



National Park Service
U.S. Department of the Interior
Guadalupe Mountains National Park
Salt Flat, Texas

Relocate Amenities at Frijole Ranch Complex Environmental Assessment

June 2009



Relocate Amenities at Frijole Ranch Complex

Environmental Assessment

Summary

Guadalupe Mountains National Park (Park) is located near the site of Salt Flat, Texas. The park was established by Public Law 89-667; 80 Stat. 920 on October 15, 1966, "In order to preserve in public ownership an area in the State of Texas possessing outstanding geological values together with scenic and other natural values of great significance". The park was officially established on September 30, 1972. The 1988 Statement for Management states that "the Guadalupe Mountains are nationally significant because of a combination of outstanding geologic, scientific, and scenic resources, including cultural and natural features unique to the American Southwest." The Frijole Ranch (also called Guadalupe Ranch) is a vernacular historic cultural landscape that has retained integrity in location, setting, feeling, association, design, workmanship, and materials. It is no longer a working ranch but many structures and features located within the area have retained their original exterior fabric and many historic landscape patterns are still evident. The Frijole Ranch was listed on the National Register of Historic Places on November 21, 1978. A Determination of Eligibility on the Frijole Ranch Cultural Landscape Inventory expanding the boundary to 32.5 acres from the original 9 acres was accepted on April 17, 2006, by the Texas Historical Commission, Texas State Historic Preservation Office (SHPO). The Frijole Ranch contributes to the visitor's understanding of the settlement of the trans-Pecos region of western Texas.

Frijole Ranch Historic District is located at the northern terminus of the Frijole Ranch road, off of U.S. Highway 62/180. The current parking area is included within the Frijole Ranch Historic District. Noise, dust, and vibrations from vehicles impact the historic district. In the alternatives, the park has proposed to move the parking area to a site just south of the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area and west of the Frijole Ranch road. The proposed parking lot would connect to Frijole Ranch by a universally accessible path. The proposed parking lot would accommodate about 18-22 passenger vehicles and 2-4 recreational vehicles. There would be enough space to allow buses and large RVs to safely turn around. A small universally accessible SST (Sweet Smelling Toilet) restroom facility and associated drinking fountain, and 2-4 shade covered accessible single table picnic areas and one large covered group picnic area with 4-8 accessible picnic tables would be constructed. If chosen this alternative would include the relocation of the administrative horse and mule operation to a more efficient modern facility away from the historic district. The barn currently used for the administrative horse/ mule operation would be cleaned up and serve as an outdoors interpretive activity area. A portion of the parking area, approximately 0.07 acres, on the west side next to the Frijole Ranch Historic District would be rehabilitated to alleviate the sheet flooding and revegetated to blend with the natural environment. Under the Preferred Alternative, an accessible trail would be added that begins from the Manzanita and Smith Spring trail, passes through the northwest corner of the historic orchard area, and terminates at the edge of the yard by the stone gate, which would offer mobility challenged visitors and school children a relatively easy trail around the historic landscape. The design, fabric, and construction methods for this accessible trail would be similar to the Manzanita Springs trail, i.e. using a natural appearing stabilized soil. A universally accessible path would remain in the present parking area running along the historic stone wall providing access from the accessible trail to the Manzanita and Smith Spring trailhead. The Frijole Ranch road would be closed at the wash to all vehicles except for park operations.

This Environmental Assessment evaluates three alternatives; Alternative A – the No Action

Alternative; Alternative B – Move the parking area to the south side of the wash and the west side of the Frijole Ranch road where it enters the Frijole Ranch Historic District parking area, retain the administrative horse corral but construct a new barn to the south side of the corral, and construct a new accessible path through the orchard; and Alternative C (The Preferred Alternative) - Move the parking area to the south side of the wash and west side of the road where the Frijole Ranch road enters the Frijole Ranch Historic District parking area, move the horse corral and construct a new barn on the south side of U.S. Highway 62/180, and construct a new accessible path through the orchard.

This Environmental Assessment has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet objectives of the proposal, 2) evaluates potential issues and impacts to Guadalupe Mountains National Park's resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. No major effects are anticipated as a result of this project. Public scoping was conducted to assist with the development of this document and comments were received.

Public Comment

If you wish to comment on the Environmental Assessment, you may mail comments to the name and address below or post comments on line at <http://parkplanning.nps.gov/GUMO> . This environmental assessment will be on public review for 30 days. It is the practice of the NPS to make all comments, including names and addresses of respondents who provide that information, available for public review following the conclusion of the environmental assessment process. Individuals may request that the National Park Service (NPS) withhold their names and/or address from public disclosure. If you wish to do this, you must state this prominently at the beginning of your comment. Commentators using the website can make such a request by checking the box "keep my contact information private." NPS will honor such requests to the extent allowable by law, but you should be aware that NPS may still be required to disclose your name and address pursuant to the Freedom of Information Act. **We will make all submissions from organizations, businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety.**

Superintendent Guadalupe Mountains National Park
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PURPOSE AND NEED

Introduction

Guadalupe Mountains National Park (Park) is located near the site of Salt Flat, Texas. The park was established by Public Law 89-667; 80 Stat. 920 on October 15, 1966, "In order to preserve in public ownership an area in the State of Texas possessing outstanding geological values together with scenic and other natural values of great significance". The park was officially established on September 30, 1972. The 1988 *Statement for Management* states that "the Guadalupe Mountains are nationally significant because of a combination of outstanding geologic, scientific, and scenic resources, including cultural and natural features unique to the American Southwest." The Frijole Ranch (also called Guadalupe Ranch) is a vernacular historic cultural landscape that has retained integrity of location, setting, feeling, association, design, workmanship, and materials. It is no longer a working ranch but many structures and features located within the area have retained their original exterior fabric and historic landscape patterns are still evident. The Frijole Ranch was listed on the National Register of Historic Places on November 21, 1978. A Determination of Eligibility on the Frijole Ranch Cultural Landscape Inventory expanding the boundary to 32.5 acres from the original 9 acres was accepted on April 17, 2006, by the Texas Historical Commission - State Historic Preservation Office (SHPO). The Frijole Ranch contributes to the visitor's understanding of the settlement of the trans-Pecos region of western Texas. See Figure 1 for project location.

The purpose of this Environmental Assessment is to examine the environmental impacts associated with the proposal to relocate the Frijole Ranch parking lot and the development of limited new facilities at the Frijole Ranch area for the purposes of improving visitor access, traffic flow, and to partially restore the current parking area to better protect, preserve, and interpret the Frijole Ranch cultural landscape. As a part of this project, the National Park Service (NPS) administrative horse operation could be moved to another location away from the historic district. This Environmental Assessment has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9), and the National Park Service Director's Order (DO)-12 (Conservation Planning, Environmental Impact Analysis, and Decision-making).

Background

Frijole Ranch is an oasis in the arid Guadalupe Mountains region of the Chihuahuan Desert. Frijole Ranch Historic District and its surrounding cultural landscape are located in the vicinity of the Manzanita, Smith, and Frijole Springs at the base of the eastern escarpment of the Guadalupe Mountains National Park, in Culberson County, Texas. Frijole Ranch is one of the primary visitor use areas of the park, located approximately one mile north of U.S. Highway 62/180 and approximately 3 miles east of the Park Headquarters at Pine Springs, Texas.

The Frijole Ranch Historic District is a 32.5 acre historic vernacular landscape. The original November 21, 1978 National Register listing included only 9 acres focusing on the ranch house and yard complex. The 2006 Determination of Eligibility enlarges the district to 32.5 acres. This area expands the original 9 acre historic site to include contributing landscape elements, including constructed water features, gardens, historic field areas, and stone walls that were part of the original occupations. Located at Frijole Spring, the district was used as a family farmstead and ranch by John T. Smith from 1906 to 1941. In 1941 it was purchased by J.C. Hunter's Guadalupe Mountain Ranch and served as ranch headquarters. The Frijole Ranch

Historic District provides an excellent example of a historic vernacular ranch/farmstead operation in the trans-Pecos area of West Texas.

CURRENT USE:

Following the establishment of the Guadalupe Mountains National Park in 1972, the NPS has utilized the ranch house as a residence, a ranger station, and presently as the Frijole Ranch Cultural Museum to provide interpretation of ranching settlement in the trans-Pecos area of western Texas for visitors to the park. The ranch house interior has been adaptively used for cultural exhibits on the cultural history of the region and the park.

