.com
(505) 690-8843

Braitman, Dara

From: Timberley.Belish@dot.gov
Sent: Tuesday, March 08, 2016 2:14 PM
To: Braitman, Dara
Subject: FW: El Camino Real de Tierra Adventro National Historic Trail - Public Comments welcomed through March 17, 2016

From: Puto, Tom (FHWA)
Sent: Thursday, February 25, 2016 12:32 PM
To: Belish, Timberley (FHWA)
Subject: FW: El Camino Real de Tierra Adventro National Historic Trail - Public Comments welcomed through March 17, 2016

Thomas E. Puto
Project Manager
FHWA-CFLHD
303-250-9996, work cell

Sent with Good (www.good.com)

From: Marie Campos
Sent: Thursday, February 25, 2016 2:21:15 PM
To: WILSON, KEITH P.
Cc: Puto, Tom (FHWA)
Subject: RE: El Camino Real de Tierra Adventro National Historic Trail - Public Comments welcomed through March 17, 2016

Wilson,
Love this project. Wish I would have been able to attend. I'll look over this information. Thank you for sending this to me.

Marie

Marie Campos
505-660-0002
votemarie@outlook.com
PO Box 32203
Santa Fe, NM 87594

From: kpwilson@ci.santa-fe.nm.us

CC: tom.puto@dot.gov

Subject: El Camino Real de Tierra Adentro National Historic Trail - Public Comments welcomed through March 17, 2016

Date: Thu, 25 Feb 2016 18:18:07 +0000

All:

A Public Scoping Meeting for the El Camino Real de Tierra Adentro National Historic Trail was held last week on February 17. If you were unable to attend and are interested in this project the invitation letter to and presentation from the Meeting can be downloaded from the following link:

<http://santafemppo.org/wp-content/uploads/2016/02/FLAPScopingMtgWebsiteMaterials.pdf>

The Public Comment period for this phase of the project runs through March 17, 2016. If you have any information or comments regarding the Project, you may submit written comments to the following address:
FHWA Central Federal Lands Highway Division

Attention: Tom Puto

12300 West Dakota Avenue, Suite 380

Lakewood, Colorado 80228

You can also download the comment sheet (<http://santafemppo.org/wp-content/uploads/2016/02/ScopingMtgCommentSheet.pdf>) and mail it or submit comments via email to Tom Puto at tom.puto@dot.gov

If you require additional information about the Project, please see the Project website (http://www.santafecountynm.gov/open_space_and_trails_program/flap) or contact Tom Puto, Project Manager, at (720) 963-3728

El Camino Real de Tierra Adentro National Historic Trail



PUBLIC SCOPING MEETING: February 17, 2016

You are cordially invited to attend a public scoping meeting for: El Camino Real de Tierra Adentro National Historic Trail, Buckman Road Segment, Retracement Trail Project.

Nancy Rodriguez Community Center

1 Prairie Dog Loop
Santa Fe, NM 87507

5:30pm - 7:30pm

A presentation will start at 6pm

Join us to discuss the potential implementation of a trail that would (1) improve access to adjoining lands between downtown Santa Fe and recreation areas located west in the Caja del Rio Plaza and (2) follow a portion of the congressionally-designated route of the El Camino Real de Tierra Adentro NHT along US Buckman Road (County Road 77) and the creation of a public use trail along CR 66 and Caja del Rio Road linking the oldest segment of El Camino Real to the Santa Fe River Greenway Trail.



Questions? Contact Tim Papp, Project Manager: (720) 643-8729 or tim.papp@dot.gov
Visit us online at: <http://www.santafecomm.gov/open-space-and-trails/projects/16j>

Keith P. Wilson

MPO Senior Planner

Santa Fe Metropolitan Planning Organization

Mailing: P.O. Box 909

Santa Fe, NM 87504-0909

Office: 500 Market St, Suite 200 (Above REI Store)

Santa Fe, NM

Map: <http://tinyurl.com/l6kejeq>

Directions & Parking: <http://www.railyardsantafe.com/north-railyard/>

Phone: 505-955-6706

Email: kpwilson@santafenm.gov

santafempo@santafenm.gov

Please Visit Our Website at: www.santafempo.org



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Braitman, Dara

From: Colleen Baker <CBaker@santafecountynm.gov>
Sent: Tuesday, March 08, 2016 2:13 PM
To: Tom.Puto@dot.gov
Cc: Beazley, Sandy; Braitman, Dara
Subject: FW: Grand Unified Trails System Stakeholders Meeting

From: Tim Rogers [<mailto:tim@sfct.org>]
Sent: Thursday, February 25, 2016 4:42 PM
To: Carlos Garcia; Colleen Baker
Subject: Re: Grand Unified Trails System Stakeholders Meeting

Thanks, Carlos, I appreciate your enthusiasm! I have only been peripherally involved in the development of Camino Real Trail but paying close attention as it will be a big piece of our future trail system, which I am involved in planning along with the County, City, and many other partners.

I am forwarding your question to Colleen Baker of Santa Fe County, who may be able to provide more details on the development of the Camino Real Trail.

Regards, Tim

Tim Rogers
Trails Program Manager
Santa Fe Conservation Trust

tim@sfct.org
www.sfct.org

P.O. Box 23985
Santa Fe, NM 87502

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On 2016-02-21 15:32, Carlos Garcia wrote:

Tim,

Congratulations! I read the New Mexican's article about the upcoming construction of new trail linking Santa Fe River to Diablo Canyon. Unfortunately I won't be able to attend stakeholders meeting but I'm very interested in receiving more information since I own approximately 50 acres of land bordering Caja del Rio Road and Santa Fe River Trail. Is it possible to receive by email a soft copy trail's route? Any information you can provide will be greatly appreciated.

Best regards,

Carlos

Carlos Garcia

Director

carlos@gotSPACEUSA.com

NAI Maestas & Ward

418 Cerrillos Rd. Suite 11

[Santa Fe, NM 87501 USA](#)

gotSPACEUSA.com

Direct [+1 505 473 3434](tel:+15054733434)

Cell [+1 505 670 3181](tel:+15056703181)

Main [+1 505 988 8081](tel:+15059888081)

Fax [+1 505 988 8082](tel:+15059888082)

Braitman, Dara

From: Timberley.Belish@dot.gov
Sent: Tuesday, March 08, 2016 2:14 PM
To: CBaker@santafecountynm.gov; lbjorklund@fs.fed.us
Cc: Braitman, Dara
Subject: FW: Camino Real NHT Suggestion
Attachments: Chili Line Diablo Loop Camino Real.jpg

From: Puto, Tom (FHWA)
Sent: Tuesday, February 23, 2016 7:13 AM
To: Belish, Timberley (FHWA)
Subject: FW: Camino Real NHT Suggestion

First comment

Thomas E. Puto
Project Manager
FHWA-CFLHD
303-250-9996, work cell

Sent with Good (www.good.com)

From: Thomas Lopez
Sent: Monday, February 22, 2016 10:48:09 PM
To: Puto, Tom (FHWA)
Subject: Camino Real NHT Suggestion

There is a natural loop around diablo canyon which happens to be the old historic Chili Line Railroad Grade which would take minimal development since it is already to grade and developed. I would like to see the Chili Line Railroad Grade (circa 1880) preserved as well as the Camino Real.

Please look at the attached .jpg picture as a reference.

Any help you can provide would be greatly appreciated. I would also be available to help. The Railroad Museum on 44th in Golden has the railroad survey information. I purchased the survey maps a while back as well.

Thanks!

Tom Lopez
505-670-8849



Google

Imagery Date: 10/3/2013 35°48'39.03" N 106°07'55.61" W elev 5942 ft

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1996

Santa Fe New Mexican Article, February 22, 2016

LOCAL NEWS



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4 Remaining

Downtown to Rio Grande trail planned along El Camino Real

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Colleen Baker, Open Space and Trails Program manager for Santa Fe County, said a new trail along Old Buckman Road will give visitors a chance to experience a landscape unchanged for hundreds of years. Courtesy Scott Belonger of Loris and Associates



Posted: Saturday, February 20, 2016 10:00 pm | Updated: 12:22 pm, Mon Feb 22, 2016.

By Anne Constable
The New Mexican

Juan de Oñate, colonial governor of New Mexico, once used El Camino Real de Tierra Adentro to travel from Mexico City to a new Spanish settlement near San Juan Pueblo, now called Ohkay Owingeh, where he established the first capital of the province of New Spain.

Now a portion of that route — the Royal Road of the Interior Lands — is set to be part of a new 15-mile trail linking the Santa Fe River Trail to the Municipal Recreation Complex on Caja del Rio Road and to recreation sites farther north, along Old Buckman Road, such as the popular trail through Diablo Canyon.

Once the new segment of the El Camino Real de Tierra Adentro National Historic Trail and the MRC Trail are complete, along with the final stretches of the River Trail, said Tim Rogers, trails program manager for the Santa Fe Conservation Trust, "People will be able to go from downtown Santa Fe out to Cajo del Rio and Diablo Canyon on bike or foot."

The new trail also will link to hundreds of miles of other trails on public lands

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Cost: Free

Contact: Tim Rogers, 988-7019 or tim@sfct.org

managed by the Bureau of Land Management and the U.S. Forest Service.

Most of the funding for the \$4.3 million project is coming from the Federal

Lands Access Program of the Federal Highway Administration. Santa Fe County is putting up matching funds of \$474,000, and the city of Santa Fe another \$150,000.

The proposal began with Steve Burns Chavez, a landscape architect with the National Trails Intermountain Region of the National Park Service, which administers eight national historic trails, including El Camino Real. Burns Chavez said County Commissioner Robert Anaya took his plan to the county, which applied for the federal funding.

Burns Chavez said he was simply pursuing the mandate of the National Trails Act — which is to give visitors the opportunity to “vicariously” have the experience of a historic trail user.

Much of the Camino Real national historic trail through New Mexico and Texas is already established as a driving tour, with various attractions for visitors to explore along along the way, such as wildlife refuges, mission churches, museums and ancient cultural sites. The route was added to the National Trails System in 2000. Colleen Baker, Open Space and Trails Program manager for Santa Fe County, said this portion of the Camino Real will give visitors a chance to experience a landscape unchanged for hundreds of years.

HDR Inc. in Denver, which worked previously with the county on the heavily used Rail Trail, was hired to do the design.

A 30-day “scoping period” for the project began recently. During this time, public comments are being accepted and eventually will be incorporated into an environmental assessment. Construction is expected to begin on the trail in the spring of 2017.

Tim Fowler, a board member and past president of the local Fat Tire Society, said he believes the project will provide “better connectivity to existing trails and perhaps some possibilities for additional trails, all of which are likely and positive outcomes.”

Steve Washburn, another board member of the Fat Tire Society and a member of the Trails Alliance of Santa Fe, said, “I think anything they can do to help the Caja area is a great idea. Between that and the ‘Big Friggin’ Loop,’ it all ties in and makes sense.” Especially he added, for kids on the south side of town.

What he calls “The Big Friggin Loop” is the Grand Unified Trails System, an initiative to develop a loop of connecting trails around the greater Santa Fe area by 2020. Some of those trail systems include the La Tierra Trails, the Dale Ball Trails and trails in the Arroyo Hondo Open Space.

The Camino Real project contains two segments. The first five miles of the trail, which will connect with the Santa Fe River Trail, will be a 10-foot-wide, paved, multi-use pathway. Beginning at the Santa Fe River Greenway, that portion will proceed north from the River Trail via an underpass at N.M. 599 and then travel parallel to Caja del Rio Road until County Road 62. Then it will cross CR 62, heading south to the U.S. Forest Service Headquarters Trailhead at the entry to Forest Service and BLM lands.

The next segment will be a 10-mile, narrower, unpaved recreation trail that will follow the historic route. The original trail to Oñate’s settlement near Ohkay Owingeh existed for only 10 to 12 years, Rogers said, until the colonial capital was

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TODAY'S NEW MEXICAN

moved to Santa Fe. The traces of it are minimal. But the new trail will look much as the old route did to the conquistadors.

The recreation trail will begin at the Forest Service Headquarters Trailhead west of Las Campanas and will continue north to a new trailhead at the parking area for the Forest Service's Dead Dog Trail off Old Buckman Road. Then it will proceed north, paralleling Old Buckman Road, and continue to the BLM's Diablo Canyon Trailhead.

The Camino Real actually went through La Cienega, but this plan bypasses that community because of residents' concerns about drawing additional traffic.

Baker, of the county open space program, said Old Buckman Road is a heavily trafficked major utility corridor, but as hikers, bikers and equestrians get into the canyon, they will see a nearly untouched landscape. And they may run into grazing cows, so they should be sure to latch any gates they go through, she said.

What's exciting about the project, Baker added, is that local, state and federal agencies are coming together to work collaboratively. Besides the federal program, the city and the county, other partners include the BLM, the Forest Service, the National Historic Trails program and the National Park Service.

The Grand Unified Trails System also is a collaborative project. The partnership agreement has been signed by 11 groups, including the Santa Fe Conservation Trust, the National Park Service, Rancho Viejo, the Santa Fe Community College, the Santa Fe County Horse Coalition and others.

The Federal Lands Access Program's Camino Real trail project, Rogers said, is another spoke in the wheel. A portion of it, he said, piggybacks on the Municipal Recreation Complex Trail, which was already part of the Metropolitan Planning Organization's bicycle master plan, a project he designed. Prior to that, he said, the northwest area of the city was largely an empty corridor, with lots of public lands. Now those lands are being integrated into the Camino Real trail plan.

Rogers said he is looking especially at recreational, dirt trails that can be maintained by volunteers.

Recently, he had a meeting to put together planning teams for 10 segments of the Grand Unified Trails System, and the public is invited to another meeting Friday.

Washburn said Rogers and Fowler are "leading the charge" to map trails and fill in the gaps so that people can hike and bike everywhere, including, "Pecos, Glorieta, the Dale Ball Trails, La Tierra, the MRC and Caja."

Contact Anne Constable at 986-3022 or aconstable@sfnewmexican.com.



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Appendix C.

El Camino Real de Tierra Adentro National Historic Trail Buckman Road Segment, Retracement Trail Project Biological Assessment and Evaluation



November 2016

BIOLOGICAL ASSESSMENT AND EVALUATION

*El Camino Real De Tierra Adentro
National Historic Trail
Buckman Road Segment
Retracement Trail Project*

Santa Fe County, New Mexico

Lead Federal Agency: FHWA



FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

Prepared by:



BIOLOGICAL ASSESSMENT AND EVALUATION

for the

EL CAMINO REAL DE TIERRA ADENTRO NATIONAL HISTORIC TRAIL BUCKMAN ROAD SEGMENT RETRACEMENT TRAIL PROJECT

Santa Fe County, New Mexico

November 2016

Lead Federal Agency:

FHWA CFLHD

Prepared by:

Sirena Brownlee
HDR Engineering, Inc.
1670 Broadway, Suite 3400
Denver, CO 80202

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1.0 INTRODUCTION

The Federal Highway Administration (FHWA) Central Federal Lands Highway Division (CFLHD), in cooperation with Santa Fe County, Bureau of Land Management (BLM), and U.S. Forest Service (USFS), is proposing the development of a trail following a portion of the congressionally designated route of the El Camino Real de Tierra Adentro (Royal Road to the Department of Interior) National Historic Trail (NHT) along Old Buckman Road (County Road [CR] 77) and the creation of a multi-use trail along CR 62 and Caja del Rio Road (Figure 1). The Federal Lands Access Program (FLAP), along with a local match, will provide the funds for the El Camino Trail (Project). CFLHD, BLM, and USFS are Cooperating Agencies in the development of this project.