A one mile gravel road leads to the historic site from U.S. Highway 62/180. A small gravel parking lot that accommodates approximately 6 to 10 cars, depending on their size, currently lies just west of the stone wall surrounding the ranch house. The Frijole Ranch is minimally accessible with a universally accessible path leading from the parking area to the back door of the ranch house. This parking area also serves the trailhead for the Manzanita Spring universally accessible trail. The interior of the ranch house is currently minimally accessible. The enclosed yard is a popular picnic spot. The Frijole Ranch Historic District is adequate for these gatherings, but conflicts can result when large groups come in and dominate the area, while small groups of visitors move through the historic district by maneuvering around the large group. Those not participating in the picnic miss out on the quiet solitude of the ranch.

The present Frijole Ranch parking area serves the trailhead for the 2.5 mile Smith Spring Trail which takes visitors on a hike through the eastern foothills past Manzanita Spring to Smith Spring, an oasis nestled in a small canyon against the eastern escarpment. The trail to Manzanita Spring has been modified and surfaced with soil cement to provide universal accessibility to these springs, thus affording mobility challenged visitors an opportunity to traverse some of the Chihuahuan Desert and visit springs with spectacular scenic vistas.

DESCRIPTION OF THE PROBLEM:

As Guadalupe Mountains National Park has developed and matured, visitor use patterns have evolved and expanded. In 1990 with the building of the new visitor center and headquarters at Pine Springs, the Frijole Ranch house was established as the park's primary cultural resource interpretive center. Cultural exhibits located in the ranch house interpret the cultural history of the park while the cultural landscape interprets the ranching history to the public. As overall park visitation increased, so did visitation to this important historic landscape. Currently, an average of 1,173 visitors per month use the Frijole Ranch area based on park visitation statistics and traffic counters from 2008. From January 1, 2008 to October 31, 2008, the Frijole Ranch area received 11,735 visitors.

The Frijole Ranch house, outbuildings, and surrounding grounds are part of a historic landscape that receives heavy visitation. The site is a focal destination for school groups and other groups, as well as the visiting public. The parking area can no longer accommodate visitor's parking needs and does not provide a large enough space to accommodate the turning radius for tour buses, school buses, and most RVs. This problem becomes more complicated when the parking lot is more than half full. In addition, the parking lot within the historic district is immediately adjacent to the house and yard creating audible and visual intrusions. Dust created by traffic in the current parking area is blown by prevailing winds directly into the historic ranch house and yard. Aside from impairing the view of the historic setting, vehicle traffic in such close proximity could have negative impacts to the structures themselves. At the present time, vehicles park within 10 feet of one historic structure and within 30 feet of the main ranch house. This parking area also serves visitors using the popular Manzanita Spring, Smith Spring, Frijole

and the Foothills trails. The current parking area is inadequately sized to accommodate a reasonable amount of parking and traffic flow.

Historically, sheet flooding has created problems in this parking area with resulting erosion and undesirable relocation of debris and gravels. Overhead utility service comes to this site by the Frijole Ranch road near the barn. The overhead lines interfere with unobstructed views of the mountainsides, the cultural landscape and the historic ranch setting.

A universally accessible flagstone walkway exists from the present Frijole Ranch parking area into the historic district to the backdoor of the ranch house to provide accessibility to the cultural museum. The ranch house is minimally accessible to wheelchairs because door openings do not meet current ADA width recommendations. It has been suggested that the hinges on the back door could be replaced with an off-set hinge and the door stops could be removed to permit the door to fully swing open, allowing for wheelchair access. (Appendix A)

The trailhead for the Smith Spring trail departs from the north end of the Frijole Ranch parking area. A segment of this trail is universally accessible with hardened surface extending from the trailhead to Manzanita Spring. The accessible parking space does not include a hardened surface and is separated from the beginning of the hardened trail surface by approximately 100 feet of loose gravel surface. In addition the hardened accessible trail segment is not joined to the accessible flagstone walkway. The inconsistency of these surfaces prevents mobility challenged visitors from easily passing from one area to another. The eastern side of the immediate ranch house area and the orchard are completely inaccessible to mobility challenged visitors. A NPS Denver Service Center landscape architect visited in the summer of 2007 reviewed the historic district and made several recommendations that have been discussed above to help to make the historic site more universally accessible.

The portable restroom in the current parking area is not universally accessible. In the past, a historic outbuilding (the bath house) served as a single restroom facility. It was closed in FY2002 due to an inadequate septic system. In addition, it was determined to be impractical to retrofit this structure for ADA compliance. As a temporary measure, a chemical toilet facility was installed to handle the sewage problem, but it is not ADA-compliant and requires frequent pumping and maintenance. Joseph Winkelmaier, Regional Public Health Consultant, IMR-SSO, in his annual Environmental Health Survey dated December 2002, found the septic system for the Frijole restrooms did not comply with State and Federal regulations. Mr. Winkelmaier's recommendations were to close the facilities immediately and temporarily install portable chemical toilets until a suitable system could be installed. Per Director's Order #83: Public Health, B.5 and B.6: chemical toilets are for temporary use only, because they require frequent service and pumping to prevent objectionable odors.

The park's administrative horse and mule operations are supported at the Frijole Ranch complex. The horses and mules obtain water and feed at this site. The barn houses hay, feed, supplies, and horse tack. The wash located where the Frijole Ranch road enters the current parking lot passes immediately south and below the horse and mule barn and corral. Horses and mules passing through this wash to reach the rest of the pasture add to the erosion problem that the double culverts are exacerbating due to waterfall action and severe down cutting. The park wants to decrease erosion and nitrate contamination by removing this operation to a site away from the historic district. If large trucks did not have to come to this area to deliver feed and supplies there would be less congestion to the historic district and less pollution from loose dirt in the parking lot, vehicle exhaust, and noise. Trucks would no longer obstruct traffic and pose a safety hazard while attempting to maneuver around multiple parked vehicles. The

current interface between the park stock handler's truck and horse trailer and visitor vehicles contributes to potential automotive accidents and decreases the amount of space available for visitor parking every time that stock are trailered for park use. This may range from 60-80 times per year for loading and unloading, depending on annual project demands.

There are two washes crossing the Frijole Ranch road that are of concern to the NPS. The first is about a half mile north of U.S. Highway 62/180. The other is at the end of the road in close proximity to the Frijole Ranch Historic District. Both washes have two culverts placed in the wash under the road. These culverts divert the water flow acting as a levee with two outlet pipes preventing natural flows to flush down the wash. With the current system, low water flows are being forced to back up and deposit material upstream of the culverts. The culverts at the end of the road in proximity of the Frijole Ranch Historic District are four feet above the floor of the wash on the east side of the road, and act as a waterfall by increasing velocities and down cutting. These culverts are not correctly aligned and are causing erosion into the bank below the park's horse/ mule corral. Under flood flows, the culverts could be compromised; road damage would then occur, and ultimately the culverts could fail completely. One possible solution would be to replace the two culverts with one large box culvert appropriately matched to the upstream channel width. This would approximate the natural channel flow to pass under the road without disruption and allow material to flush through the system unimpeded, as noted in the *Guadalupe Mountains National Park Sand and Gravel Management Plan*, 2007, on page 16-17 (NPS 2008a).

Purpose and Need

The purpose of this proposal is to provide safe and universal accessibility for the Frijole Ranch Historic District, to improve the overall visitor experience, and to maintain or enhance the historic integrity of the historic district. In addition, this proposal seeks to provide a safe, healthy, functional and efficient educational and working environment for visitors and park staff while maintaining or enhancing historic integrity in compliance with the goals and objectives of current law, policy, and management plans. The project is needed to accomplish the following objectives:

1. Provide a safe parking and picnic area that is large enough to accommodate the current traffic flow and allow RVs and buses the ability to safely turn around.
2. Meet federal and state health and safety requirements by providing a universally accessible restroom facility with a drinking fountain.
3. Create more accessible opportunities within the historic district. - Bring the facilities at the Frijole Ranch Historic District into compliance within the requirements of the Americans with Disabilities Act and the Architectural Barriers Act.
4. Correct the erosion problem associated with the improperly sized double culverts located along Frijole Ranch road in the wash ½ mile north of Hwy 62/180 and at the wash at the entrance to the current parking area of the Frijole Ranch Historic District.
5. Alleviate the sheet flooding problem associated with the current parking area.
6. Maintain or enhance the historic integrity of the district.
7. Remove the impact of the horse and mule operation from the adjacent watershed.