The new trail would link the oldest segment of El Camino Real to the Santa Fe River Greenway Trail. The Project would introduce a dedicated non-motorized corridor for pedestrians, bicycles, and equestrians to facilitate safe access to federal lands. There are two segments of the proposed action, totaling approximately 15.2 miles of trail. The Project would be located entirely in Santa Fe County on Bureau of Land Management (BLM), Santa Fe National Forest Service (SFNF), or Santa Fe County right-of-way.

Section 7 of the Endangered Species Act (ESA) of 1973, as amended, requires federal agencies to ensure that their actions (authorized, funded, or carried out) are not likely to jeopardize the continued existence of endangered, threatened, candidate, and proposed species; or result in the destruction or adverse modification of their critical habitats. The purpose of this Biological Assessment and Evaluation (BAE) is to present the analysis and determination of impacts of the El Camino Trail project on state- and federally listed species that may occur in the project area.

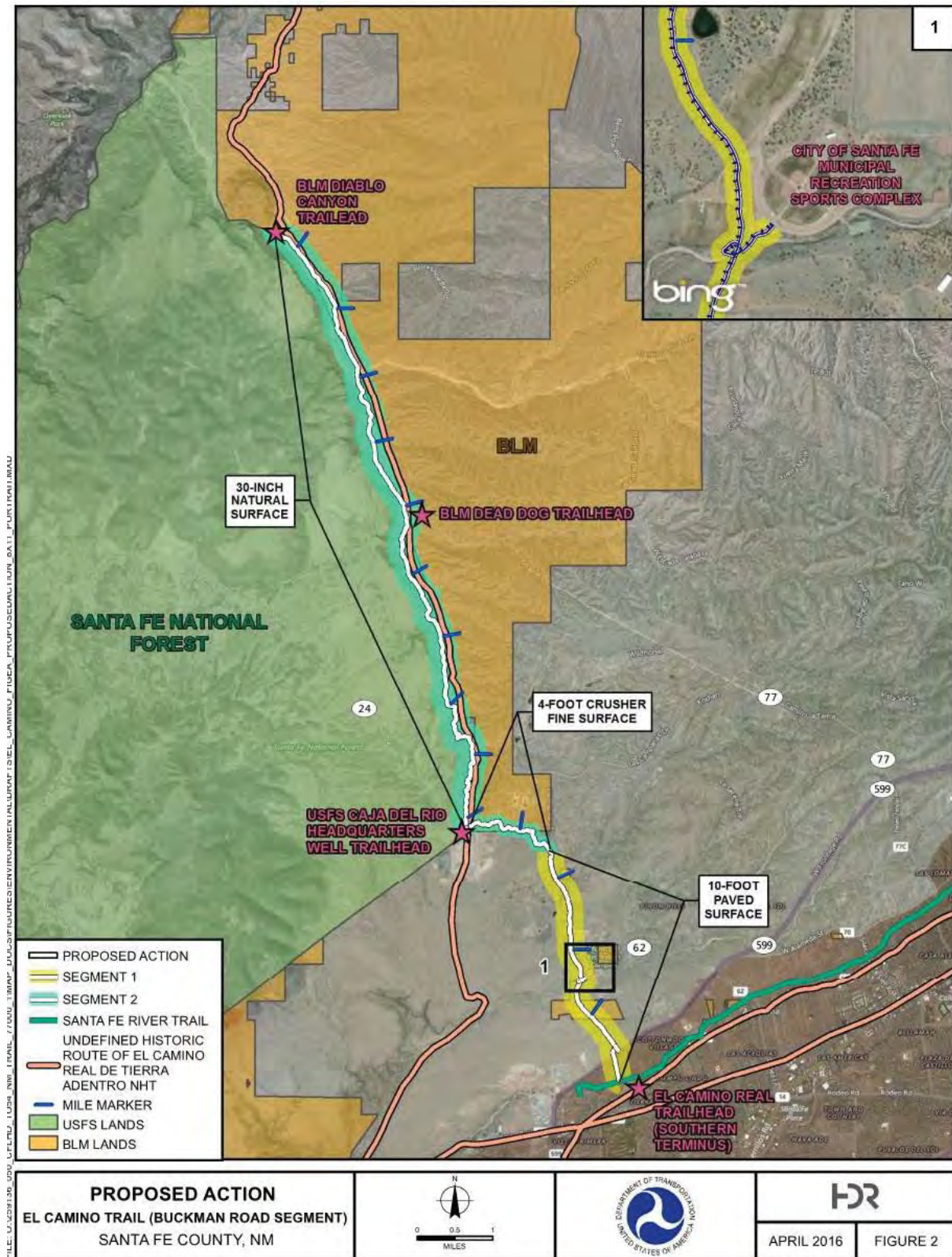
Identification of species evaluated in this BAE originates from the U.S. Fish and Wildlife Service (USFWS) on-line evaluation tool—the Information, Planning and Conservation System (IPaC), BLM Sensitive species list, Santa Fe National Forest Service Region 3 sensitive species, and New Mexico Department of Game and Fish state-listed species.

Forest Service policy requires that a review of programs and activities, through an effects analysis document (referred to in current Forest Service policy as a biological evaluation or BE), be conducted to determine their potential effect on Regional Forester-designated sensitive species (FSM 2670.3). Preparation of a BE as part of the NEPA process ensures that sensitive species receive full consideration in the decision-making process.

The 1982 Planning Rule 36 CFR 219.19(a)(6) related to Management Indicator Species (MIS) requires the Forest Service to produce a unique list of species to represent Forest communities or ecosystems. These species and the ecosystems in which they represent must be considered for each project to evaluate consistency with the Forest Plan.

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Figure 1. Project Location/Proposed Action



2.0 PURPOSE AND NEED

CFLHD, BLM, and USFS have a similar goal in improving public safety and access to federal lands, but have operational objectives distinct to their respective agencies. CFLHD's primary interest is to improve public safety and access to federal lands by enhancing the existing transportation network. Both the BLM and USFS, as land managers and multiple-use agencies, have additional purposes which include making public land and its resources available for use and development to meet national, regional, and local needs that are consistent with their agencies' respective objectives. The purpose and need for the project, with consideration of these varying objectives, is described below.

Purpose

The purpose of the project is to:

- Improve federal lands access by enhancing trail connectivity between land uses in Santa Fe County and City of Santa Fe and recreational opportunities on BLM and USFS lands.
- Enhance the safety of non-motorized users accessing federal lands and other recreational opportunities in the area.
- Develop a trail retracing a portion of the congressionally designated route of El Camino Real de Tierra Adentro NHT along Buckman Road.

Need

The project addresses the following needs:

- Improve access to federal lands for non-motorized users because the lack of existing infrastructure puts pedestrians and bicyclists in potential conflict with motorists. Based on growth projections, non-motorized use is expected to continue to increase, thus increasing the likelihood of conflicts with motorists.
- Assist local and federal agencies in meeting the congressional intent of the NSTA by constructing one of the first segments of El Camino Real de Tierra Adentro NHT.
- Improve trail connectivity on federal lands. There is currently no non-motorized connection between Caja del Rio Road, USFS's Caja del Rio Headquarters Well Trailhead, and BLM's Dead Dog and Diablo Canyon trailheads.

3.0 DESCRIPTION OF THE PROPOSED PROJECT

The proposed action would be located on City of Santa Fe, Santa Fe County, BLM, and USFS lands. To simplify the discussion, the project corridor has been split into two sections – Segment 1 and Segment 2. Segment 1 includes the southern part of the project corridor from El Camino Real Trailhead at Santa Fe River Trail to where Caja del Rio Road meets CR 62. Segment 2 includes the part of the project corridor from CR 62 at Caja del Rio Road to BLM's Diablo Canyon Trailhead. In total, the proposed action would introduce approximately 15.2 miles of trail designed to improve access to federal lands.

All trail maintenance would be performed by Santa Fe County. A construction schedule has not been finalized, but it is currently estimated that construction would occur between Spring 2017 and Fall 2017. Staging would likely occur at previously disturbed trailhead parking lots.

Construction activities would include clearing and grading, slope and subgrade stabilization, revegetation, placement of crusher fine rocks, signs, and other safety related features

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Equipment likely to be used during project construction includes, but is not limited to, small excavators and front end loaders (bobcats), dump trucks, loaders, generators, and light trucks.

Segment 1

Segment 1 would be located within City of Santa Fe and Santa Fe County right-of-way and easements. The trail would connect the Santa Fe River Trail to CR 62, generally following Caja del Rio Road. Improvements in Segment 1 include the following:

- Construction of a 10-foot wide paved, multi-use trail.
- Use of an existing system of underpasses beneath NM 599 and frontage roads to separate trail users from motorists.
- The double box culvert that runs under Caja del Rio Road at Arroyo de los Frijoles and just south of MRCS would be widened to carry the multi-use trail over the arroyo. North of the arroyo, a secondary trail would take users through the box culvert to arrive at the MRCS. One side of the box culvert would maintain its existing function while the other would be converted for trail use.
- Trail connections to the MRCS. This includes two spur trails to create connections to the park both east and west of Caja del Rio Road. The western spur would provide access to the rugby fields. The eastern spur would travel in the modified box culvert to provide access to the ball fields.
- Modification of the entrance to the Santa Fe Golf Course to accommodate the trail. Limited roadway improvements except, as necessary, to provide for the multi-use trail at existing road crossings and barrier where the multi-use trail is within the roadway clear zone.
- Installation of concrete barriers in select locations to maintain separation between trail users and motorists.
- Signage, wayfinding, and striping.

Segment 2

Segment 2 would begin at the Caja del Rio Road and CR 62 intersection where the 10-foot wide, paved multi-use trail would connect with the 4-foot wide, crusher fine surface trail and would continue to the USFS Caja del Rio Headquarters Well trailhead. From there the trail, which would be a 30-inch natural surface, would extend north to the Diablo Canyon trailhead (**Error! Reference source not found.**). Segment 2 traverses lands owned by the City of Santa Fe, USFS, and BLM, and includes the following elements.

- Construction of a 4-foot wide crusher fine surfaced trail between the Caja del Rio Road/CR 62 intersection and the USFS Caja del Rio Headquarters Well trailhead.
- Construction of a 30-inch wide natural surface trail from just north of the USFS Caja del Rio Headquarters Well trailhead to the Diablo Canyon trailhead.
- Parking lot improvements at the Dead Dog trailhead. The parking area would be unpaved (gravel), without curbs, and able to accommodate six large vehicles (i.e., horse trailers) and 12 passenger vehicles. The existing fence, which is just east of the proposed action, would be relocated further to the east to enclose the proposed parking area. A cattle guard and gate would preclude cattle passage.
- Realignment of fencing to minimize trail crossings across the fence. In these areas new fence would be constructed.
- Construction of fence crossings that allow for the passage of trail users, but preclude cattle from crossing.

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- Signage, wayfinding, and striping. This includes interpretive signs for the El Camino Real de Tierra Adentro National Historic Trail.

The trail in Segment 2 would not be constructed across arroyos because storm events would wash away the trail. The trail would be constructed to the edge of each arroyo and then resume on the opposite side of the arroyo. These crossing points would be marked with rock cairns or carsonite posts so users would know where the trail ends and resumes.

The analysis assumes that existing leash laws will be maintained and dogs would be expected to be under voice control at all times while on trail. The analysis also assumes that tree removal will be minor (less than 10 trees total).

4.0 CONSULTATION AND COORDINATION HISTORY

As required by Section 7 of the ESA, interagency consultation has been initiated between FHWA and the SFNF, BLM and USFWS regarding state- and federally listed species that could potentially be affected by the proposed project. A teleconference led by FHWA and HDR with Will Amy, the SFNF Espanola Ranger District Biologist and Valerie Williams, the BLM Wildlife Biologist for the Taos Field Office occurred on October 28, 2015. The purpose of the teleconference was to discuss the proposed multi-use trail project, the SFNF sensitive and MIS species, and BLM sensitive and watchlist species that could occur in the project area, as well as biological surveys to be conducted for the project. Formal consultation with the USFWS was not conducted because FHWA determined the project would have *no effect* on USFWS listed or proposed species.

Meeting minutes from the teleconference with BLM and SFNF and the USFWS IPaC official letter are included in **Appendix A** of this document.

4.1 Methods and Field Studies

Prior to conducting biological surveys, HDR conducted a desktop review of available sources to identify federal and state listed species and sensitive species with the potential to occur in the project area. The following information sources were reviewed:

- Santa Fe National Forest Service Region 3 Sensitive Plants and Animal Species List (USFS 2013) and Santa Fe National Forest Management Indicator Species Assessment (USFS 2012).
- USFWS IPaC interactive program which lists federal species potentially found in the project area (USFWS 2016).
- Bureau of Land Management New Mexico State Office, Taos Field Office sensitive and watchlist species (BLM 2011).
- New Mexico Game and Fish (NMDGF) State Listed Species for Santa Fe County (NMDGF 2014).

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- Biota Information System of New Mexico (BISON-M 2016).
- New Mexico Breeding Bird Atlas data (Breeding Bird Atlas Explorer 2016)
- eBird for recent sightings of federally listed birds in the project area (Sullivan et al. 2009)
- New Mexico Partners in Flight Species Accounts (NMPIF 2016)

Biological surveys were conducted from November 1 to 3, 2015, by Sirena Brownlee, Senior Wildlife Biologist, and Tara Kent, Ecologist, with HDR. The purpose of the biological surveys was to assess the project area for the presence and suitability of potential habitat for listed and sensitive species. Habitat preferences and known distribution (based on the above sources and conversation with the resource agencies) for listed species were reviewed prior to conducting surveys.

HDR biologists completed a pedestrian survey of the entire proposed trail alignment with a buffer of 50 feet on either side of the proposed centerline. No species-specific surveys were conducted, but potential habitat for listed species was noted throughout the project area, and all plants and wildlife observed were documented. All potential raptor habitats including cliff habitat along the Caja del Rio Plateau were surveyed with high power binoculars for raptor nests. Additionally, prairie dog colonies along Caja del Rio Road were evaluated for signs of Western Burrowing Owl (*Athene cunicularia hypugaea*) presence. The project area was surveyed for the presence of BLM and SFNF sensitive plants with the potential to occur in the area. The surveys were conducted after the growing season for most species. Some sensitive species can only be identified by the flower which makes identification difficult in some cases. No sensitive plants were found within the project area.