Improve safety and efficiency of the administrative horse/mule operation by reducing the interface of administrative and visitor vehicles, and providing a suitable area for mechanized unloading and storage of large hay bales.

RELATIONSHIP TO OTHER PLANS AND POLICIES

Current plans and policy that pertain to this proposal include the *Draft General Management Plan (GMP)/ Environmental Impact Statement (EIS) Guadalupe Mountains National Park* (NPS 2008b), *Guadalupe Mountains National Park Site Analysis and Schematic Design and Details for Frijole Ranch Parking Area* (NPS 2007a), *Cultural Landscape Report for Frijole Ranch Guadalupe Mountains National Park* (NPS 1994), and *National Park Service Management Policies* (NPS 2006). The following is more information pertaining to how this proposal meets the goals and objectives of these plans and policies:

- This project is consistent with the *Draft GMP/ EIS Guadalupe Mountains National Park* (NPS 2008b) which states that regardless of the alternative chosen that the following conditions would be considered including modifying the Frijole Ranch parking area to safely accommodate more vehicles and allow for larger vehicles, including RVs and buses turning radius; addressing the administrative horse/ mule operations impact on the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area; providing alternatives for large groups wanting to picnic in Frijole Ranch Historic District; ensuring that a universally accessible trail would bring visitors from the proposed parking area to the Frijole Ranch and the accessible trail to Manzanita and Smith Spring; and reviewing options to alleviate erosion issues associated with the two culverts along the Frijole Ranch Road.
- During the summer of 2007, a team from the Denver Service Center made a site visit and evaluated the proposed space that is west of the Frijole Ranch road and directly south of the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area. Several designs were developed for a gravel parking area that would accommodate up to 18-22 vehicles, including 2-4 spaces for large RVs, a SST (sweet smelling toilet) and drinking fountain, 2-4 shade covered universal accessible single table picnic areas, and one large covered group picnic area with 4-8 accessible picnic tables could be included in the parking lot designs. Additionally, corrections to the metal culverts in the wash next to the Frijole Ranch Historic District were discussed. See *Guadalupe Mountains National Park Site Analysis and Schematic Design and Details for Frijole Ranch Parking Area* (NPS 2007a).
- The *Guadalupe Mountains National Park Sand and Gravel Management Plan* (NPS 2008a), analyzes the problems with the two sets of culverts along the Frijole Ranch road. The report suggests how to remedy the problems and the types of culverts that are needed for these types of intermittent washes, see page 17.
- The *Cultural Landscape Report for Frijole Ranch Guadalupe Mountains National Park* (NPS 1994), identifies the area south of the ranch-house complex for any future development, page 111. The report noted that the current parking area next to the Frijole Ranch should not be enlarged, and any upgrades must be reviewed for impacts to the historic district.
- The proposal is consistent with the goals and objectives of the *National Park Service Management Policies* (NPS 2006) which states 5.3.5.2 “treatment implementation will be based on sound preservation practices to enable long-term preservation of a resource’s historic features, qualities, and materials.

Appropriate Use

Sections 1.4 and 1.5 of *Management Policies*, 2006 direct that the National Park Service must ensure that park uses that are allowed would not cause impairment of, or unacceptable impacts on, park resources and values. A new form of park use may be allowed within a park only after a determination has been made in the professional judgment of the park manager that it will not result in unacceptable impacts.

Section 8.1.2 of *Management Policies*, 2006, *Process for Determining Appropriate Uses*, provides evaluation factors for determining appropriate uses. All proposals for park uses are evaluated for:

- consistency with applicable laws, executive orders, regulations, and policies;
- consistency with existing plans for public use and resource management;
- actual and potential effects on park resources and values;
- total costs to the service; and
- whether the public interest will be served.

Park managers must continually monitor all park uses to prevent unanticipated and unacceptable impacts. If unanticipated and unacceptable impacts emerge, the park manager must engage in a thoughtful, deliberate process to further manage or constrain the use, or discontinue it. More information on the definition of unacceptable impacts as cited in §1.4.7.1 of *Management Policies*, 2006 can be found in the *Environmental Consequences* chapter.

The proposed parking area would provide park visitors with safe and adequate parking. A permanent universally accessible toilet facility and drinking water would increase the comfort of visitors and increase the number of visitors served. Moving the park's administrative horse/ mule operation would decrease the impact that the large feed delivery trucks have on the historic district. Improvements to the current Frijole Ranch parking area are needed to reduce the sheet erosion and the impacts to the wash and the current horse/ mule feeding area above the wash. None of the proposed alternatives would cause impairment to any park resources and all are consistent with the park's general management plan and other related park plans. The park considers these proposals as an acceptable option at Guadalupe Mountains National Park.

Public Scoping

Scoping is a process to identify the resources that may be affected by a project proposal, and to explore possible alternative ways of achieving the proposal while minimizing adverse impacts. Guadalupe Mountains National Park conducted both internal scoping with appropriate National Park Service staff and external scoping with the public and interested/affected groups and agencies.

Internal scoping was conducted by an interdisciplinary team of professionals from Guadalupe Mountains National Park, the NPS Denver Service Center, NPS Intermountain Regional Office, and most recently, a NPS Cultural Resources team from Santa Fe, NM. Interdisciplinary team members met multiple times to discuss the purpose and need for the project, various alternatives, potential environmental impacts, cumulative effects, and possible mitigation measures. Over the course of the project, team members also conducted multiple site visits to view and evaluate the Frijole Ranch Historic District, the current Frijole Ranch parking area, the park's administrative horse and mule operation, and the proposed site for the new parking area.

A public scoping session was initiated with the distribution of a general scoping letter to inform the public of the proposal to consider the relocation of the Frijole Ranch parking lot and the development of limited new facilities at the Frijole Ranch area for the purposes of improving visitor access and safety. These changes would help to better protect, preserve, and interpret the historic setting of Frijole Ranch by providing adequate parking, an established universally accessible trail, and providing more areas that would be accessible to mobility challenged individuals.

To generate input on the preparation of this Environmental Assessment, general scoping letters dated November 30, 2007 were mailed to interested parties adjacent to the park, as well as to the Texas Historical Commission. Scoping information was also posted on the park's website under the management and planning page. In addition, scoping letters were mailed on April 14, 2008 to the park's culturally affiliated Native American tribes, including the Apache Tribe of Oklahoma, Comanche Tribe of Oklahoma, Fort Sill Apache Tribe of Oklahoma, Hopi Tribe, Isleta Pueblo, Jicarilla Apache Tribe, Kiowa Tribe, Mescalero Apache Tribe, San Carlos Apache Tribe, White Mountain Apache Tribe, Ysleta Del Sur Pueblo, Zia Pueblo, and Zuni Pueblo. The Mescalero Apache Tribe and the Ysleta Del Sur Pueblo historically have participated in park scoping activities. In addition to the scoping letter, the Superintendent contacted these two tribes via telephone and email. Letter, voice, and email messages were not responded to by any tribe. Also, the U.S. Fish and Wildlife Service was consulted and sent a biological evaluation letter on May 12, 2009.

During the scoping period, two responses were received from the public through letters. The Texas Parks and Wildlife Department, Julie Wicker, made some suggestions and expressed interest in reviewing the Environmental Assessment. The Texas Historical Commission responded that they would need more information before they could consider the effects of this project. On June 23, 2009, Amy Roberson from the U.S. Fish and Wildlife Service called the park to inform park staff that they had reviewed the May 12, 2009 letter and concurred with the park's no effect determination and had no additional comments. The U.S. Fish and Wildlife Service will be sending a written copy of the concurrence letter within a few weeks of the phone call.

A 30 day public review period will begin with the release of the Environmental Assessment. The Environmental Assessment will be released in the summer of 2009. To inform the public of the availability of the Environmental Assessment, the National Park Service will publish and distribute a letter to various federal and state agencies, park neighbors, tribes, libraries, county commissioners, and members of the public on the park's mailing list. The NPS will also place a press release in the local newspaper. Copies of the Environmental Assessment will be provided to interested individuals, upon request. Copies of the document will also be available for review at the park's visitor center and on the internet at <http://parkplanning.nps.gov/gumo>.

The Environmental Assessment is subject to a 30 day public comment period. During this time, the public is encouraged to submit their written comments electronically to the Planning, Environment, and Public Comment (PEPC) website at <http://parkplanning.nps.gov/gumo> or via mail to the National Park Service address at the beginning of this document. Following the close of the comment period, all public comments will be reviewed and analyzed prior to the release of a decision document. The National Park Service will issue responses to substantive comments received during the public comment period and will make appropriate changes to the environmental assessment, as needed.