4.1.1 Species Evaluation and Effects Determination

The potential for occurrence of each species was determined based on the categories listed below. Because not all species are accommodated precisely by a given category (i.e., category definitions may be too restrictive), an expanded rationale for each category assignment is provided. Potential for occurrence categories are listed below.

- Known to occur—the species has been documented in the project area by a reliable source.
- May occur—the project area is within the species' documented range, and vegetation communities, and soils, resemble those known to be used by the species.
- Unlikely to occur—the project area is within the species' currently documented range, but vegetation communities, soils, etc., do not resemble those known to be used by the species, or the project area is clearly outside the species' currently known range.

Species listed by the USFWS were assigned effect determinations based on three categories of possible effect (USFWS 1998). The effects determinations recommended by USFWS include:

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- *May affect, is likely to adversely affect*—the project is likely to adversely affect a species if 1) the species is known to occur in the project area, and 2) project activities would disturb areas or habitat elements known to be used by the species or would directly affect an individual;
- *May affect, is not likely to adversely affect*—the project is not likely to adversely affect a species if 1) the species may occur but its presence has not been documented, and 2) project activities would not result in disturbance to areas or habitat elements known to be used by the species; and
- *No effect*—the project will have no effect on a species if 1) the species is considered unlikely to occur (range, vegetation, etc., are inappropriate), and 2) the species or its sign was not observed during surveys of the project area.

Impact determinations for BLM, SFNF, and State of New Mexico threatened and endangered species do not follow USFWS recommendations. Instead, the impact determinations for any species not protected under the ESA are as follows:

- *No impact*—the project will have no impact on a species if 1) the species is considered unlikely to occur (range, vegetation, etc., are inappropriate), and 2) the species or its sign was not observed during surveys of the project area;
- *May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability*—the project is not likely to adversely impact a species if 1) the species may occur but its presence has not been documented, and 2) project activities would not result in disturbance to areas or habitat elements known to be used by the species; and
- *May impact individuals and is likely to result in a trend toward federal listing or loss of viability*—the project is likely to adversely impact a species if 1) the species is known to occur in the project area, and 2) project activities would disturb areas or habitat elements known to be used by the species or would directly affect an individual.

5.0 DESCRIPTION OF THE ANALYSIS AREA

The proposed 15.2-mile multi-use trail is located approximately 12 miles northwest of Santa Fe near the community of Las Campanas. The project area is located between the Jemez Mountains to the west and the Sangre de Cristo Mountains to the east within the Española Basin, part of the U.S. Basin and Range physiographic province (Hibner 2004). The dominant geologic features in the project area are Diablo Canyon and Caja del Rio Plateau. Diablo Canyon, located at the far north end of the project area, is a hard, dark basalt canyon that opens into the Rio Grande at White Rock Canyon. The flat sand bottom of the canyon is subject to flash floods in the summer and opens into the Cañada Ancha, a broad sand wash that parallel's the proposed trail along the base of the Caja del Rio Plateau.

The soils in the project area are broadly defined as comprising basalt volcanic parent material with soils on the steeper slopes including shallow, moderately fine textured, and containing a high percentage of coarse fragments. Soils in the Canada Ancha are comprised of cobbles and stones (BLM 1988). The soils in the Caja del Rio area are mapped almost entirely as unsatisfactory, having a reduced ability for hydrologic and nutrient function due to the geologic parent material, which is basalt.

The project area is located within the juniper-savanna vegetation community and is dominated by one-seed juniper (*Juniper monosperma*) and pinyon pine (*Pinus edulis*) at an elevation of approximately 6,500 feet above mean sea level (Griffith et al. 2006). Tree densities and diversity are very low and no riparian vegetation occurs in the project area. Other species observed during biological surveys in the project area include sand sagebrush (*Artemisia filifolia*), four-wing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Ericameria nauseosa*), ring muhly (*Muhlenbergia torreyi*), broom snakeweed (*Gutierrezia sarothrae*), tree cholla (*Cylindropuntia imbricata*), plains yucca (*Yucca glauca*), Apache plume (*Fallugia paradoxa*), plains pricklypear (*Opuntia polyacantha*), blue grama (*Bouteloua gracilis*), purple three awn (*Aristida purpurea*), net-leaf hackberry (*Celtis reticulata*), squawbush sumac (*Rhus trilobata*), New Mexico locust (*Robinia neomexicana*), sideoats grama (*Bouteloua curtipendula*), and squirreltail (*Elymus elymoides*).

Some areas within the project area are degraded and contained a high percentage of non-native invasive species including Canada thistle (*Cirsium arvense*), Russian thistle (*Salsola tragus*), cheatgrass (*Bromus tectorum*), and dalmatian toadflax (*Linaria genistifolia* ssp. *dalmatica*).

The project area provides habitat for a variety of terrestrial mammal species including Colorado chipmunk (*Neotamias quadrivittatus*), Gunnison's prairie dog (*Cynomys gunnisoni*), black-tailed jackrabbit (*Lepus californicus*), western spotted skunk (*Spilogale gracilis*), badger (*Taxidea taxus*), desert cottontail (*Sylvilagus audubonii*), and several woodrat (*Neotoma* sp.) and mouse (*Peromyscus* sp.) species. Larger mammal species that could potentially be within the project area include mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus elaphus*), gray fox (*Urocyon cinereoargenteus*), and coyote (*Canis latrans*). No signs of large mammals were observed during biological surveys; however, numerous small mammal burrows were observed

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within the project area and one dead western spotted skunk was observed along Old Buckman Road.

A variety of bird species use habitats found in the project area for shelter, nesting, and foraging. The cliffs in Diablo Canyon and the adjacent Caja del Rio Plateau provide suitable roosting and nesting habitat for several birds of prey including golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), and peregrine falcon (*Falco peregrinus anatum*). Other raptors that may forage in the project area include bald eagle (*Haliaeetus leucocephalus*) in winter months, Swainson's hawk (*Buteo swainsonii*), and prairie falcon (*Falco mexicanus*). The only raptor observed during the biological survey was red-tailed hawk. Guano (whitewash) was observed on the cliff walls indicating the presence of large birds using the area and one large inactive stick nest located at approximately (latitude 35.785974/longitude -106.127020) was observed but the nest was dilapidated and no signs of recent whitewash were present.

The pinyon-juniper habitat in the project area provides nesting, wintering, foraging and sheltering habitat for a variety of migratory and resident bird species. Common species that can be found in the project area include juniper titmouse (*Baeolophus ridgwayi*), chipping sparrow (*Spizella passerina*), mountain bluebird (*Sialia currucoides*), pinyon jay (*Gymnorhinus cyanocephalus*), northern flicker (*Colaptes auratus*), loggerhead shrike (*Lanius ludovicianus*), common nighthawk (*Chordeiles minor*), spotted towhee (*Pipilo maculatus*), mourning dove (*Zenaida macroura*), Eurasian collared dove (*Streptopelia decaocto*), broad-tailed hummingbird (*Selasphorus platycercus*), lark sparrow (*Chondestes grammacus*), western meadowlark (*Sturnella neglecta*), and brown-headed cowbird (*Molothrus ater*). Other species that may occur in the project area include gray flycatcher (*Empidonax wrightii*), Say's phoebe (*Sayornis saya*), ash-throated flycatcher (*Myiarchus cinerascens*), Cassin's kingbird (*Tyrannus vociferans*), horned lark (*Eremophila alpestris*), violet-green swallow (*Tachycineta thalassina*), northern rough-winged swallow (*Stelgidopteryx serripennis*), blue-gray gnatcatcher (*Polioptila caerulea*), western bluebird (*Sialia mexicana*), American robin (*Turdus migratorius*), gray vireo (*Vireo vicinior*) and western tanager (*Piranga ludoviciana*) (Sullivan et al. 2009; Breeding Bird Atlas Explorer 2016).

Common reptiles that may be found in the project area and surrounding habitats include New Mexican whiptail (*Aspidoscelis neomexicanus*), roundtail horned lizard (*Phrynosoma modestum*), collard lizard (*Crotaphytus collaris*), striped whipsnake (*Masticophis taeniatus*), western diamondback rattlesnake (*Crotalus atrox*), prairie rattlesnake (*Crotalus viridis*), and bullsnake (*Pituophis melanoleucus*).

Existing land uses in the project vicinity include utility corridors and easements, water wells, pipelines, drainages and flood control, and various recreation activities, including shooting, off highway vehicle touring, hiking, horseback riding, birding, mountain biking, and scenery/nature viewing. The project area overlaps with the Caja del Rio grazing allotment managed by the SFNF and BLM's Santa Fe grazing allotment. BLM's Santa Fe grazing allotment totals 20,496 acres and is located on public, state, and private lands. The allotment permits 271 head of cattle and five horses totaling 3,180 animal unit months (AUMs). The allotment includes seven wells,

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two corrals, several storage tanks and troughs, and five pastures (Dutch, Home, Midway, Boondocks, and Artesian). USFS's Caja del Rio grazing allotment totals 66,873 acres and is located on Santa Fe National Forest lands in Santa Fe and Sandoval Counties. The Santa Fe National Forest Plan identifies the allotment as being in Management Areas G (Wildlife-Range-Firewood) and L (Semi-Primitive, Non-Motorized Recreation). There are 492 head of cow/calf pairs and 28 bulls (8,305 AUMs) year round.

The allotment is approximately 75,000 acres in size, is grazed year-round, and consists of four pastures. The allotment is permitted for grazing 520 cow/calf units annually.

Photo 1 and Photo 2 show a representation of the vegetation types in the project area.



Photo 1. Typical juniper savannah habitat

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Photo 2. Typical arroyo lined with rubber rabbitbrush and other species

6.0 ACTION AREA

The action area is not limited to the project footprint, but rather encompasses the full geographic area potentially affected by the proposed project, including the extent of all direct and indirect effects, as well as interdependent or interrelated activities. The action area includes all areas potentially affected by visual and audible disturbance created by the project activities, as well as potential terrestrial and aquatic habitat impacts.

For the purposes of this analysis, the action area consists of a .25-mile radius from the proposed centerline of the proposed trail, because of the potential for noise impacts and visual disturbance from construction activities and human use of the trail. For raptors, the action area consists of a .50-mile radius from the proposed centerline. All direct and indirect effects are expected to be contained within this distance.

7.0 SPECIES CONSIDERED AND EVALUATED

Table 1 includes SFNF Region 3 Sensitive Plants and Animal Species, federally-listed species identified by the USFWS IPaC, BLM sensitive and watchlist species, and NMGFD Listed Species that may occur in the action area. Table 1 identifies habitat requirements, the potential for occurrence in the action area, and the determination of effect. MIS species are addressed separately in Table 2. Species with no potential for occurrence and no suitable habitat will not require further analysis in this BAE.

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Table 1. Federally-listed, State-listed and Sensitive Species and Potential to occur in the Project Action Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Mammals							
American marten (<i>Martes americana origenes</i>)		S		SS	Mature dense forests of mixed Douglas-fir, lodgepole, and spruce.	Unlikely to occur. No suitable habitat is present in action area.	No impact
American pika (<i>Ochotona princeps saxatilis</i>)		S			Talus slides and boulder fields in alpine and subalpine areas.	Unlikely to occur. No suitable habitat is present in action area.	No impact
American water shrew (<i>Sorex palustris</i>)		S			Small cold streams with thick overhanging riparian growth. Also around lakes, ponds, marshes, bogs, and other lentic habitats. Rarely far from water.	Unlikely to occur. No suitable habitat is present in action area.	No impact
Cinereus (masked) shrew (<i>Sorex cinereus</i>)		S			Confined to the Sangre de Cristo, Jemez, and San Juan Mountains, where they prefer areas with very little or no vegetation, usually above 9,500 feet.	Unlikely to occur. No suitable habitat is present and action area is below known elevation tolerances.	No impact
Fringed myotis (<i>Myotis thysandoes</i>)				SS	Pinyon-juniper, desert, riparian, grassland, and coniferous woodlands. Caves, buildings, underground mines, rock crevices in cliff faces, bridges and hollow trees are used for maternity and night roosts.	May occur. No suitable roosting habitat is present in action area; however, suitable foraging habitat is present.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Goat peak pika		S			Steep, rocky banks and hillsides in	Unlikely to occur.	No impact.

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Table 1. Federally-listed, State-listed and Sensitive Species and Potential to occur in the Project Action Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
<i>Ochotona princeps nigrescens</i>					alpine and subalpine habitats.	No suitable habitat is present in action area.	
Gunnison's prairie dog (<i>Cynomys gunnisoni</i>)		S	S	SS	Shortgrass and midgrass prairies and grass-shrub habitats to montane meadows.	Known to occur. Inactive prairie dog colonies were observed along Caja Del Rio Road adjacent to the project area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Least shrew (<i>Cryptotis parva</i>)			WL		Cropland/hedgerow, grassland/herbaceous, old field, savanna, shrubland/chaparral, suburban/orchard, woodland – hardwood and woodland-mixed. The least shrew is a common species over much of its range, but in New Mexico it is generally local and uncommon (Frey 2005).	Unlikely to occur. No suitable habitat is present in action area.	No impact
Long-legged myotis (<i>Myotis volans</i>)				SS	Ponderosa pine forests and pinyon-juniper woodlands, but also may be found in riparian and desert habitats. Roosts in trees, buildings, crevices in the rock faces, and even fissures in the ground in evenly eroded areas. Caves and mines do not appear to be important as day roosts, but are used as night roosts if available.	May occur. No suitable roosting habitat is present in action area; however, suitable foraging habitat is present.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
New Mexico meadow jumping mouse (<i>Zapus hudsonius</i>)	E	S	S	SE	Nests in dry soils but uses moist, streamside, dense riparian/wetland vegetation up to an elevation of about	Unlikely to occur. No suitable habitat is present in action	No effect

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Table 1. Federally-listed, State-listed and Sensitive Species and Potential to occur in the Project Action Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
<i>luteus</i>					8,000 feet.	area.	
Pale Townsend's big-eared bat (<i>Corynorhinus townsendia pallescens</i>)		S	S	SS	Caves and rocky outcroppings in scrub deserts, pinyon-juniper woodlands, and coniferous forests	May occur. No suitable roosting habitat is present in action area; however, suitable foraging habitat is present.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Preble's shrew (<i>Sorex preblei</i>)		S			Arid and semiarid shrub-grass associations, openings in montane coniferous forests dominated by sagebrush	Unlikely to occur. No suitable habitat is present in action area.	No impact
Red fox (<i>Vulpes vulpes</i>)				SS	Open woodlands, pasturelands, riparian, and agricultural lands. Margins of urbanized areas and open space and other undeveloped areas adjacent to cities. Semidesert shrublands are not utilized to any great extent, except local riparian wetlands and areas adjoining irrigated agriculture.	Unlikely to occur. No suitable habitat is present in action area.	No impact
Ringtail (<i>Bassariscus astutus</i>)				SS	Typically in rocky areas with cliffs or crevices for daytime shelter; desert scrub, chaparral, pine-oak and conifer woodland. Usually occurs near a perennial water source. The species is most common in the southern half of New Mexico.	Unlikely to occur. No suitable habitat is present in action area and no perennial water source.	No impact.
Spotted bat		S	S	ST	Riparian communities, pinyon-juniper woodlands, and ponderosa pine and	May occur. There was no evidence of	May impact individuals, but is

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Table 1. Federally-listed, State-listed and Sensitive Species and Potential to occur in the Project Action Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
<i>Euderma maculatum</i>)					spruce-fir forests, and in burned areas of ponderosa pine forest.	bat use in the action area; however, pinyon-juniper woodlands in the area provide potential foraging habitat.	not likely to result in a trend toward federal listing or loss of viability
Western small-footed myotis (<i>Myotis ciliolabrum</i>)				SS	Coniferous and Mixed Woodland and Montane Coniferous Forest. Also in desert badland, and semiarid habitats, riparian zones, and areas near cliffs and outcrops. In summer it has been found roosting in rock crevices, caves, dwellings, burrows, among rocks, under bark, and even beneath rocks scattered on the ground.	May occur. There was no evidence of bat use in the action area; however, pinyon-juniper woodlands in the area provide potential foraging habitat.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Western spotted skunk (<i>Spilogale gracilis</i>)				SS	Montane forest and shrubland, semidesert shrubland, and pinyon-juniper woodlands.	May occur. Suitable habitat is present within action area	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
White-tailed jackrabbit (<i>Lepus townsendii campanius</i>)			WL		Plains and prairie and in alpine meadows with scattered coniferous trees up to an elevation of about 10,000 feet.	Unlikely to occur; no suitable habitat in action area.	No impact
Yellow-faced pocket gopher (<i>Cratogeomys castanops</i>)			WL		Prefers deep firm soils; rich soils of river valleys and streams, agricultural land. Fossorial, usually in deep sandy or silty soils that are relatively free of	Unlikely to occur; no suitable habitat in action area.	No impact

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Table 1. Federally-listed, State-listed and Sensitive Species and Potential to occur in the Project Action Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Yuma myotis (<i>Myotis yumanensis</i>)				SS	Wide variety of upland and lowland habitats, including riparian, desert scrub, moist woodlands, and forests. They are a water surface forager.	Unlikely to occur; no suitable habitat in action area. There was no evidence of bat use in the action area and no permanent sources of water.	No impact
Birds							
American bittern (<i>Botaurus lentiginosus</i>)			WL		Herbaceous wetland and riparian habitat.	Unlikely to occur; no suitable habitat in action area.	No impact
American peregrine falcon (<i>Falco peregrinus anatum</i>)		S		ST	Open habitat where there are suitable nesting cliffs, mountains, open forested regions, and human population centers. Nests on ledge or hole on face of rocky cliff or crag. River banks, tundra mounds, open bogs, large stick nests of other species, tree hollows, and man-made structures. Breeds from April to June (NMPIF 2016)	May occur. Potential nesting habitat in Diablo Canyon.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Baird's sparrow (<i>Ammodramus bairdii</i>)				ST	Grassland, ungrazed or lightly grazed mixed-grass prairie, wet meadows of eastern Montana, North Dakota, and lower central Canada	Unlikely to occur; no suitable habitat in action area.	No impact
Bald eagle (<i>Haliaeetus</i>)		S	S	ST	The bald eagle is a winter migrant along the Rio Grande. Most of the	May occur. Winter and suitable	May impact individuals, but is

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Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
<i>leucocephalus</i>)					preferred roost sites are in snags and cliffs along the river in the section between Bandelier National Monument and the Cochiti Reservoir delta.	transient roosting habitat is present in the nearby Rio Grande.	not likely to result in a trend toward federal listing or loss of viability
Bendire's thrasher (<i>Toxostoma bendirei</i>)			S		Desert habitats with fairly large shrubs or cacti and open ground, or open woodland with scattered shrubs and trees.	May occur. Suitable habitat is present in action area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Cassin's finch (<i>Carpodacus cassinii</i>)			WL		Breeds in open coniferous forest breed and less commonly in open sagebrush shrubland with scattered western junipers. Migration and winter habitat consists of deciduous woodland, second growth, scrub, brushy areas, partly open situations with scattered trees. This species winters in New Mexico and south into Baja California and mainland Mexico.	May occur. Species occurs in the action area during migration and winter months.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Chestnut-collared longspur (<i>Calcarius ornatus</i>)			S		Open prairie and avoids excessively shrubby areas. However, scattered shrubs and other low elevated perches such as Canada thistle often are used for singing. Winters in open cultivated fields.	Unlikely to occur; no suitable habitat in action area.	No impact.
Common black-hawk (<i>Buteogallus anthracinus</i>)			WL		This species is an obligate riparian nester and prefers lowland forest, swamps and mangroves, in both moist and arid habitats but generally near water (along rivers and streams).	Unlikely to occur; no suitable habitat in action area.	No impact.

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Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Ferruginous hawk (<i>Buteo regalis</i>)			WL		Forages in open woodland. It occasionally nests along the Rio Grande as far north as Albuquerque (NMPIF 2016). Open country, primarily prairies, plains and badlands; sagebrush, saltbush-greasewood shrubland, periphery of pinyon-juniper and other woodland, desert. In New Mexico, breeding occurs across the northern two-thirds of the state, and may be found statewide during winter.	May occur. Species has potential to occur in the action area year-round.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Golden eagle (<i>Aquila chrysaetos</i>)			WL		During the breeding season, Golden Eagle occurs primarily in areas of mountain cliffs or canyons. Foraging habitat is open grassland or shrubland habitat.	May occur. Suitable foraging habitat is present in action area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Gray vireo (<i>Vireo vicinior</i>)		S	WL	ST	Dry foothills and bajadas west of the Great Plains. Prefers juniper, pinyon pine, and oak trees.	May occur. Much of the project area contains suitable nesting habitat for this species.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Juniper titmouse (<i>Baeolophus ridgwayi</i>)			WL		Pinyon-juniper woodlands. Nests in natural tree cavities, in old woodpecker holes, or bird boxes.	Known to occur. Species was observed in action area during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.

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Table 1. Federally-listed, State-listed and Sensitive Species and Potential to occur in the Project Action Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Lesser prairie-chicken (<i>Tympanuchus pallidicinctus</i>)			S		Mixed grass-dwarf shrub communities that occur on sandy soils; principally the sand sagebrush; Leks typically occur on knolls or ridges with relatively short and/or sparse vegetation.	Unlikely to occur; no suitable habitat in action area.	No impact.
Loggerhead shrike (<i>Lanius ludovicianus</i>)				SS	Habitats include desert scrub and open grasslands, though it prefers to nest in trees of medium to tall height. Loggerhead shrikes are fairly common year-round residents throughout Santa Fe County.	Known to occur. Species was observed in action area during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
McCown's longspur (<i>Rhynchophanes mccownii</i>)			WL		Sparse short-grass plains, plowed and stubble fields, and areas of bare or nearly bare ground	Unlikely to occur; no suitable habitat in action area.	No impact
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	T			SS	Nesting and roosting occurs in both forested and rocky-canyon habitats. Nest placed in mature or old-growth stands with complex structure; typically they are uneven-aged, multistoried, and have high canopy cover; nest trees are typically large Douglas-fir.	Unlikely to occur. Pinyon-juniper habitat in action area is low-density and no steep canyons with mixed coniferous forests are present in action area.	No effect.
Mountain plover (<i>Charadrius montanus</i>)			WL	SS	Large areas of flat grassland expanses with sparse, short vegetation, and bare ground. The species is primarily associated with shortgrass prairie dominated blue grama, often mixed with buffalo grass or western wheatgrass. It also occupies semi-	May occur. Breeding documented in Santa Fe County (Breeding Bird Atlas 2016). May also occur in project area	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.

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Table 1. Federally-listed, State-listed and Sensitive Species and Potential to occur in the Project Action Area

Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Northern goshawk (<i>Accipiter gentilis</i>)		S		SS	desert scrub and grassland habitat. Ponderosa pine, aspen, mixed-conifer, and spruce-fir forests along the edge of mountain valleys and stream bottoms.	during spring and fall migration. Unlikely to occur. No suitable habitat in action area.	No impact
Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)			S		Pinyon-juniper woodland, less frequently pine; in nonbreeding season, also occurs in scrub oak and sagebrush. Nests in shrubs or trees.	Known to occur. Species was observed in action area during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Sage thrasher (<i>Oreoscoptes montanus</i>)			WL		In winter, uses arid and semi-arid scrub, brush and thickets. Breeds in shrub-steppe dominated by big sagebrush; the species is considered a sagebrush obligate.	May occur. Breeding has not been documented in Santa Fe County (Breeding Bird Atlas 2016); however, foraging habitat for this species occurs within the action area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Southwestern willow flycatcher (<i>Empidonax trailii extimus</i>)	E			SE	Breeding habitat typically contains dense riparian habitat, with willow, salt cedar, Russian olive and a cottonwood overstory. Nests near slow moving streams, river backwaters, oxbows, or marshy areas. Within New Mexico, nesting populations occur along the Rio Grande and Gila drainages. Species winters in Mexico, Central	Unlikely to occur. No suitable riparian habitat in action area. No documented nesting occurrences in Santa Fe County (Breeding Bird Atlas 2016). Closest	No effect

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Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
Virginia's warbler (<i>Vermivore virginiae</i>)			WL		America, and perhaps northern South America. Primarily associated with pinyon-juniper and oak woodlands, though in New Mexico, it extends upward into mixed conifer habitat containing Gambel Oak, New Mexico locust, maple or other shrubby deciduous vegetation.	nesting habitat is the Rio Grande. May occur. Virginia's warbler is a confirmed breeder in Santa Fe County and has been documented in the action area (Breeding Bird Atlas 2016; Sullivan et al. 2009).	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Western burrowing owl (<i>Athene cunicularia hypugea</i>)		S	S		Found in open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation. It occurs as a summer resident and is fairly common in Santa Fe County. Typically nests in abandoned mammal burrows and is often associated with prairie dog towns	Known to occur. Species has been documented nesting adjacent to Caja Del Rio road on the south end of the project area near latitude 35.656791/ Longitude - 106.064788 (Sullivan et al. 2009;).	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	T	S	S	SS	Nest in large, dense patches of riparian vegetation, particularly with a cottonwood/Gooding's willow overstory. In New Mexico, habitat is generally within the San Marcial Reach of the Rio Grande.	Unlikely to occur. No suitable riparian habitat in action area. No documented nesting occurrences in Santa Fe County (Breeding Bird Atlas	No effect.

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	FWS	SFNF	BLM	NM			
White-tailed ptarmigan (<i>Lagopus leucurus</i>)		S		SE	Alpine tundra, especially in rocky areas with sparse vegetation.	Unlikely to occur. No suitable habitat in action area.	No impact
Fish							
Bigscale Logperch (<i>Percina macrolepida</i>)			S		Deep rivers, preferably with a strong current and rubble-gravel substrate; however, it is also found in rivers with nearly imperceptible flow and in impoundments.	Unlikely to occur. No aquatic habitat in action area.	No impact
Smallmouth buffalo (<i>Ictiobus bubalus</i>)			S		Larger pools of higher order rivers with low velocity current and lower elevation impoundments.	Unlikely to occur. No aquatic habitat in action area.	No impact
Peppered chub (<i>Macrhybopsis tetranema</i>)			S		Low gradient, main channel streams with a substrate of fine gravel or sand.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande chub (<i>Gila Pandora</i>)		S	S	SS	Coolwater reaches of the Rio Grande and Pecos River (including tributaries) in northern New Mexico.	Unlikely to occur. No aquatic habitat in action area.	No impact
Roundtail chub (<i>Gila robusta</i>)			S		Pools and rapids of moderate to large rivers with cobble-rubble, sand-cobble, or sand-gravel substrate in association with undercut banks, fallen logs, or other overhead cover.	Unlikely to occur. No aquatic habitat in action area.	No impact
Speckled chub (<i>Macrhybopsis</i>)			S		Low gradient, main channel streams with a substrate of fine gravel or sand.	Unlikely to occur. No aquatic habitat	No impact

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Common Name (Scientific Name)	Status ¹				Habitat Requirements ^{2,3}	Potential for Occurrence in Action Area	Determination of Effect
	FWS	SFNF	BLM	NM			
<i>aestivalis</i>)						in action area.	
Southern redbelly dace (<i>Phoxinus erythrogaster</i>)			WL		Clear, cool, and shaded streams and spring runs.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande silvery minnow (<i>Hybognathus amarus</i>)			WL		Medium to large-sized rivers of New Mexico and Texas	Unlikely to occur. No aquatic habitat in action area.	No impact
Suckermouth minnow (<i>Phenacobius mirabilis</i>)			S		Riffles in small to moderate-sized clear water streams with substrates ranging from sand and gravel to large boulder.	Unlikely to occur. No aquatic habitat in action area.	No impact
Gray redborse (<i>Moxostoma congestum</i>)			S		Low gradient streams, with warm, usually clear water.	Unlikely to occur. No aquatic habitat in action area.	No impact
Arkansas river shiner (<i>Notropis girardi</i>)			S		Shallow, often turbid channels, in High Plains reaches of major streams of the Arkansas drainage.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande shiner (<i>Notropis jemezianus</i>)			S		Large open rivers with laminar flows and a minimum of aquatic vegetation and larger streams with gravel, sand or rubble bottoms which are sometimes overlain with silt.	Unlikely to occur. No aquatic habitat in action area.	No impact
Blue sucker (<i>Cycleptus elongates</i>)			S		Deep river channels, pools with moderate currents, and deep lakes.	Unlikely to occur. No aquatic habitat in action area.	No impact
Bluehead sucker (<i>Catostomus</i>)			S		Occupies a variety of habitats from headwater streams to large rivers, it is	Unlikely to occur. No aquatic habitat	No impact

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	FWS	SFNF	BLM	NM			
<i>discobolus discobolus</i>)					almost always in moderate to fast flowing water above a rubble-rock substrate.	in action area.	
Flannelmouth sucker <i>Catostomus latipinnis</i>			S		Occurs in a wide variety of habitats, ranging from riffles to backwater areas, in larger rivers and streams.	Unlikely to occur. No suitable habitat in action area.	No impact
Rio Grande sucker <i>(Catostomus plebeius)</i>		S	S		Cool, mid-elevation streams with rocky substrates and backwaters with pools below riffles. Rarely found in water with heavy silt or organic matter.	Unlikely to occur. No aquatic habitat in action area.	No impact
Rio Grande cutthroat trout <i>(Oncorhynchus clarki virginalis)</i>		S	S	SS	Clear, cold streams and lakes. Distribution limited to headwater tributaries within native range.	Unlikely to occur. No aquatic habitat in action area.	No impact
Amphibians & Reptiles							
Northern leopard frog <i>(Lithobates pipiens)</i>		S	WL		Aquatic habitats, including marshes, streams, ponds, irrigation ditches, wet meadows, and shallow portions of reservoirs	Unlikely to occur. No aquatic habitat in action area.	No impact
Plains leopard frog <i>(Lithobates blairi)</i>			WL		Usually in the vicinity of streams, ponds, creek pools, reservoirs, irrigation ditches, and marshes in areas of prairie and desert grassland, farmland, and prairie canyons, oak and oak-pine woodland	Unlikely to occur. No aquatic habitat in action area.	No impact
Texas horned lizard <i>(Phrynosoma)</i>			WL		Inhabits flat, open, generally sandy and dry country with little plant cover, except for bunchgrass and cactus.	Unlikely to occur. Project action area outside known	No effect.