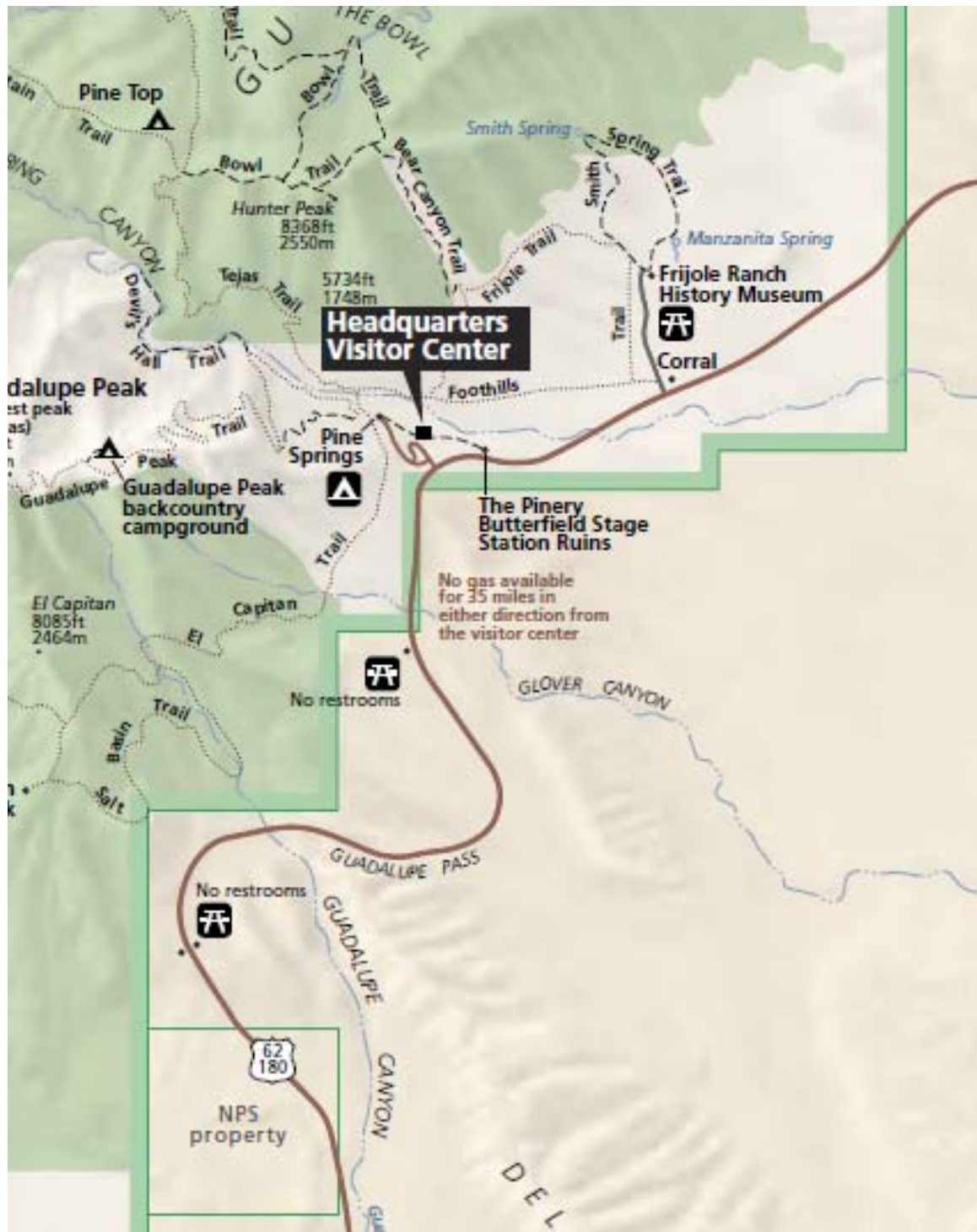


Figure 1 – General Project Location: Frijole Ranch

Impact Topics Retained for Further Analysis

Impact topics for this project have been identified on the basis of federal laws, regulations, and orders; National Park Service *Management Policies*, 2006; and National Park Service knowledge of resources at Guadalupe Mountains National Park. Impact topics that are carried forward for further analysis in this Environmental Assessment are listed below along with the reasons why the impact topic is further analyzed. For each of these topics, the following text also describes the existing setting or baseline conditions (i.e. affected environment) within the project area. This information will be used to analyze impacts against the current conditions of the project area in the *Environmental Consequences* chapter.

Topography, Geology, and Soil Resources

According to the National Park Service's *Management Policies*, 2006, the National Park Service will preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue (NPS 2006). These policies also state that the National Park Service will strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.

The proposed project area within the park does not contain unusual or especially significant topographic or geologic features. Lands within and surrounding the affected environment lie among gently rolling topography generally underlain by alluvial fans that originated on the slopes of the Southeastern escarpment of the Guadalupe mountains. These alluvial fans are comprised of pebble- to boulder-sized conglomerates that are generally loosely bound together but that have in a few places been tightly cemented by calcareous minerals to form very resistant "pavements." Soils within the region generally are very thin, calcareous, and of poor quality, such that they do not support prolific vegetation. Such conditions allow these soils to be easily and rapidly eroded by both wind and rain. Runoff from summer monsoonal thunderstorms tends to drain rapidly and erode steep channels, or arroyos, into the landscape, rather than soaking into the soils. Disturbances to soils are generally slow to become naturally re-vegetated, thereby increasing opportunity for accelerated erosion.

The general location for the proposed parking area, horse/ mule corral, and barn have been previously disturbed by past construction of ranching activities and an abandoned road that existed south of Highway 62/180. It is anticipated that the various alternatives being evaluated here could potentially involve construction disturbances to soils in a total area of approximately 3-4 acres, as well as possibly changing land surface use in an area of 141-142 acres. Reconfiguration of drainage profiles and effects to immediate topography and natural runoff conditions could potentially impact two washes crossed by the Frijole Ranch road. Because these factors have potential to produce impacts to the topography, geology, and soils of the proposed project locations, this topic will be retained for further analysis.

Recreation Resources & Visitor Experiences

Currently, an average of 1,173 visitors per month use the Frijole Ranch area based on park visitation statistics and traffic counters from 2008. From January 1, 2008 to October 31, 2008, the Frijole Ranch area received 11,735 visitors. Visitors come to visit the ranch structures and to relax in the shady grove of 30-foot tall chinkapin oak and pecan trees near the Frijole spring which wells up in the center of the ranch yard. Cultural resource exhibits and museum artifacts are displayed in the 130 year old ranch house. Picnicking, bird watching and socializing with the nearby park stock are favorite visitor activities. This area is also the trailhead for a variety of hikers. Those with mobility restrictions can use the universally accessible trail for the 1/3 mile

walk to Manzanita Spring, a contributing element of the cultural landscape. Other hikers without physical limitations may continue on the 2.3 mile Smith/Manzanita Springs loop trail, or may hike a longer Frijole/Foothills trail loop to the Pine Springs area and return. The current parking area will hold 6 to 10 passenger vehicles, depending on how visitors space their cars in the available area. There are no parking control devices in the dirt and gravel lot other than wheel stops and one area near the soil stabilized walkway to the ranch yard reserved for handicapped parking. There is currently one portable chemical toilet immediately outside the stone walled ranch yard, but it is not universally accessible. A sign near the public use corrals, ½ mile from the ranch house, restricts vehicles with trailers, buses, and large RVs from entering the area due to no area to park or turn around. Because of proposed changes to recreation resources and visitor experience under the alternatives, this topic has been retained for further analysis.

Special Status Species

The Endangered Species Act of 1973 requires examination of impacts on all federally-listed threatened, endangered, and candidate species. § 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service (or designated representative) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. In addition, the *Management Policies*, 2006 and Director's Order #77 Natural Resources Management Guidelines require the National Park Service to examine the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species (NPS 2006). For the purposes of this analysis, the U.S. Fish and Wildlife Service and the Texas Parks and Wildlife Department were both contacted with regards to federally- and state-listed species to determine those species that could potentially occur on or near the project areas.