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	FWS	SFNF	BLM	NM			
<i>cornutum</i>)					Seeks shelter under rocks. Range includes southwestern Missouri and central Kansas to southeastern Colorado, and south and west throughout most of Oklahoma and Texas, eastern and southern New Mexico, and southeastern Arizona to Mexico.	range.	
Great Plains narrowmouth toad (<i>Gastrophryne olivacea</i>)			WL		Semi-arid and arid lowlands such as mesquite and shrublands. It is also known from grasslands, rocky wooded hills, marsh edges, near springs, streams, and rain pools, river floodplains, scrub desert, and cultivated fields. It hides in rotten logs and stumps, burrows, and under rocks and other cover when inactive. Range includes southern Nebraska, southeastern Colorado, and southern Arizona to Mexico. Range in New Mexico is limited to the south west portion of the state.	Unlikely to occur. Project action area outside known range.	No effect.
Clams & Snails							
Lilleborg peaclam (<i>Pisidium lilleborgi</i>)		S		ST	Large lakes and is common in the sublittoral zones and in the mud of profundal zones of lakes, including the Great Lakes; it is also found in fine sand of river	Unlikely to occur. No aquatic habitat in action area.	No impact
Arthropods							
Yuma skipper (<i>Ochlodes yuma</i>)			S		Restricted to marshes, watercourses, pond edges, seeps, sloughs, springs	Unlikely to occur. No aquatic habitat	No impact

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	FWS	SFNF	BLM	NM			
<i>Anasazi</i>					and irrigation canals.	in action area.	
Plants							
Gramma grass cactus (<i>Sclerocactus papyracanthus</i>)			S		Pinyon-juniper woodlands and in desert grasslands and is almost always associated with grama (<i>Bouteloua</i> spp.), especially blue grama (<i>B. gracilis</i>). It may also be associated with dropseed (<i>Sporobolus</i> spp.)	May occur. Suitable pinyon-juniper woodlands are present in action area but no plants were observed during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Santa Fe cholla (<i>Opuntia viridiflora</i>)			S	SE	South- and west-facing slopes in pinyon-juniper woodlands in between 5,800 and 7,200 ft in Santa Fe County.	May occur. Suitable pinyon-juniper woodlands occur but no individuals were observed during biological surveys. Only three populations known to exist near Chimayo, none near the Project area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Ripley's milkvetch (<i>Astragalus ripleyi</i>)			S		Pine-oak communities, pinyon-juniper sagebrush, sagebrush communities, and <i>Chrysothamnus viscidiflorus</i> meadows from 7,000 to 8,250 feet. Found growing under the canopy, or amongst the stems, of shrubs such as big sage, gambel oak, rabbit brush, and juniper.	Unlikely to occur. No suitable substrate and action area is below known elevation tolerances.	No impact.

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	FWS	SFNF	BLM	NM			
Tufted sand verbena (<i>Arbronia bigelovii</i>)		S	S		Hills and ridges of calcareous Toddlito formation at elevations from 5,700-7400 ft	May occur. Suitable pinyon-juniper woodlands are present in action area but no plants were observed during biological surveys.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Greene milkweed (<i>Asclepias uncialis</i> ssp. <i>Uncialis</i>)		S			Occurs on lower side slopes at the base of mesas or escarpments; it is absent from highly disturbed habitats such as sand dunes, erosion channels, wash slopes, and badlands; associated with species typical of shortgrass prairie.	Unlikely to occur. No suitable habitat within action area.	No impact.
Chaco milkvetch (<i>Astragalus micromerius</i>)		S			Pinyon-juniper woodland and Great Basin desert scrub. This species is associated with calcareous sandstone or gypsum substrates and specifically is found on sandstone mixed with Toddlito gypsum or limestone.	Unlikely to occur. No suitable habitat within action area.	No impact.
Pecos mariposa lily (<i>Calochortus gunnisonii</i> var. <i>perpulcher</i>)		S			Meadows and aspen glades in upper montane coniferous forest.	Unlikely to occur. No suitable habitat within action area.	No impact.
Yellow lady's-slipper (<i>Cypripedium parviflorum</i> var. <i>pubescens</i>)		S		SE	Boggy areas, swampy areas, damp woods (often with a rich layer of humus and decaying leaf litter), near rivers or canal banks.	Unlikely to occur. No suitable habitat within action area.	No impact.
Robust larkspur		S			Canyon bottoms and aspen groves in	Unlikely to occur.	No impact.

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	FWS	SFNF	BLM	NM			
<i>Delphinium robustum</i>)					lower and upper montane coniferous forest	No suitable habitat within action area.	
Heil's alpine whitlowgrass (<i>Draba heilii</i>)		S			Alpine tundra growing in association with other low, caespitose or pulvinate alpine plants.	Unlikely to occur. No suitable habitat within action area.	No impact.
Pecos fleabane (<i>Erigeron subglaber</i>)		S			Rocky, (generally greater than 50% exposed rock) open meadows in subalpine-montane conifer forest at 9,950 to 11,600 feet	Unlikely to occur. No suitable habitat within action area.	No impact.
Wood lily (<i>Lilium philadelphicum</i> var. <i>adinum</i>)		S		SE	Wetland obligate found in high-mountain meadows	Unlikely to occur. No suitable habitat within action area.	No impact.
Lady tresses orchid (<i>Spiranthes magnicamporum</i>)				SE	Habitat variable, but often associated with calcareous soils: dry or wet prairie and riverbanks and floodplains.	Unlikely to occur. No suitable habitat within action area.	No impact.
Chama blazing star (<i>Mentzelia conspicua</i>)		S			On road cuts and steep barren hillsides of gray to red shales and clays of the Mancos and Chinle formations in piñon-juniper woodland from 5,900-7,200 feet.	Unlikely to occur. No suitable habitat within action area.	No impact.
Springer's blazing star (<i>Mentzelia springeri</i>)		S			Volcanic and unconsolidated pyroclastic ash in piñon-juniper woodland and lower montane coniferous forest from 7,000 to 8,000 feet.	Unlikely to occur. No suitable habitat within action area and action area is below known elevation tolerances.	No impact.

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	FWS	SFNF	BLM	NM			
Blumer's dock (<i>Rumex orthoneurus</i>)		S			Near perennial springs in unshaded meadows or along streambanks in canyons with organic, moist soils.	Unlikely to occur. No suitable habitat within action area.	No impact.
Arizona willow (<i>Salix arizonica</i>)		S			High elevation (subalpine) wet meadows, low gradient streambanks, wet drainage ways, and cienegas, typically within a subalpine coniferous forest matrix. Plants are also sometimes found in drier sites adjacent to forest edges or within the riparian zone where subsurface channels provide moisture.	Unlikely to occur. No suitable habitat within action area is below known elevation tolerances.	No impact.

Source: USFWS 2016; BLM 2015; USFS 2013, NMGF 2016

¹Status designations are: FWS - Endangered (E), Threatened (T); SFNF – Sensitive (S); BLM – Sensitive (S), Watch List (WL); and State of New Mexico - State endangered (SE), State threatened (ST)

²Unless indicated otherwise, all of the wildlife species habitat information contained in this table was obtained from the New Mexico Game and Fish BISON-M, Biota Information System of New Mexico Web site at <http://nmnhp.unm.edu/bisonnm/bisonquery.php> and the New Mexico Partners in Flight Species Accounts at <http://www.nmpartnersinflight.org/species.html>

³ Sensitive and listed plant habitat information was obtained from New Mexico Rare Plants Website (NMRPTC 1999) at http://nmrareplants.unm.edu/rarelist_single.php?SpeciesID=61

8.0 ANALYSIS OF EFFECTS

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

The purpose of this section is to determine if it is reasonable to expect the proposed action to have direct or indirect effects on federally listed, sensitive, and MIS species and their suitable habitat that reduce appreciably the likelihood of their survival and recovery. An evaluation of the anticipated disturbance from the proposed action is described below for each species with potential to occur in the action area.

None of the four USFWS federally listed species (Southwestern willow flycatcher, New Mexico meadow jumping mouse, Mexican spotted owl, or Western yellow-billed cuckoo) have the potential to occur in the action area and will not be discussed further. In addition, no critical habitat for any federally listed species occurs in the action area.

For the remaining sensitive species, the action area is either clearly beyond the known geographic or elevation range of these species, or the action area does not contain habitat to support these species, or both. Disturbance is defined as noise in excess of ambient levels in or near suitable nesting/roosting/foraging habitat or as the reaction of nesting birds or breeding mammals to human presence or activity, resulting in disruption of essential breeding or other behaviors.

8.1 General Impacts Common to All Species

Human activity and noise during construction have the potential to disturb wildlife inhabiting the site. However, most wildlife would be expected to naturally avoid the area during construction because of increased noise and human presence; hence the effect of any displacement is expected to be temporary. However, this still is an energetic cost to the individual and in extreme cases can result in increased predation risk to the individual or its offspring. This disturbance will only occur during the 6 month construction schedule.

Construction of the new trail will require minor vegetation (mostly grasses and shrubs) removal within the trail corridor. The trail alignment has been designed to avoid trees where possible. Where the trail crosses arroyos, the trail will continue through the arroyo with a natural surface and with no construction in the arroyo. A total of 8.27 acres of permanent impact to vegetation is expected as a result of trail construction. No riparian habitat or wetlands are located in the project area. Temporary habitat loss would occur directly adjacent to the trail during construction activities but is expected to recover in one to two years. Areas where temporary impacts occur will be revegetated or reseeded.

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If construction takes place during the nesting season for migratory birds, nest loss or abandonment may occur. Disturbance by construction workers and equipment may be significant enough to cause stress to nesting birds and result in abandonment and/or predation of nests. Implementing trail construction outside of the nesting season would mitigate these impacts. It is recommended in Section 10.0 that construction activities should be conducted outside the migratory bird breeding season (April 15 to September 15) if possible.

Construction of the trail would occur between Spring 2017 and Fall 2017. Construction would occur during daylight hours only, reducing the potential for direct disturbance to nocturnal species, such as owls and bats.

The trail will not create any barriers to wildlife movement; however, the physical presence of a trail may cause avoidance by some species. Injury or mortality to small mammals could occur as a result of recreation traffic, but the potential for direct effects is low. Mountain bikers and hikers may contribute to the spread of noxious weeds, reducing habitat quality for some species potentially outside the Action Area to the surrounding landscape.

Disturbance by recreation traffic can result in behavioral changes in certain bird species, such as displacement and nest abandonment. Different animals respond differently to the presence of trail users. Most wildlife species readily adapt or become "habituated" to consistent and non-threatening recreational activities. For example, animals may notice but not move away from humans on a frequently used trail (Knight and Gutzwiller 1995). Occasional trailside trampling within trail corridors could impact native plant species. Recommended mitigation in Section 10.0 requiring existing leash laws to be maintained and dogs to be under voice control at all times while on trail will reduce the potential for any impacts to wildlife from off-leash dogs.

8.1.1 Potential Impacts to Migratory Birds

The Migratory Bird Treaty Act (MBTA) (16 United States Code [USC] 703–712), Executive Order 121186 for migratory bird protection, and the Bald and Golden Eagle Protection Act (16 USC 668–668d) establish protections for migratory birds and their parts (e.g., eggs, nests, and feathers) from taking, hunting, capture, transport, sale, or purchase. Most species of birds are classified as migratory under the MBTA, except for some upland game and introduced birds.

During the biological surveys several old nests located in cholla were observed, and signs of potential nesting, perching and roosting activity (whitewash) were noted along the cliff face within 0.50 miles of the trail. Although no active nests were observed, suitable nesting habitat exists within and immediately adjacent to the trail alignment. HDR recommends that construction activities take place outside of the bird nesting season (April 15 through September 15). If this recommendation is not possible because of scheduling constraints, a pre-construction nest survey conducted by a qualified biologist is recommended, and any impacts that are identified be mitigated in conformance with the USFWS's migratory bird requirements.

8.2 Species-Specific Impacts and Effects Determination

8.2.1 Fringed myotis (*Myotis thysanodes*)

The Fringed myotis occurs in a variety of habitats ranging from mountainous pine, oak, and pinyon-juniper to desert scrub but prefers grassland areas at intermediate elevations. These bats roost in caves, mine tunnels, rock crevices, and old buildings in colonies that may number several hundred (BISON-M 2016). The pinyon-juniper woodlands in the action area may provide suitable roosting and foraging habitat for the species. No bats were observed during the biological survey.

Human activities and noise during construction may temporarily displace Fringed myotis. No nighttime construction activities are planned, and tree removal in the pinyon-juniper woodlands would be minimal. No impacts to potential roost sites would occur as a result of project construction. Therefore, the proposed project *may impact individual Fringed myotis, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.2 Gunnison's prairie dog (*Cynomys gunnisoni*)

The Gunnison's prairie dog habitat consists of grassland, sagebrush, and pinyon-juniper woodland. Diet includes grasses, forbs, sedges, and shrubs. It lives in colonial burrows, usually on slopes or in hummocks. Colonies may consist of fewer than 50 to 100 individuals. The animals are diurnal, with bimodal peaks of activity common during the warmer parts of the year. They hibernate during the winter months (BISON-M 2016).

Suitable habitat is present within open areas in the action area. No Gunnison's prairie dogs were observed during biological surveys; however, potential mounds (inactive at time of survey) were observed along Caja Del Rio Road within the action area.

Human activities and noise during construction could temporarily displace Gunnison's prairie dogs from active construction areas. Construction could result in soil compaction and vegetation removal that may negatively impact Gunnison's prairie dogs. Increased human recreation activity may result in disturbance and displacement of prairie dogs immediately adjacent to the trail. However, prairie dogs will likely adapt or become "habituated" to consistent and non-threatening recreational activities. Therefore, the proposed project *may impact individual Gunnison's prairie dogs, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.3 Long-legged myotis (*Myotis volans*)

Long-legged myotis are relatively common in ponderosa pine forests and pinyon-juniper woodlands. This bat roosts in a variety of sites, including trees, buildings, crevices in rock faces, and even fissures in the ground in evenly eroded areas. The pinyon-juniper woodlands in the action area may provide suitable roosting and foraging habitat for the species. No bats were observed during the biological survey.