There are no federally listed species that occupy the proposed project areas. Nathan Allan with the U.S. Fish and Wildlife Service Ecological Services Field Office in Austin was contacted in January 2008 and advised the park that the Endangered Species List for Culberson County Texas listed on the USFWS website, (Appendix B), was up to date and could be used as the park's matter of record. A biological evaluation was prepared and mailed on May 13, 2009 to notify the U.S. Fish and Wildlife Service that the project under any alternative would be a "no effect" action on any federally listed species and request their concurrence. The park received telephone concurrence of "no effect" to federally listed species from Amy Roberson on June 23, 2009.

There are two species of concern listed on the Texas Parks and Wildlife Department, Wildlife Division, Diversity and Habitat Assessment Programs, County Lists of Texas' Special Species for Culberson County last revised on May 2, 2007; the Texas horned lizard *Phrynosoma cornutum* is listed as threatened and the sparsely-flowered jewelflower *Streptanthus sparsiflorus* is listed as rare, but with no regulatory listing status, (Appendix C). Both could potentially occur on or near project areas. Due to the possibility that two species of concern listed on the Texas Parks and Wildlife Department may exist in the proposed project areas, this topic has been retained for further analysis.

Vegetation

According to the National Park Service's *Management Policies*, 2006, "The National Park Service will maintain as parts of the natural ecosystems of parks all plants and animals native to park ecosystems.... by minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them." (NPS 2006). The existing

vegetation in the proposed project areas primarily consists of grasses and desert scrub. Vegetation within the existing pasture is currently browsed by park stock. The acreage of vegetation disturbed by stock would be essentially unchanged under any of the alternatives. Visitor activities have negligible impacts on vegetation since most recreation is directed to trails. A negligible to minor amount of vegetation trampling occurs by visitors within the ranch yard, and the orchard area. Less than one acre of vegetation would be impacted by traffic and parking areas under any alternative. Although it is anticipated that the proposed alternatives would have minor effects on vegetation, the topic will be retained for further analysis.

Cultural Landscapes

The National Historic Preservation Act of 1966, as amended (16USC 470 et seq.); the National Environmental Policy Act of 1969 (42USC 4321 et seq.); NPS Director's Order #28: Cultural Resource Management Guideline (NPS 1998), *NPS Management Policies*, 2006, NPS Director's Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-making and its accompanying handbook (NPS 2001) require the consideration of impacts on cultural landscapes listed in or eligible for listing in the National Register of Historic Places (NRHP).

The 32.5-acre Frijole Ranch Historic District (the district) is a significant historic vernacular landscape that comprises the most complete and substantial remnants of early settlement and ranching practices in the southern Guadalupe Mountains, and that tells the story of the continuum of use over nearly a century. On November 21, 1978, 9 acres of the current 32.5 acres were listed on the National Register of Historic Places as the Guadalupe Ranch. On April 17, 2006, the Texas Historical Commission concurred with the findings of the Frijole Ranch Cultural Landscape Inventory (CLI), which included increasing the size of the district to 32.5 acres and changing the property name to Frijole Ranch. The period of significance for the district is 1876-1970.

The district comprises the following landscape sub-areas:

- the enclosed yard (including ranch house, school, outbuildings, irrigation ditch, oak trees, wall, and paths, and adjacent parking area to the west);
- the historic orchard and garden (including the barn, shed, and corral);
- the back field area (Manzanita Spring, the historic road trace, now trail, to the springs, and historic field areas with remnant stone walls)
- Smith Spring (including the spring and its immediate natural environment, and road trace/trail to spring), and
- range land (portions of the associated range land that are within the district boundary). (Figures 2, 3, and 4).

These areas altogether make up the surviving elements, features, and patterns of the historically informal, utilitarian farming and ranching landscape. The parking area, the orchard/garden, and the barn/corral would be most directly affected by the proposed project.

Contributing elements are those that need to be preserved to maintain historic integrity. Key contributing landscape elements and qualities of these two sub-areas within the district, as identified in the 1994 CLR and 2009 CLI, include the following:

- oasis quality – presence of water, tree cover, tightly clustered buildings
- spatial relationships between the different functional areas
- informal vernacular character (e.g. dirt/gravel roads and trails, and remaining small-scale features such as water-tower stand and wooden trough)

- irrigation features including spring house and ditches
- all historic structures, including barn, shed, and corral fencing
- stone wall enclosing ranch house/yard and orchard/garden area
- specific historic vegetation, including chinkapin oaks, pecan trees, remnant historic orchard trees, alligator juniper, and native grasses, shrubs, and trees.
- sight, sound, and smell of horses and mules
- parking lot adjacent to the west, road trace (now trail) to Manzanita Spring, and informal stone and dirt/gravel walkways within the enclosed yard.
- expansive views and relative quiet

The accessible flagstone walkway developed in 1995 and the heirloom species orchard trees that were planted in 2006 to help evoke the quality of the historic orchard are considered non-contributing but compatible elements.

Despite changes over the years, the Frijole Ranch Historic District retains integrity to its period of significance. The greatest threat to historic integrity is the cumulative loss of landscape character as a result of removal of historic elements (e.g. privies, swings, clothesline, water tank, vegetable garden, flower beds), and the addition of non-historic elements (e.g. retaining wall, lawn, trailhead, and congested traffic within the parking lot). The re-introduction of historic elements (e.g. recent addition of orchard trees) helps to retain the overall historic character of the landscape.

Overall condition of the district is good. Sheet flow across the parking lot and subsequent movement of corral waste into the drainage and erosion of culverts and drainage banks are current landscape condition and water quality issues.

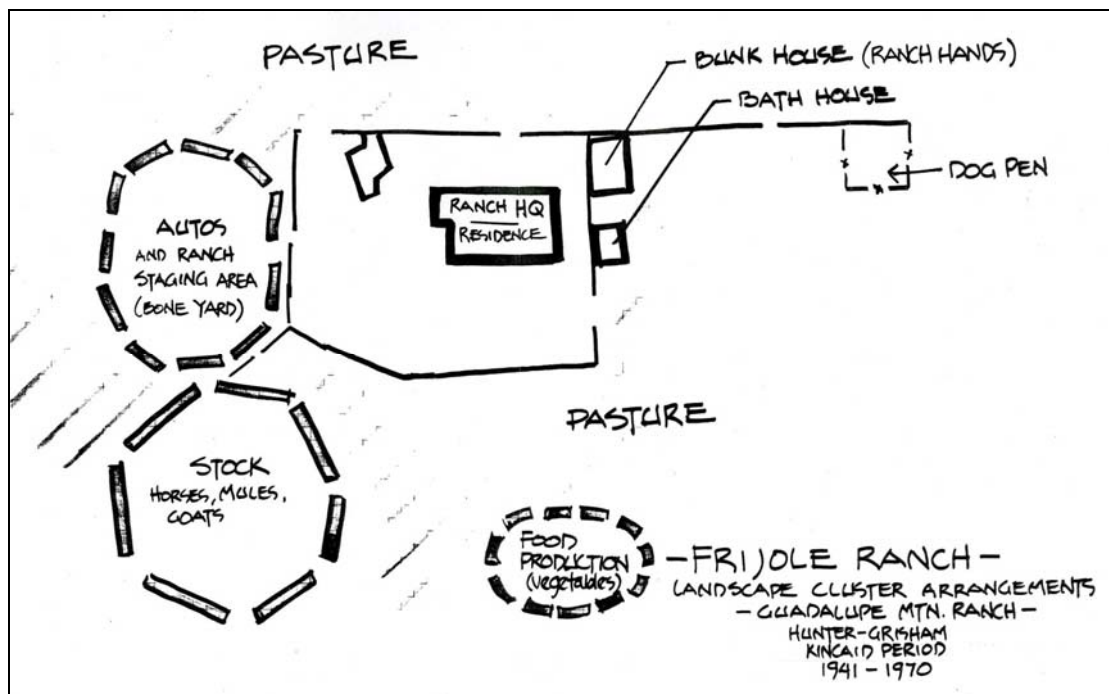


Figure 2 - Spatial relationships between functional areas, 1941-1970.
(scale approximate) Cultural Landscape Report, (NPS 2005b)