Human activities and noise during construction may temporarily displace Long-legged myotis. No nighttime construction activities are planned, and tree removal in the pinyon-juniper woodlands would be minimal. Minor tree removal may impact individual roost sites of Long-

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legged myotis but there is abundant habitat surrounding the action area. Therefore, the proposed project *may impact individual Long-legged myotis, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.4 Pale Townsend's big-eared bat (*Corynorhinus townsendia pallescens*)

Pale Thompson's big-eared bats occupy semidesert shrublands, pinyon-juniper woodlands, and open montane forests. They are frequently associated with caves and abandoned mines for day roosts and hibernacula but will also use abandoned buildings and crevices on rock cliffs for refuge. They are relatively sedentary and do not move long distances from hibernacula to summer roosts, nor do they move or forage far from their day roosts (BISON-M 2016). The pinyon-juniper woodlands in the action area may provide suitable foraging habitat for the species. No bats were observed during the biological survey.

Human activities and noise during construction may temporarily displace Pale Townsend's big eared bats. No nighttime construction activities are planned, and tree removal in the piñon-juniper woodlands would be minimal. Minor tree removal may impact individual roost sites of Pale Thompson's big-eared bats but there is abundant available habitat for roost sites surrounding the action area. Therefore, the proposed project *may impact individual Pale Townsend's big eared bats but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.5 Spotted bat (*Euderma maculatum*)

Habitat for the Spotted bat includes ponderosa pine forests, pinyon-juniper woodlands, and open semidesert shrublands. Rocky cliffs are necessary to provide suitable cracks and crevices for roosting, as is access to water. The pinyon-juniper woodlands in the action area may provide suitable foraging habitat for the species. No bats were observed during the biological survey.

Human activities and noise during construction may temporarily displace Spotted bats. No nighttime construction activities are planned, and tree removal in the piñon-juniper woodlands would be minimal. No impacts to potential roost sites for Spotted bats would occur as a result of project construction. Therefore, the proposed project *may impact individual Spotted bats but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.6 Western small-footed myotis (*Myotis ciliolabrum*)

Western small-footed myotis are common in coniferous and mixed woodland habitat in canyons and foothills. Roosting habitat includes rock crevices, caves, dwellings, burrows, among rocks, under bark, and even beneath rocks scattered on the ground. The piñon-juniper woodlands in the action area may provide suitable foraging habitat for the species. No bats were observed during the biological survey.

Human activities and noise during construction may temporarily displace small-footed myotis because of. No nighttime construction activities are planned, and tree removal in the piñon-juniper woodlands would be minimal. No impacts to potential roost sites would occur as a result of project construction. Therefore, the proposed project *may impact individual Western small-footed myotis but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.7 Western spotted skunk (*Spilogale gracilis*)

Spotted skunks inhabit montane forest, shrubland, semidesert shrubland, and pinyon-juniper woodlands. It frequents rocky canyon, cliffs, or brushy gulches where thickets or rock piles afford protection. Spotted skunks may be found in agricultural areas and around human settlements (BISON-M 2016). Suitable habitat is present within the pinyon-juniper woodland habitats within the action area. No spotted skunks were observed during biological surveys.

Human activities and noise during construction could temporarily displace spotted skunks from active construction areas. Increased human recreational activity may result in disturbance and displacement of spotted skunks immediately adjacent to the trail. Domestic dogs roaming off trail may harass spotted skunks. Therefore, the proposed project *may impact individual Western spotted skunks, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.8 American peregrine falcon (*Falco peregrinus anatum*)

In New Mexico, the breeding territories of peregrine falcons center on wooded and forested cliffs (BISON-M 2016). Suitable nesting habitat exists in Diablo Canyon and suitable foraging habitat exists in the pinyon-juniper habitats and surrounding areas. Peregrine falcons have been documented in Diablo Canyon but breeding has not been confirmed (Will Amy, SFNF Biologist, personal communication with Sirena Brownlee, HDR, December 2015). No Peregrine falcons were observed during biological surveys.

Because of the low intensity and localized nature of construction activities and subsequent recreational use, construction activities are not likely to disturb foraging Peregrines in the action area. Impacts to peregrine prey availability are also not expected because of minor loss of vegetation. Therefore, the proposed project *may impact individual Peregrine falcons, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.9 Bald eagle (*Haliaeetus leucocephalus*)

Bald eagles are common winter residents along the Rio Grande. During the winter they roost in cliffs and large snags along the water. Bald eagles may also be found in grasslands in association with prairie dogs town during the winter (BISON-M 2016). Suitable breeding habitat is not present within the action area but suitable roosting habitat is present in Diablo Canyon and the nearby riparian habitat along the Rio Grande and prairie dog towns in the project vicinity could provide suitable foraging habitat.

Because there is no roosting habitat in the action area, construction activities are not likely to disturb wintering bald eagles. Roosting eagles that maybe present in Diablo Canyon or along the Rio Grande will not be disturbed because of the localized nature of activities. Prey species, such as mule deer and prairie dogs, are available in the action area. Bald Eagles may occasionally prey on prairie dogs in winter. Therefore, any loss of prairie dog colonies would result in a slight loss of foraging habitat for eagles. Therefore, the proposed project *may impact individual bald eagles, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.10 Bendire's thrasher (*Toxostoma bendirei*)

Bendire's thrasher typically inhabits sparse desert shrubland and degraded grassland vegetation. It may also occur in open woodland with scattered shrubs. Plant composition of habitat varies with latitude and elevation. On the Colorado Plateau, the thrasher inhabits sagebrush with scattered junipers. In central New Mexico, Bendire's thrasher is more commonly associated with cholla stands (NMPIF 2016). Bendire's thrasher have been reported in the action area and surrounding areas (Sullivan et al. 2009). This species has not been documented breeding in Santa Fe County (Breeding Bird Atlas Explorer 2016).

. Bendire's thrasher may be temporarily displaced during construction should they occupy the action area. Therefore, the proposed project *may impact individual Bendire's thrasher, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.11 Cassin's finch (*Carpodacus cassinii*)

Cassin's finch breeds in open coniferous forest from 8,000 feet to 11,000 feet but will also breed in pinyon-juniper, riparian areas, and, rarely, towns within their range. During migration and winter they may be found in deciduous woodland, second growth, scrub, brushy areas, and partly open situations with scattered trees. The New Mexico Breeding Bird Atlas (2016) reported probable nesting for Cassin's finch in Santa Fe County. Suitable foraging habitat may occur in pinyon-juniper habitat in the action area; although, the action area is below the elevation tolerance for breeding.

Cassin's finch could be temporarily displaced during construction should they occupy the action area. Because the action area is below the elevation preference for nesting, no impacts to breeding habitat will occur as a result of project construction. Therefore, the proposed project *may impact individual Cassin's Finch, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.12 Ferruginous hawk (*Buteo regalis*)

Ferruginous hawks occur in open areas containing broad expanses of prairie grassland or shrub-steppe vegetation. Landscapes with low to moderate agricultural coverage (less than 50 percent) may be used for nesting and foraging, and agricultural fields may serve as important foraging areas because of high prey densities. The species also uses transitional and edge areas between grassland and juniper savannah or pinyon-juniper woodland. Nesting sometimes occurs in elevated locations on the ground, particularly in broad and undisturbed grassland areas, but can also occur on rock spires or tree stands. Ferruginous hawks feed primarily on small mammals, especially ground squirrels, prairie dogs, and rabbits. In New Mexico, wintering Ferruginous hawks show a strong association with prairie dog colonies (BISON-M 2016). No nesting has been confirmed in Santa Fe County (Breeding Bird Atlas Explorer 2016). However, the action area provides open areas that provide foraging habitat for this species, and this species has been observed in the vicinity of the action area (Sullivan et al. 2009).

Because of the low intensity and localized nature of construction activities and subsequent recreational use, construction activities are not likely to disturb foraging Ferruginous hawks in the action area. Prey species, such as ground squirrels and prairie dogs, are available in the

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project area. Any removal of vegetation or loss of prairie dog colonies would result in a slight loss of foraging habitat for this species. Therefore, the proposed project *may impact individual Ferruginous hawks, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.13 Golden eagle (*Aquila chrysaetos*)

Golden eagle nest sites may be located in cliffs and rock faces that are abundant in the river canyons. Golden eagles forage in open areas, including open grassland or shrubland habitat, and tend to avoid agricultural areas (BISON-M 2016). Golden eagles breed from February 1 to August 15 in New Mexico. No nesting has been confirmed in Santa Fe County (Breeding Bird Atlas Explorer 2016). However, the action area provides open areas that provide foraging habitat for this species. Prey species, such as mule deer, prairie dogs, and other small- to medium-sized mammals are available in the project area.

Construction activities could temporarily reduce the availability of prey in the area, which would temporarily impact Golden eagles foraging in the area. Additionally, removal of vegetation for trail construction may result in a slight reduction of available habitat for prey species. Therefore, the proposed project *may impact individual Golden eagles, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.14 Gray vireo (*Vireo vicinior*)

Gray vireos breed in open woodlands and shrublands featuring evergreen trees and shrubs of various kinds. The species is often associated with oaks (*Quercus* sp.) in the southern part of its range and usually in habitat with a well-developed grass component (BISON-M 2016). The action area provides marginal breeding habitat consisting of scattered juniper trees. No Gray vireos were observed during the biological survey; however, this species is commonly observed near Diablo Canyon (Sullivan et al. 2009).

Construction of the proposed project could temporarily displace Gray vireos should they occupy the action area. Removal of vegetation may result in a minor loss of foraging habitat. However, there is abundant available habitat adjacent to the action area, while existing suitable habitat in the action area is marginal. Therefore, the proposed project *may impact individual Gray vireos, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.15 Juniper titmouse (*Baeolophus ridgwayi*)

Juniper titmouse is a year-round resident in the action area and prefers open, mixed woodland areas at mid-elevations, and is most common where juniper is dominant. Juniper titmouse requires large, mature trees that provide natural or woodpecker-excavated cavities for nesting and roosting. Nests are sometimes placed in crevices in twisted trunks of mature junipers. Cavity use for night roosting in winter increases fasting endurance and may be critical to annual survival (NMPIF 2016). The action area provides breeding habitat consisting of scattered juniper trees. Several Juniper titmouse were observed during the biological survey and this species is confirmed breeder in Santa Fe County (Breeding Bird Atlas Explorer 2016).

Construction of the proposed project could temporarily displace Juniper titmouse should they occupy the action area. Minor tree and shrub removal may impact availability of breeding sites

but there is abundant habitat available in surrounding areas. Therefore, the proposed project *may impact individual Juniper titmouse, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.16 Loggerhead shrike (*Lanius ludovicianus*)

Loggerhead shrikes primarily inhabit sagebrush areas, desert scrub, pinyon-juniper woodlands, deciduous riparian forests, and woodland edges. Habitats may be selected for availability of perching sites, such as fences (BISON-M 2016). There is suitable nesting and foraging habitat within the action area. No loggerhead shrike nests or birds were observed during the biological survey.

Loggerhead shrikes are a year-round resident on their breeding grounds and therefore could be temporarily displaced during construction should they occupy the action area. Removal of vegetation may result in a slight reduction of potential foraging and nesting habitat for shrikes but there is abundant habitat available in surrounding areas. Therefore, the proposed project *may impact individual Loggerhead shrikes, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.17 Mountain Plover (*Charadrius montanus*)

Mountain plovers occur in shortgrass prairies and dry playas dominated by blue grama and buffalograss (*Buchloe dactyloides*), and in scattered taller vegetation during the breeding season. Bare ground is a requirement for this species and they often are found in association with livestock grazing, prairie dog towns, disturbed areas around windmills and water tanks, and barren playas. Nests are often located near prominent objects, such as woody plants, cow manure, rocks, fence posts, and power poles (BISON-M 2016). Breeding has been confirmed in Santa Fe County (Breeding Bird Atlas 2016). May also occur in project area during spring and fall migration. The pinyon-juniper woodland in the action area provides marginal nesting and foraging habitat.

Construction activities may temporarily displace individual Mountain plovers should they occupy the action area. Therefore, the proposed project *may impact individual Mountain plover, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.18 Pinyon jay (*Gymnorhynchus cyanocephalus*)

Pinyon jays nest mainly in stands of pinyon-juniper. The species needs open woodlands for nesting and an adequate supply of seeds, especially nuts. They are gregarious and breed in colonies of up to 150 individuals. They spend the winters in large flocks in search of pinyon stands with a successful crop of pinyon nuts that are a primary food source along with other seeds, fruits, and insects (USFS 2012). A group of 15 pinyon jays were observed in the foothills adjacent to the action area during biological surveys. Suitable habitat for this species exists within the action area but it is marginal because of the pinyon pine mortality from bark beetles (Curculionidae) (USFS 2012).

Construction of the proposed project may impact Pinyon jay breeding colonies if a colony occurs near the action area. Their occurrence is unpredictable and seasonally sporadic and they may

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move many miles in mass looking for a good crop of pinyon nuts (USFS 2012). Removal of any trees would result in the loss of a minor amount of foraging and potential nesting habitat; however, there is abundant available habitat adjacent to the action area. While higher in the foothills pinyons were more common, only a few pinyon pines were observed near the action area. Therefore, the proposed project *may impact individual Pinyon jays, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.19 Sage thrasher (*Oreoscoptes montanus*)

Sage thrashers breed in shrub-steppe dominated by big sagebrush; the species is considered a sagebrush obligate. This species generally nests in or under big sagebrush, though occasionally other shrub species are used. Taller shrubs, and shrubs with wider crowns, are preferred for building nests. Nests are located either on the ground beneath the shrub, or low (less than 3 feet) in the interior branches. Breeding activity in New Mexico begins in April and southward migration begins in August (NMPIF 2016). Breeding has not been documented in Santa Fe County (Breeding Bird Atlas 2016); however, foraging habitat for this species occurs within the action area.

Construction activities may temporarily displace individual Sage thrashers should they occupy the action area. Removal of vegetation may result in a slight reduction of potential foraging and nesting habitat for Sage thrashers. Therefore, the proposed project *may impact individual Sage thrashers, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.20 Virginia's warbler (*Vermivore virginiae*)

Virginia's warbler are associated with pinyon-juniper and oak woodlands and mixed conifer habitat containing Gambel Oak, New Mexico locust, maple (*Acer* spp.), or other shrubby deciduous vegetation. Virginia's warbler is a ground nester in open habitat with deciduous shrubs and trees. During spring and fall migration, the species uses lower elevation foothills and cottonwood-dominated riparian corridors. Virginia's warbler is a confirmed breeder in Santa Fe County and has been documented in the action area (Breeding Bird Atlas 2016; Sullivan et al. 2009).

Construction activities may temporarily displace individual Virginia's warblers should they occupy the action area. Removal of any trees would result in the loss of potential nesting habitat; however, there is abundant available habitat adjacent to the action area.. Therefore, the proposed project *may impact individual Virginia's warblers, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.21 Western burrowing owl (*Athene cunicularia hypugea*)

The Burrowing owl is typically associated with prairie dog colonies and heavily grazed tracts of mixed-grass prairie and open areas. A decline in the population of burrowing mammals may adversely affect owls through a lack of available burrows (Haug et al. 1993). Human activities that reduce quality of prey habitat and thus lower food supplies result in poorer reproductive success in females (Haug et al. 1993).