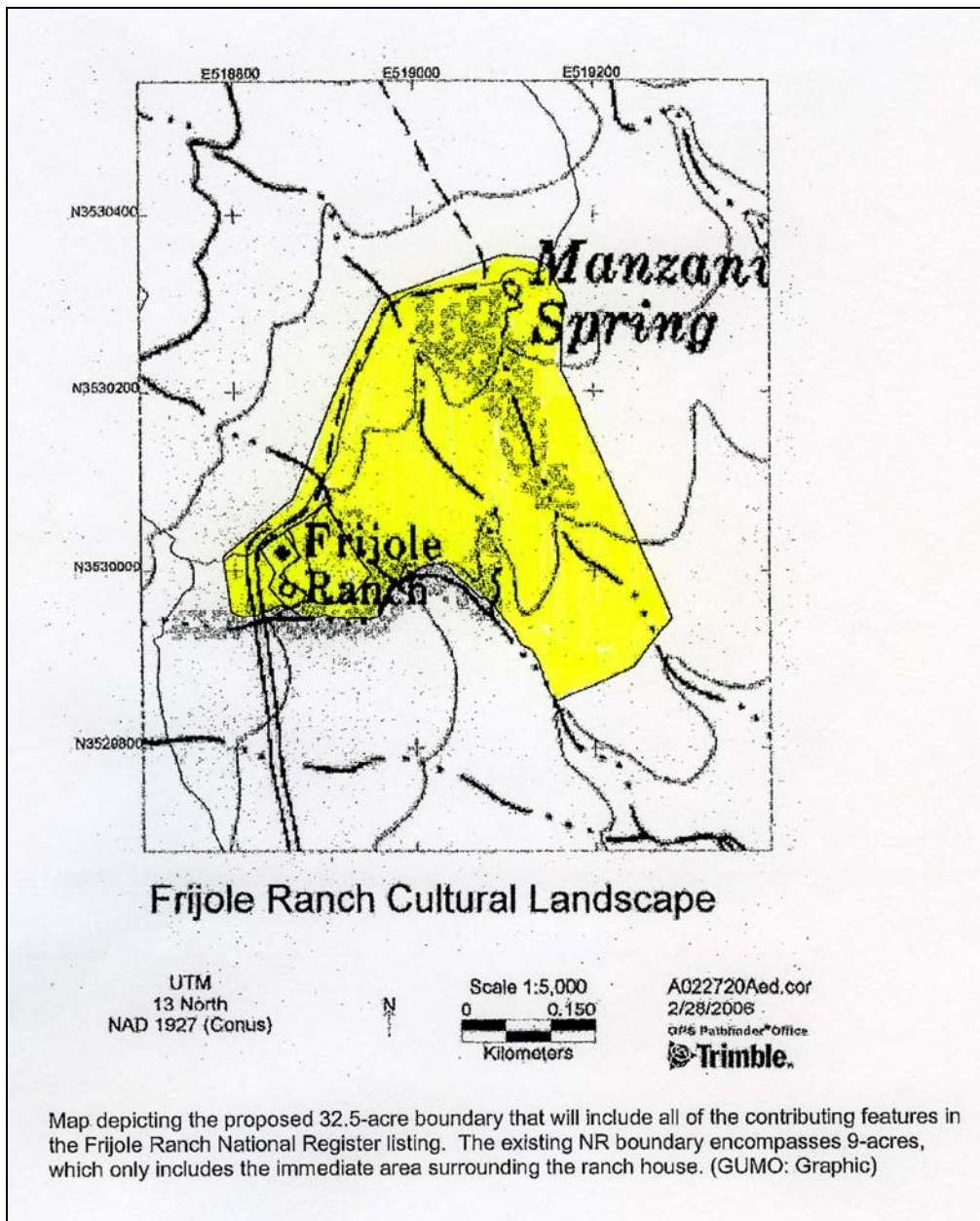


Figure 3 - SHPO-approved boundary for 32.5 acre historic district.

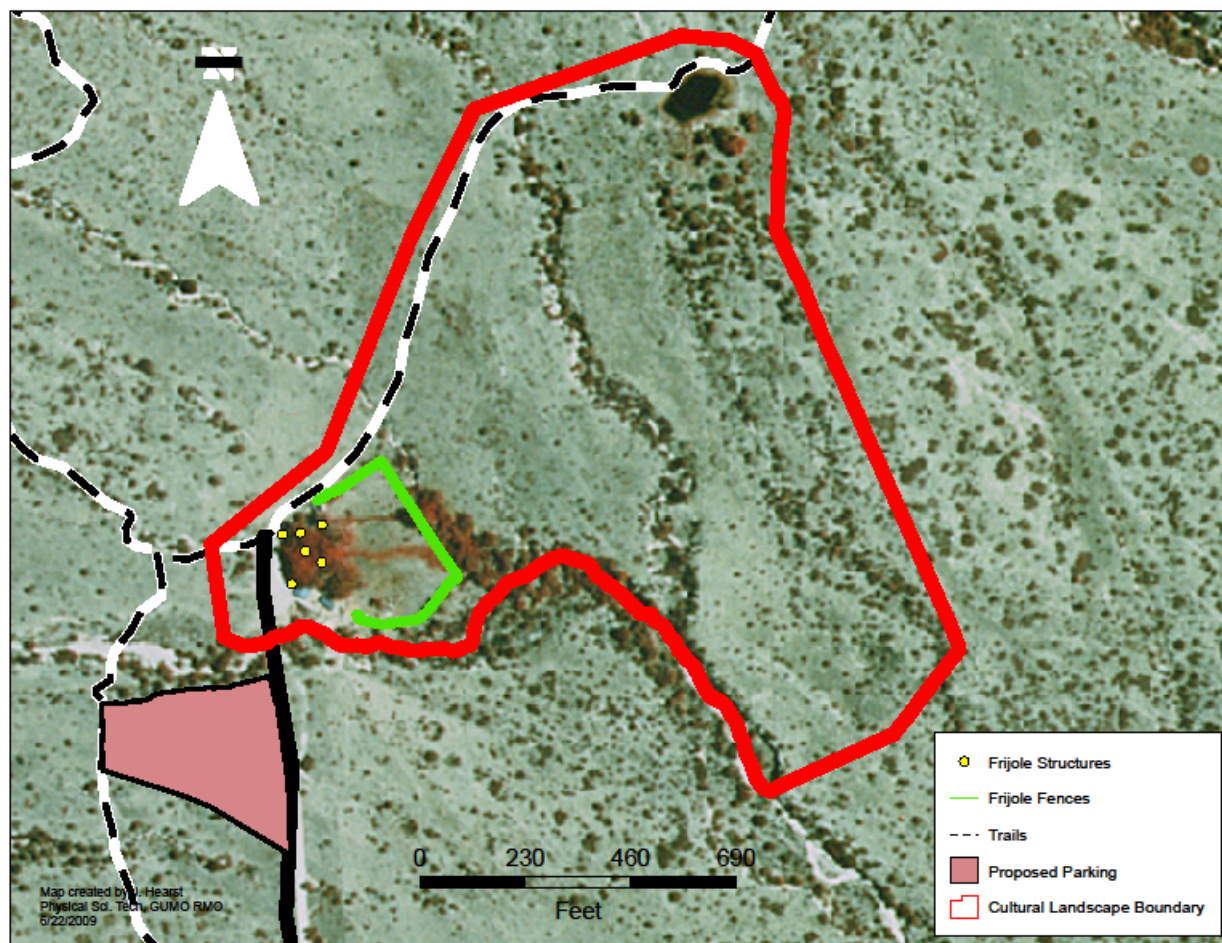


Figure 4 – Frijole Ranch aerial photograph of National Register district boundary including proposed parking/picnic area.

Impact Topics Dismissed From Further Analysis

Some impact topics have been dismissed from further consideration, as listed below. During internal scoping, the park's interdisciplinary team conducted a preliminary analysis of resources to determine the context, duration, and intensity of effects that the proposal may have on those resources. If the magnitude of effects was determined to be at the negligible or minor level, there is no potential for significant impact and further impact analysis is unnecessary, therefore the resource is dismissed as an impact topic. If however, during internal scoping and further investigation, resource effects still remain unknown, or are more at the minor to moderate level of intensity, and the potential for significant impacts is likely, then the analysis of that resource as an impact topic is carried forward.

For purposes of this section, an impact of negligible intensity is one that is “at the lowest levels of detection, barely perceptible, and not measurable.” An impact of minor intensity is one that is “measurable or perceptible, but is slight, localized, and would result in a limited alteration or a limited area.” The rationale for dismissing these specific topics is stated for each resource.

Paleontological Resources

According to *Management Policies*, 2006, paleontological resources (fossils), including both organic and mineralized remains in body or trace form, will be protected, preserved, and managed for public education, interpretation, and scientific research (NPS 2006). The current parking area, the site of the proposed gravel parking lot, and the areas under consideration for the modern barn facility and corral have been examined by the park paleontologist and found not to contain paleontological resources. The proposed project areas consist of a surficial, alluvial fan, rock type that is not conducive to preserving significant fossils. Because there will be no effects to paleontological resources for all alternatives of the proposed project, this topic has been dismissed from further analysis in this document.