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Western burrowing owl habitat found within the action area includes open areas within the pinyon-juniper woodland and prairie dog colonies adjacent to Caja Del Rio Road. No owls were observed during biological surveys, nor were any active prairie dog towns. Species has been documented nesting adjacent to Caja Del Rio Road on the south end of the project area (Sullivan et al. 2009).

Construction activities could result in the potential disturbance of some prairie dog colonies that are located adjacent to Caja del Rio Road. These colonies were not active during the November 2015 surveys. Burrowing owls are dependent on prairie dog colonies for nesting habitat and any impact to prairie dog habitat is likely to impact Burrowing owls. Construction activities leading to compacted soils used by burrowing owls or other burrowing mammals may adversely affect the species. Construction activities could temporarily reduce the availability of prey for owls in the immediate area. A Burrowing owl survey will be conducted prior to starting construction along Caja del Rio Road, to confirm if any prairie dog burrows are occupied by Burrowing owls. If Burrowing owls are found in the action area, FHWA will coordinate with USFWS to ensure compliance with the MBTA. The proposed project *may impact individual Western burrowing owls, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.22 Gramma grass cactus (*Sclerocactus papyracanthus*)

Gramma grass cactus is listed as a BLM sensitive species. It occurs in pinyon-juniper woodlands and in desert grasslands usually on sandy soils with a calcareous or gypseous component, on open flats or gentle slopes from 4,920 to 7,200 feet elevation. The plant is almost always associated with grama (*Bouteloua* spp.), especially blue grama (*B. gracilis*). It may also be associated with dropseed (*Sporobolus* spp.) and can go unnoticed because the spines resemble the dried leaves of the grass (NMRPTC 1999).

Suitable habitat for *Sclerocactus papyracanthus* may exist within the action area. The project area is within the elevational range for this species. If present, impacts to this species could include ground disturbance during construction activities and potential trampling of vegetation adjacent to trail. The proposed project *may impact individuals of Sclerocactus papyracanthus, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.2.23 Santa Fe cholla (*Opuntia viridiflora*)

Santa Fe cholla is listed as a BLM sensitive species and a state endangered species. It occurs in gravelly rolling hills in pinyon-juniper woodland from 5,800-7,200 feet elevation. The Santa Fe cholla is known from only three areas between Santa Fe and Chimayo. Populations of this species are impacted by urban development and human activity. (NMRPTC 1999).

Suitable habitat for *Opuntia viridiflora* may exist within the action area. The project area is within the elevational range for this species. If present, impacts to this species could include ground disturbance during construction activities and potential trampling of vegetation adjacent to trail. The proposed project may impact individuals of *Opuntia viridiflora*, but it is not likely to result in a trend toward federal listing or loss of viability.

8.2.24 Tufted sand verbena (*Arbronia bigelovii*)

Tufted sand verbena is characterized as a dwarf, tufted, perennial, semi-succulent, grayish-green herb with leaves clustered on very short thick branches that remain near the ground. It

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grows on hills and ridges of gypsum in the Todilto Formation from 5,700 to 7,400 feet. Populations are usually small and are restricted to gypsum or strongly gypseous soils derived from gypsum outcrops. Plants are conspicuous on the otherwise rather barren gypsum. Although locally rather common, they do not form dense populations.

Suitable habitat for *Arbronia bigelovii* likely occurs within in the vicinity of the action area (pers. comm. Jessa Davis, BLM). The project area is within the elevational range for this species. If present, impacts to this species could include ground disturbance during construction activities and potential trampling of vegetation adjacent to trail. The proposed project *may impact individuals of Arbronia bigelovii, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.3 Santa Fe National Forest Management Indicator Species

Table 2 lists MIS designated by the Santa Fe National Forest, their habitat requirements, potential for occurrence in the action area, and determination of effect. These species were selected for their association with plant communities or seral stages, which management activities are expected to affect (USFS 2012). The MIS evaluated in detail for this analysis include Rocky mountain elk, Pinyon jay, and Mourning dove. The remaining species either do not occur in the action area or will not be affected by construction activities.

Table 2. Santa Fe National Forest Management Indicator Species

Common Name (Scientific Name)	Habitat Requirements ¹	Potential for Occurrence in Project Area	Determination of Effect
Rocky mountain bighorn sheep (<i>Ovis canadensis canadensis</i>)	Bighorn sheep serve as a management indicator for alpine meadow habitat. On the SFNF, Rocky Mountain bighorn sheep inhabit the highest alpine areas of the Sangre de Cristo Mountains within the Pecos Wilderness, and have been introduced to the White Rock Canyon (pers. comm. NMDGF) and have also been transplanted in the Dome Wilderness on the Jemez Ranger District (pers. comm. R. Borrego, USFS). This includes the cliffs, crags, or other extremely rocky areas around the mountain peaks and open alpine meadow areas down to the edge areas of the spruce-fir type. The habitat trend for bighorn sheep on the Santa Fe Forest is stable (USFS 2012).	Not present. No suitable habitat is present in action area.	No impact
Rocky mountain elk (<i>Cervus elaphus nelsoni</i>)	Rocky Mountain elk serve as a management indicator for mid elevation (generally less than 9,000 feet) grasslands, meadows, and forested areas. During the summer, elk occupy montane meadows and montane coniferous forests. In winter, they move to lower piñon-juniper woodland, mixed conifer forest, plains grassland, or even desert scrub (USFS 2012).	May occur in action area during winter.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability
Merriam's turkey (<i>Meleagris</i>)	Merriam's turkey uses a wide range of vegetative communities, but the species was	Not present. No suitable habitat	No impact

Biological Assessment and Evaluation for El Camino Trail

Table 2. Santa Fe National Forest Management Indicator Species

Common Name (Scientific Name)	Habitat Requirements ¹	Potential for Occurrence in Project Area	Determination of Effect
<i>gallopavo</i>)	selected to serve as a management indicator of healthy, mature ponderosa pine habitat. Merriam's turkey utilizes ponderosa pine, a source of mast and its preferred roosting tree. Ponderosa pine is an essential component of its permanent habitat, while surface water is a range requirement. Turkeys prefer to roost in tall mature or over-mature ponderosa pines with relatively open crowns and large horizontal branches starting at 20–30 feet from the ground. Trees with a diameter at breast height of over 14 inches are often used as roosts. Turkeys forage in grasslands, brush communities, deciduous tree-brush, and ponderosa pine (USFS 2012).	is present in action area.	
Mourning dove (<i>Zenaida macroura</i>)	The mourning dove serves as a management indicator of healthy, mid and low elevation grasslands, woodlands, and ponderosa pine habitats. The species can be found in higher elevation communities but are typically regarded as casual above 7,000 feet. Mourning doves nest in a variety of habitats including shrub lands and forests. Fields used for feeding are often characterized by an abundance of small weed seeds and grain on relatively bare ground. Also frequents farms and suburbs, backyard feeders, and towns (USFS 2012).	May occur. Though not observed during biological surveys, suitable nesting habitat for this species is found throughout the proposed project area.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of viability.
Hairy woodpecker (<i>Picoides villosus</i>)	Hairy woodpeckers serve as a management indicator for mature forest and woodland habitats. They are also found in mature piñon-juniper, but typically, piñon trees are not large enough to provide suitable snags for nesting. They are primarily insectivorous and feed on insects associated with snags and downed logs. Consequently, snags and downed logs are key components of hairy woodpecker habitat. Hairy woodpeckers are also known to use mature snags of cottonwood and elm (<i>Ulmus</i> sp.) in riparian areas (USFS 2012).	Not present. No suitable habitat in action area. May use riparian habitat along Rio Grande.	No impact.
Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)	Pinyon jays can be found in a wide variety of vegetative communities, but they were selected to serve as a management indicator of healthy piñon-juniper habitat. Pinyon jays nest mainly in stands of piñon-juniper. The species needs open woodlands for nesting and an adequate supply of seeds, especially nuts.	Known to occur. This species was identified adjacent to the project area in hillside habitat.	May impact individuals, but is not likely to result in a trend toward federal listing or loss of

Biological Assessment and Evaluation for El Camino Trail

Table 2. Santa Fe National Forest Management Indicator Species

Common Name (Scientific Name)	Habitat Requirements ¹	Potential for Occurrence in Project Area	Determination of Effect
	They are gregarious and breed in colonies of up to 150 individuals. They spend the winters in large flocks in search of piñon stands with a successful crop of piñon nuts that are a primary food source along with other seeds, fruits, and insects (USFS 2012).		viability.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	Mexican spotted owls serve as a management indicator for late seral stage mixed conifer habitat. The Mexican spotted owl is most common in mature and old-growth forests throughout much of its range. The most highly sought habitat characteristics include high canopy closure, high stand density, a multi-layered canopy, uneven-aged stands, numerous snags, and downed woody matter (USFS 2012).	Not present. No suitable mixed conifer habitat is within the action area.	No impact.
Rio Grande cutthroat trout (<i>Oncorhynchus clarki virginalis</i>)	Rio Grande cutthroat trout serves as a management indicator of healthy riparian and stream habitats and good water quality. The trout is found primarily in clear, cold mountain lakes and streams in Colorado and New Mexico within the Rio Grande Basin. In New Mexico, the Rio Grande cutthroat trout exists only in mountain streams primarily within the Sangre de Cristo and Jemez Mountain ranges. Isolated populations persist in southern New Mexico on the Gila National Forest in the Black Range and on the Mescalero Apache Indian Reservation in the Tularosa Basin (USFS 2012).	Not present. Action area is outside species known range and no suitable habitat is present.	No impact.

¹ Santa Fe National Forest Management Indicator Species Assessment (USFS 2012).

8.4 MIS Impacts and Effects Determination

8.4.1 Rocky Mountain Elk (*Cervus elaphus nelsoni*)

Elk were extirpated from New Mexico by 1909. In 1911 efforts to restore elk to New Mexico began with transplants near Raton and Las Vegas. Since that time elk have been steadily increasing in many areas of the state including the SFNF. There is no concern with population viability of elk on the SFNF and the population is currently increasing (USFS 2012). No evidence of elk was observed during biological surveys, and pinyon-juniper woodland habitat in the area is marginal for this species. No management indicator habitat is present in the project area. Elk likely only use the action area during winter months.

Biological Assessment and Evaluation for El Camino Trail

Increased noise and human activity during construction could temporarily displace elk from the active construction areas. Minor loss of migration or movement corridors from trail construction would occur. If the proposed project resulted in an increase of noxious weeds in the area, this could indirectly impact available browse for elk. Standard best management practices for construction and mitigation practices would ensure these impacts are minimized. Increased recreational usage of the area may disturb elk as they utilize the winter habitat in the area. However, winter recreational use of the trail is not expected to be as heavy in other seasons, and there is abundant available habitat adjacent to the trail. Therefore, the proposed project *may impact individual elk, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.4.2 Mourning dove (*Zenaida macroura*)

Mourning dove habitat is abundant on the SFNF. Mourning doves nest in a variety of habitats, including shrub lands and forests in lower elevation. For a habitat to be favorable, abundant food and water must be available nearby. The abundance of nesting and cover habitat on the SFNF contribute to maintaining viable populations of mourning dove. No threats to the mourning dove are known except for human encroachment or overhunting. There is suitable nesting habitat within the action area. While no permanent water source is located within the action area, nearby cattle troughs and human developments are a likely water source for mourning doves.

Mourning doves are a year-round resident in this area and have multiple broods. Nesting doves could be temporarily displaced during construction should they occupy the action area. Trees and shrub removal may impact availability of breeding sites; although, there is abundant habitat in surrounding areas. All vegetation removal shall be conducted outside of the nesting season for migratory birds (April 15 to September 15). Therefore, the proposed project *may impact individual Mourning doves, but it is not likely to result in a trend toward federal listing or loss of viability.*

8.4.3 Pinyon jay (*Gymnorhynchus cyanocephalus*)

Construction of the proposed project may impact Pinyon jay breeding colonies if a colony occurs near the proposed trail. Their occurrence is unpredictable and seasonally sporadic and they may move many miles in mass looking for a good crop of pinyon nuts (USFS 2012). Removal of any trees would result in the loss of foraging and potential nesting habitat; however, there is abundant available habitat adjacent to the action area. Only a few pinyon pines were observed near the action area. Most pinyons occurred up higher on the foothills. All vegetation removal shall be conducted outside of the nesting season for migratory birds (April 15 to September 15). Therefore, the proposed project *may impact individual Pinyon jays, but it is not likely to result in a trend toward federal listing or loss of viability.*

See Section 8.2.18 for more information about Pinyon jays.

9.0 SUMMARY

This BAE was prepared based on presently available information. If the proposed action is modified in a manner that causes effects not considered, or if new information becomes available that reveals that the action may impact endangered, threatened, proposed, or sensitive species in a manner or to an extent not previously considered, a new or revised BAE may be required.

10.0 RECOMMENDED CONSERVATION MEASURES TO AVOID OR MINIMIZE IMPACTS

FHWA proposes the following conservation measures to reduce impacts to sensitive and MIS species:

- The Project Engineer shall immediately report to the appropriate land management agency and FHWA CFLHD Biologist any active nest, den or permanent occupation of wildlife species that are determined by the FHWA/CFLHD Biologist to be adversely affected by construction activities associated, whereupon the land management agency, in coordination with NMDGF and USFWS, as appropriate, will decide appropriate changes needed to reduce or avoid impacts to the occupied habitat and population.
- No vegetation clearing should occur during the migratory bird breeding season (March 1–September 15). If vegetation clearing must occur between March 1 and September 15, pre-construction surveys for active migratory bird nests will be conducted by a qualified biologist in all suitable habitat types that will be disturbed. The contractor's biologist shall contact BLM Taos Field Office and SFNF Espanola Ranger District biologists prior to conducting nesting migratory bird surveys.
- If active bird nests are identified within the project limits, construction activities will avoid disturbing any active nest. A qualified biologist will determine the appropriate avoidance strategy, in coordination with the land management agency, until the nestlings have fledged from the nest and the nest is no longer active.
- Between March 1 and August 31, prior to any ground disturbance near active and inactive prairie dogs colonies along Caja del Rio Road, a qualified biologist shall conduct a survey to identify if Western burrowing owls are present in any of the colonies. If owls are not observed, all active burrows should be inspected for indications of use by the presence of owl pellets, droppings, or feathers. The burrowing owl survey must be conducted no more than 30 days prior to the onset of construction. If owls are present CFLHD will notify the appropriate land management agency and/or NMDFG to determine the appropriate avoidance strategy.
- Between September 1 and February 28, prior to any ground disturbance near active and inactive prairie dogs colonies along Caja del Rio Road, the Project Engineer will observe the

Biological Assessment and Evaluation for El Camino Trail

area prior to construction for evidence of Western burrowing owls. If owls are present CFLHD will notify the appropriate land management agency and NMDFG to determine the appropriate avoidance strategy.