Wildlife

According to the National Park Service's *Management Policies*, 2006, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of animals (NPS 2006). Wildlife commonly found in the park include 60 species of mammals (Cornely 1991), 303 species of birds (Newman 1997), and 55 species of reptiles and amphibians (Grace 1980 revised by Wauer 1991). Depending on the elevation and exposure, vegetation types in Guadalupe Mountains National Park include desert scrub, grasslands, chaparral, woodlands, and coniferous forest. Endemic plants are a special feature of Guadalupe Mountains National Park. These unique taxa occur in high elevation forest canyons and along streams in the lower elevations in McKittrick Canyon (Northington and Burgess 1979). The project area is in a heavily used visitor service area and is typically used by larger animals such as deer, elk, javelina, coyote, gray fox and cougar only when humans are absent.

There would be negligible short-term impacts to wildlife under the action alternatives. Short-term impacts would include displacement of wildlife from human-related noise and visual disturbance caused by construction activities. Long-term impacts to wildlife are not anticipated. The majority of construction would occur in areas previously disturbed by prior ranching operations and an abandoned road south of U.S. Highway 62/180. The removal of vegetation in these areas would result in negligible loss in the amount of habitat in the project area. The present parking area is scheduled to be partially rehabilitated to alleviate the sheet flooding with water flows being diverted into the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area and partially revegetated to blend into the natural environment.

Any wildlife present in the area has unquestionably been long habituated to human activity, noise, and traffic. Wildlife would probably avoid the construction zone to a certain extent during construction. Some small animals could be killed or forced to temporarily relocate outside the project area; larger animals would probably avoid the site altogether, as they do now due to high visitation.

Short-term impacts on wildlife from human-related disturbance under the action alternatives would be site-specific and negligible to minor, lasting only during the construction period. Because only a small amount of habitat would be affected by the proposed action, long-term impacts to wildlife from habitat disturbance would be negligible to minor. Because the effects to wildlife and wildlife habitat from all alternatives of the proposed project are minor or less in degree, this topic has been dismissed from further analysis in this environmental assessment.

Water Resources

National Park Service policies require protection of water quality consistent with the Clean Water Act. The purpose of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 USC §1251 et seq.). To enact this goal, the U.S. Army Corps of Engineers has been charged with evaluating federal actions that result in potential degradation of waters of the United States and issuing permits for actions consistent with the Clean Water Act. The U.S. Environmental Protection Agency also has responsibility for oversight and review of permits and actions, which affect waters of the United States.

The majority of the proposed project area does not contain surface waters, and is mostly dry, except for periodic runoff during storm events. Water quality, water quantity, and drinking water may experience negligible to minor beneficial effects, depending on the selected alternative. Creating a new gravel parking area would allow the current parking footprint to be redesigned to alleviate the sheet flooding that occurs during heavy run off. By changing the angle of the parking area, diverting water flow to the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area, and partially rehabilitating the landscape to blend with the natural environment, the erosion and deposition of debris and gravels would cease. By relocating the horse and mule operation the nitrate flushing from the park's administrative horse/mule operation would no longer impact the watershed. In addition to redesigning the current parking area, the two culverts located in the two mentioned associated washes would be replaced with a single box culvert sized to accommodate a 100 year flood. The box culvert would be placed so as to allow for the natural flushing of the wash during heavy run off. To further assist with erosion and water quality, disturbed areas would be revegetated and recontoured following construction. After discussions with the U.S. Army Corps of Engineers, we mutually agreed that the culvert replacement fell under the Nationwide Permit #14 as the single box culverts would be of similar size to the two culverts being replaced at each location and less than 1/10th of the jurisdictional boundary (the area below the ordinary high water mark of the water channel) would be impacted. Our obligations under the 404 Permit have been met. Because the topic results in negligible to minor beneficial effects to water resources, this topic has been dismissed from further analysis in this document.

Wetlands

For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."

Executive Order 11990 Protection of Wetlands requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge or dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands as stated in *Management Policies*, 2006 and Director's Order #77-1 Wetlands Protection, strive to prevent the loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In accordance with DO #77-1 Wetlands Protection, proposed actions that have the potential to adversely impact wetlands must be addressed in a Statement of Findings for wetlands.

No wetlands are located in the project area. Therefore, a Statement of Findings for wetlands will not be prepared, and further analysis of wetlands has been dismissed from further analysis.

Floodplains

Executive Order 11988 Floodplain Management requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. The National Park Service under *Management Policies*, 2006 and Director's Order #77-2 Floodplain Management will strive to preserve floodplain values and minimize hazardous floodplain conditions. According to Director's Order #77-2 Floodplain Management, certain construction within a 100-year floodplain requires preparation of a Statement of Findings for floodplains.

The project area is not located in a floodplain. Therefore, a Statement of Findings for floodplains will not be prepared and the topic of floodplains has been dismissed from further analysis.

Archeological Resources

In addition to the National Historic Preservation Act and *the National Park Service 2006 Management Policies*, the National Park Service's Director's Order #28B Archeology, affirms a long-term commitment to the appropriate investigation, documentation, preservation, interpretation, and protection of archeological resources inside units of the National Park System. As one of the principal stewards of America's heritage, the National Park Service is charged with the preservation of the commemorative, educational, scientific, and traditional cultural values of archeological resources for the benefit and enjoyment of present and future generations. Archeological resources are nonrenewable and irreplaceable, so it is important that all management decisions and activities throughout the National Park System reflect a commitment to the conservation of archeological resources as elements of our national heritage.

The area of potential effect for the proposed project areas within and adjacent to the Frijole Ranch Cultural Landscape include the proposed picnic and parking area, the proposed barn site located at the south side of the current pasture, and an area measuring approximately 138 acres south of U.S. Highway 62/180 for the proposed barn and pasture. The entire area of potential effect was surveyed for cultural resources. The proposed picnic area and parking lot adjacent to the Frijole Ranch Historic District were surveyed by NPS staff; no National Register eligible sites were found and only isolated occurrences of artifacts with no significance were recorded (NPS 2005a). In June of 2007, NPS staff surveyed the area for the proposed barn located on the south end of the current pasture and the area for the barn and pasture located south of U.S. Highway 62/180; no National Register eligible sites were found and only isolated occurrences of artifacts with no significance were recorded (NPS 2007b). One archeological site, the Butterfield Trace, was noted as being originally located in the proposed west pasture. This site was investigated by Western Cultural Resource Management in 2002 when conducting work for the AT & T fiber optic line (Mehls 2002). Only a very small portion of the AT & T project area intersects the current project area; therefore, WCRM primarily documented the historic El Paso-Carlsbad Highway (41CU661) which was used from 1920-1940 and is outside of the proposed pasture and barn area. However, WCRM conducted archival research on the Butterfield Trace, and this area was part of the project area surveyed by the NPS staff. Based on the fieldwork conducted, it has been determined that this section of the Butterfield Trace is not considered eligible for the National Register since it has no integrity and is no longer visible. To further verify this, the site location was field inspected again by NPS staff in April of 2009 (NPS 2009b). No mitigation is necessary for this portion of the Butterfield Trace since it is no longer visible, has no integrity, and is not eligible for the National Register.

Additional archeological work occurred in the area in 1983 when the NPS Regional Archeologist

conducted test excavations along the corner walls of the Frijole Ranch house prior to a stabilization project. Two trenches were excavated: one measuring 15 feet long and 4 feet wide, and another measuring 6 feet long and 2 feet wide. A prehistoric feature was discovered approximately 12 inches from the surface which extended to a depth of 24 inches below the surface. This feature was partially excavated and determined to be a prehistoric midden with fire cracked rock and associated artifacts. Based on the curvature of the feature, it was determined that the majority of the feature was undisturbed and underneath the existing ranch house (NPS 2009c). This feature would not be affected by either of the proposed alternatives since there will not be any ground disturbance adjacent to the house or in the yard.

Lastly, the area in the historic district that has been proposed for burying the utilities underground contains fill previously placed by the NPS and is not expected to contain any sub-surface historic or prehistoric deposits.

Overall, the proposed project areas have been surveyed and are not expected to contain National Register eligible archeological sites or sub-surface deposits; for this reason Archeological Resources have been dismissed from further analysis.