- All temporarily impacted habitats on the project site shall be re-contoured and revegetated or reseeded so that they become available for use. A seed and plant list will be developed in collaboration with a BLM and USFS authorized officer. Any seed used will be tested as certified weed-free by a credentialed lab. All plants will be sourced locally and certified as a cultivar that exists within the project area as a native plant.
- Existing leash laws will be maintained.

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Biological Assessment and Evaluation for El Camino Trail

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Appendix A.
Agency correspondence
and USFWS IPaC Letter



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 OSUNA ROAD NE
ALBUQUERQUE, NM 87113
PHONE: (505)346-2525 FAX: (505)346-2542
URL: www.fws.gov/southwest/es/NewMexico/;
www.fws.gov/southwest/es/ES_Lists_Main2.html

Consultation Code: 02ENNM00-2016-SLI-0225

January 06, 2016

Event Code: 02ENNM00-2016-E-00212

Project Name: CFLHD TO54 NM El Camino Trail

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

If you determine that your proposed action may affect federally-listed species, consultation with the Service will be necessary. Through the consultation process, we will analyze information

contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/endangered/esa-library/index.html#consultations.

The scope of federally listed species compliance not only includes direct effects, but also any interrelated or interdependent project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations) and any indirect or cumulative effects that may occur in the action area. The action area includes all areas to be affected, not merely the immediate area involved in the action. Large projects may have effects outside the immediate area to species not listed here that should be addressed. If your action area has suitable habitat for any of the attached species, we recommend that species-specific surveys be conducted during the flowering season for plants and at the appropriate time for wildlife to evaluate any possible project-related impacts.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico state agencies. These lists, along with species information, can be found at the following websites:

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program:
www.emnrd.state.nm.us/SFD/ForestMgt/Endangered.html

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Bird Office. To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern at website www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BCC.html to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction.

BALD AND GOLDEN EAGLES

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at www.fws.gov/midwest/eagle/guidelines/bgepa.html.

On our web site www.fws.gov/southwest/es/NewMexico/SBC_intro.cfm, we have included conservation measures that can minimize impacts to federally listed and other sensitive species. These include measures for communication towers, power line safety for raptors, road and highway improvements, spring developments and livestock watering facilities, wastewater facilities, and trenching operations.

We also suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State fish, wildlife, and plants.

Thank you for your concern for endangered and threatened species and New Mexico's wildlife habitats. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please call 505-346-2525 or email nmesfo@fws.gov and reference your Service Consultation Tracking Number.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: CFLHD TO54 NM El Camino Trail

Official Species List

Provided by:

New Mexico Ecological Services Field Office

2105 OSUNA ROAD NE

ALBUQUERQUE, NM 87113

(505) 346-2525

<http://www.fws.gov/southwest/es/NewMexico/>

http://www.fws.gov/southwest/es/ES_Lists_Main2.html

Consultation Code: 02ENNM00-2016-SLI-0225

Event Code: 02ENNM00-2016-E-00212

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Name: CFLHD TO54 NM El Camino Trail

Project Description: construct a multi-use trail along CR 62 and Caja del Rio Road linking the oldest segment of El Camino Real to the Santa Fe River Greenway Trail. The trail will basically be 4-5â crusher fine where the trail heads west from SFC lands to BLM lands and then it would be a 30â unpaved trail

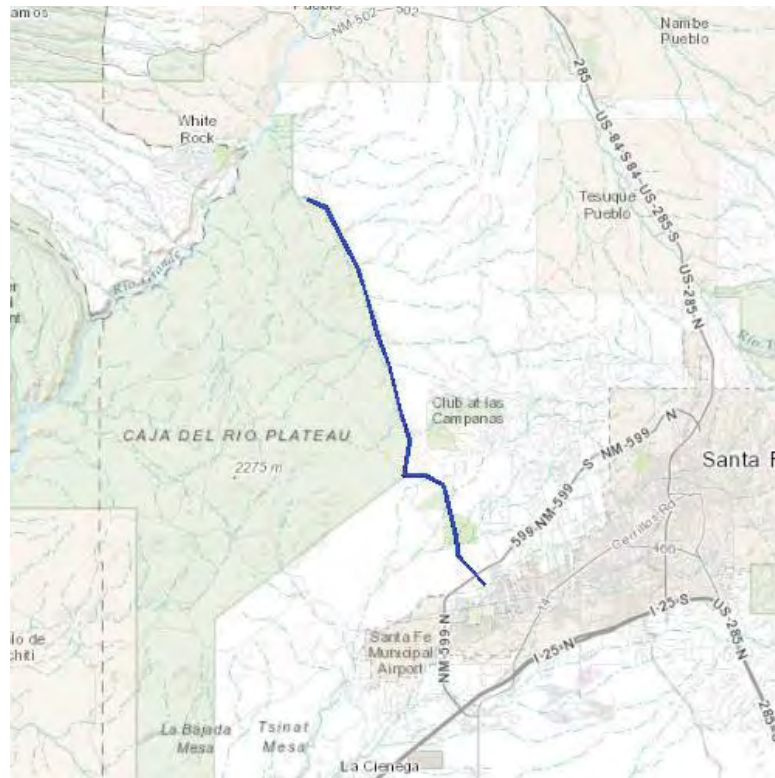
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: CFLHD TO54 NM El Camino Trail

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Santa Fe, NM



United States Department of Interior
Fish and Wildlife Service

Project name: CFLHD TO54 NM El Camino Trail

Endangered Species Act Species List

There are a total of 4 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Mexican Spotted owl (<i>Strix occidentalis lucida</i>) Population: Entire	Threatened	Final designated	
Southwestern Willow flycatcher (<i>Empidonax traillii extimus</i>) Population: Entire	Endangered	Final designated	
Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>) Population: Western U.S. DPS	Threatened	Proposed	
Mammals			
New Mexico meadow jumping mouse (<i>Zapus hudsonius luteus</i>)	Endangered	Proposed	If project affects dense herbaceous riparian vegetation along waterways (stream, seep, canal/ditch).



United States Department of Interior
Fish and Wildlife Service

Project name: CFLHD TO54 NM El Camino Trail

Critical habitats that lie within your project area

There are no critical habitats within your project area.



Meeting Minutes

Project:	El Camino Real Trail
Subject:	BLM/USFS Pre-Field Species and BA/BE Review
Date:	October 28, 2015
Location:	Teleconference
Attendees:	HDR: Sandy Beazley, Sirena Brownlee, Tara Kent CFL: Timberley Belish USFS: Will Amy BLM: Valerie Williams
Distribution	Attendees, project file

SUMMARY OF DISCUSSION:

[Note: Action items are in **bold**.]

1. Other contacts for this project: within the Espanola Ranger District: Sandy Herlocker, Annie Apodaca (USFS), Mike Frazier (USFS), Miles Standish 505.753.7331
2. Sandy gave an overview of the El Camino Real Trail Project, summarizing the 2 Phases including land ownership through the Project Area. Southern segment: Santa Fe County (Phase 1) and Northern segment: BLM and USFS lands (Phase 2).
3. Include FS Management Indicator Species? Yes.
4. Timberley mentioned that the FS often performs additional analysis on species; however, CFL does not.
5. Water depletions
 - No water withdrawals known and no downstream species to be of concern.
6. Sirena lead a discussion on BLM and FS species inclusions. Most species have been eliminated due to lack of riparian or aquatic habitat.
 - Discussion regarding YBCU and SWFL suitable habitat and potential presence. May be some willow and salt cedar in project area that would support riparian avian species.
 - Bats – likely no impacts to nocturnal species from 3-foot trail
7. Plants – limited inventory data available from agencies.
8. BLM has grazing allotments in the northern project area so browsing may be a factor in the presence of certain species such as AZ willow.
9. BA/BE Format and Review
 - BLM and USFS do not have a preferred format but a combined BA/BE is fine
 - Document review turnaround – at least a week but Timberley thought 2 weeks would be allowable given the schedule.

- Use correct determination language (e.g., May cause indirect impacts to individuals but is not likely to contribute to a trend toward federal listing or loss of viability to the population or species).

10. Survey Buffer

- Survey buffer will be species-specific and specific for the type of trail and its users (i.e., equestrians, bicyclists, pedestrians). Raptor buffer will include 0.50 miles to include adjacent cliffs, rock outcrops and large trees.
- Survey area will also depend on type of construction activity in the area (e.g., vegetation removal, type and species that has the potential to occupy it).

Appendix D.
BLM Visual Contrast Worksheets

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: November 10, 2016

District/ Field Office: Taos Field Office

Resource Area:

Activity (program):

SECTION A. PROJECT INFORMATION

1. Project Name El Camino Trail	4. Location Township_____18N	5. Location Sketch See attached
2. Key Observation Point Dead Dog Trailhead	Range_____8E	
3. VRM Class Class II	Section_____33	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Undulating, gentle, horizontal, diagonal. User created staging area.	Patchy grasslands due to prior disturbance. Vegetation has been degraded.	Fencing, corral, windmill, overhead transmission line. This area has been used for filming, so intermittent occupation.
LINE	Horizontal, banded	Weak, horizontal, banded, diffuse	Horizontal.
COLOR	Tans to dark browns	Light browns and greens to dark greens, mottled	Dark brown, metallic
TEXTURE	Fine to medium, uneven/random	Medium density, even/random regularity	Fine

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat	Linear forms created by clearing	Parking spaces for vehicles and trailers, signage, fencing, cattle guard, access road, /
LINE	Horizontal and curved	Lines created from edge of parking lot, access road, and trail.	Horizontal and verticle
COLOR	Light brown	Neutral	Brown, grey, some yellow and red from traffic control signs
TEXTURE	Fine and smooth	Fine	Fine

SECTION D. CONTRAST RATING SHORT TERM X LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM			X				X			X		3. Additional mitigating measures recommended <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)	
	LINE		X					X		X				Evaluator's Names _____ Date _____
	COLOR			X				X			X			
	TEXTURE			X				X			X			

SECTION D. (Continued)

Comments from item 2.

The trail will be a natural material and match the color of the existing landscape and vegetation, and will not dominate the visual character of the surrounding area. It is curvilinear in nature and will follow a contour, so it will be intermittently visible to those traveling along CR 62.

Additional Mitigating Measures (See item 3)

Trail width was reduced to minimize visual impact. The trail alignment was developed in a way to avoid and minimize vegetation impacts. During construction vegetation impacts were be avoided to the extent practicable.

El Camino Real Trail

KOP: Dead Dog Trailhead

Legend

- Dead Dog - VRM II
- Trail Alignment
- Trailhead/Parking

Dead Dog - VRM II

Old Buckman Rd



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: November 10, 2016

District/ Field Office: Taos Field Office

Resource Area:

Activity (program):

SECTION A. PROJECT INFORMATION

1. Project Name El Camino Trail	4. Location Township_____17N	5. Location Sketch See attached
2. Key Observation Point County Road 62	Range_____8E	
3. VRM Class Class III	Section_____22	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Undulating, gentle, horizontal,	Irregular, random pattern of piñon- juniper, oak, desert grasslands, and sagebrush	Vertical and horizontal. Existing roadside signage and interpretive signage for the Santa Fe Ranch SRMA.
LINE	Horizontal and vertical	Weak, horizontal, banded, diffuse	Vertical, horizontal, strong
COLOR	Tans to light browns	Light browns and greens to dark greens, mottled	Dark brown, metallic
TEXTURE	Fine to medium, uneven/ random	Medium density, even/ random regularity	Fine

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat	Linear forms created by clearing	48" crusher fine trail, with potential wayfinding signage at road crossings. There are no other vertical elements associated with the trail in this location.
LINE	Horizontal and curved	Lines created from edge of clearings and trail. Trail follows contours and is therefore curvilinear.	Moderate
COLOR	Light brown	Neutral	Gray
TEXTURE	Fine and smooth	Patchy	Medium

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1.		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side) 3. Additional mitigating measures recommended <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side) Evaluator's Michael Sobol Date 11/10/16
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
DEGREE OF CONTRAST		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
		FORM			X			X			X			
		LINE		X				X				X		
		COLOR			X				X				X	
ELEMENTS		TEXTURE			X			X				X		

SECTION D. (Continued)

Comments from item 2.

The trail will be a natural material and match the color of the existing landscape and vegetation, and will not dominate the visual character of the surrounding area. It is curvilinear in nature and will follow a contour, so it will be intermittently visible to those traveling along CR 62.

Additional Mitigating Measures (See item 3)

Trail width was reduced to minimize visual impact. The trail alignment was developed in a way to avoid and minimize vegetation impacts. During construction vegetation impacts were be avoided to the extent practicable.

El Camino Real Trail

KOP: County Road 62

Legend

- CR 62 - VRM III
- Trail Alignment

CR 62 - VRM III

62

24

Candril Access Rd



1000 ft

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: November 10, 2016

District/ Field Office: Taos Field Office

Resource Area:

Activity (program):

SECTION A. PROJECT INFORMATION

1. Project Name El Camino Trail	4. Location Township_____18N	5. Location Sketch See attached
2. Key Observation Point Diablo Canyon near Old Buckman Rd	Range_____8E	
3. VRM Class Class I	Section_____7	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Undulating, low hills. Escarpments and sheer cliffs	Irregular, random pattern of piñon- juniper, oak, desert grasslands, and sagebrush	Small, linear, and rectilinear, county road fencing, interpretive signage, wayfinding signage, parking area, access road
LINE	Mostly horizontal to east, sharply vertical and diagonal to north, south, and west	Weak, horizontal, diffuse	Horizontal
COLOR	Tans to light browns	Light browns and greens to dark greens, mottled	Dark brown
TEX- TURE	Coarse, undulating, irregular, vertical	Medium density, even/ random regularity	Fine

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat	Linear forms created by clearing	Cubic, fencing will be relocated, wayfinding signage
LINE	Horizontal and curved	Introduce trail line following contours	Horizontal and low- vertical (short)
COLOR	No change	No change	Neutral
TEX- TURE	Fine and smooth	No change	Fine

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				X			X				X		3. Additional mitigating measures recommended <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)
	LINE			X			X					X		
	COLOR				X				X			X		
	TEXTURE				X				X			X		
Evaluator's Michael Sobol Date 11/10/16														

SECTION D. (Continued)

Comments from item 2.

The trail will be a 30-inch natural trail surface that will blend into the existing landscape. The new, minor trailhead improvements (interpretive signs and parking curbs) will be of complimentary color to the existing landscape, vegetation, and trailhead. The new features will provide a very low change to the character of the existing environment nor will attract attention.

Additional Mitigating Measures (See item 3)

Trail width was reduced to minimize visual impact. Vegetation impacts will be avoided to the extent practicable. Ongoing coordination for the design in this area will continue throughout the final design process.

El Camino Real Trail

KOP: El Diablo Canyon

Legend

- Diablo Canyon
- Diablo Canyon - VRM I
- Trail Alignment

Diablo Canyon - VRM I

Old Buckman Rd

Horseshoe Bend

3000 ft