Historic Structures

Section 106 of the National Historic Preservation Act, as amended in 1992 (16 USC 470 et seq.); the National Park Service's Director's Order #28 Cultural Resource Management Guideline; and National Park Service *Management Policies*, 2006 require the consideration of impacts on historic properties that are listed on or eligible to be listed in the National Register of Historic Places. The National Register is the nation's inventory of historic places and the national repository of documentation on property types and their significance. The above mentioned policies and regulations require federal agencies to coordinate consultation with State Historic Preservation Officers regarding the potential effects to properties listed on or eligible for the National Register of Historic Places.

The National Park Service, as steward of many of America's most important cultural resources, is charged to preserve historic properties for the enjoyment of present and future generations. Management decisions and activities throughout the National Park System must reflect awareness of the irreplaceable nature of these resources. The National Park Service will protect and manage cultural resources in its custody through effective research, planning, and stewardship, and in accordance with the policies and principles contained in the *Management Policies*, 2006 and Director's Order #28.

On November 21, 1978 the Guadalupe Ranch was listed on the National Register of Historic Places. The Texas Historical Commission, (SHPO) concurred on April 17, 2006 with the *Frijole Ranch Cultural Landscape Inventory* that increased the holdings of the Guadalupe Ranch from 9 acres to 32.5 acres. The Determination of Eligibility also requested that the site name on the National Register listing be changed from Guadalupe Ranch to Frijole Ranch.

In the past, the park proposed to replace the hinges on the backdoor of the ranch house and completed compliance for this purpose. However, the project was not implemented at the time of consultation. The current project proposal includes replacing the hinges on the backdoor of the ranch house to allow the door to fully swing open, providing wheelchair users access to the inside of the ranch house. Prior consultation, November 29, 1995, with the Texas Historical Commission (SHPO) established acceptable mitigation thus allowing the door stops to be removed and the door hinges to be replaced with off-set door hinges reaching a "No Adverse

Effect". A copy of the Texas Historical Commission (State Historic Preservation Officer) report and door hinge concurrence can be found in Appendix A. Because this action does not have a significant impact on the historic structure and the prior consultation with the Texas Historical Commission (SHPO), this topic has been dismissed from further analysis.

Ethnographic Resources

National Park Service's Director's Order #28 Cultural Resource Management, ethnographic resources are defined as any site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it. According to Director's Order #28 and Executive Order 13007 on sacred sites, the National Park Service should try to preserve and protect ethnographic resources.

Ethnographic resources are not known to exist in the proposed project areas based on the lack of cultural materials present. In addition, Native American tribes traditionally associated with the park were apprised of the proposed project in a letter dated April 14, 2008. No responses were received. The park regularly consults with the Mescalero Apache Tribe and the Tigua Tribe of Ysleta Del Sur Pueblo. These tribes were contacted by telephone and email. Phone calls were not returned and no comments were received. Therefore, this topic has been dismissed from further analysis.

Museum Collections

According to Director's Order #24 Museum Collections, the National Park Service requires the consideration of impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material), and provides further policy guidance, standards, and requirements for preserving, protecting, documenting, and providing access to, and use of, National Park Service museum collections.

There are many museum objects on exhibit at the Frijole Ranch Cultural Museum. However, all of the alternatives of this project would have no impact on the Guadalupe Mountains National Park's museum collection. Therefore, the topic of museum collections has been dismissed from further consideration.

Air Quality

The 1963 Clean Air Act, as amended (42 USC 7401 et seq.) was established to promote the public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources and air quality related values associated with National Park Service units. §118 of the Clean Air Act require parks to meet all federal, state, and local air pollution standards. §176 (c) of the Clean Air Act requires all federal activities and projects to conform to state air quality implementation plans to attain and maintain national air quality standards. *NPS Management Policies*, 2006 addresses the need to analyze potential impacts to air quality during park planning.

Under the action alternatives, local air quality would be temporarily affected by dust and construction vehicle emissions. Fugitive dust from construction equipment would intermittently increase airborne particulate in the area near the project site, but loading rates are expected to be low. Fugitive dust would be controlled by periodic watering as necessary. Operation of construction equipment would result in increased vehicle exhaust and emissions. Emissions of hydrocarbons, nitrous oxides, and sulfur dioxides would dissipate rapidly since air stagnation is

rare within the project area. Construction equipment would not be allowed to idle for extended periods of time.

There would be no long-term impacts to air quality under the action alternatives. The parking lot, horse/ mule operations, and culvert improvements would not result in a measurable increase in air contaminants. Through the use of mitigation measures, impacts on local air quality would be adverse localized short-term negligible; occurring only during the construction period. The Class I air quality designation for Guadalupe Mountains National Park would not be affected by the proposed project. Therefore, air quality has been dismissed from detailed analysis in this environmental assessment.

Soundscape Management

In accordance with 2006 *Management Policies* and Director's Order #47, Sound Preservation and Noise Management, an important component of the National Park Service's mission is the preservation of natural soundscapes associated with national park units (NPS 2006). Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among National Park Service units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

The proposed location for the new parking area, and horse/ mule corral would move the concentration of vehicle activity away from the Frijole Ranch Historic District. This would allow the natural quiet of this area to be more pronounced and available to park visitors. Existing sounds in this area are most often generated from vehicular traffic (trucks delivering feed and supplies, visitors and employees entering/leaving the Frijole Ranch parking area), large and small groups of visitors, and from natural elements, such as horses, mules, birds and wind.

Impacts to soundscape from noise associated with construction equipment and activities under the action alternatives would be temporary, lasting only as long as the construction activity is generating sounds, and would have a minor impact on visitors and employees. Therefore, the topic of soundscape management was dismissed as an impact topic.

Lightscape Management

In accordance with 2006 *Management Policies*, the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light (NPS 2006). Guadalupe Mountain National Park strives to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements. The park also strives to ensure that all outdoor lighting is shielded to the maximum extent possible to keep light on the intended subject and out of the night sky.

There is currently one outside light at the Frijole Ranch complex, which is located on the exterior of the horse barn and faces the existing parking lot. This light would be removed as part of this project under Alternative B or Alternative C. The light on the barn is not a contributing element to the historic district. One exterior light fixture would be added to the newly constructed barn in Alternatives B and C in order to meet basic safety requirements. This light would be shielded to the maximum extent possible. Since there will be no net gain of exterior lighting as a result of this project, regardless of which alternative is chosen, the topic of lightscape management was

dismissed as an impact topic.

Socioeconomics

The proposed actions would neither change local and regional land use, nor appreciably impact local businesses or other agencies. Implementation of the proposed action could provide a negligible beneficial impact to the economies of nearby Pine Springs or Salt Flat Texas, as well as Culberson County due to minimal increases in employment opportunities for the construction workforce and revenues for local businesses and governments generated from these additional construction activities and workers. Any increase in workforce and revenue, however, would be temporary and negligible, lasting only as long as construction. Because the impacts of the action alternatives to the socioeconomic environment would be short-term and negligible, this topic was dismissed from further detailed analysis.

Prime and Unique Farmlands

In August 1980, the Council of Environmental Quality (CEQ) directed that federal agencies assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resources Conservation Services (NRCS) as prime or unique. Under the Farmland Protection Policy Act (FPA) (7 USC 4201), prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, seed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides and labor, and without intolerable soil erosion (7 USC 4201 (c) (i) (B)). Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops, such as citrus, tree nuts, olives, cranberries, fruits, and vegetables (7 USC 4201 (c) (i) (B)).

According to NRCS, none of the soils in the project area are classified as prime and unique farmlands. Therefore, the topic of prime and unique farmlands was dismissed as an impact topic in this document.

Indian Trust Resources

Secretarial Order #3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by the Department of Interior agencies be explicitly addressed in environmental documents. The Federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no Indian trust resources at Guadalupe Mountains National Park. The lands comprising the park are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, the project would have negligible effects on Indian trust resources, and this topic was dismissed from detailed analysis.

Environmental Justice

Executive Order #12898 General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

The new parking facility would be available for use by all visitors and park staff regardless of race or income. The construction workforces would not be hired based on their race or income, the proposed action would not have disproportionate health or environmental effects on minorities or low-income populations or communities. Therefore, environmental justice has been dismissed from detailed analysis in this environmental assessment.

ALTERNATIVES CONSIDERED

On May 21, 2007, an interdisciplinary team of National Park Service employees met for the purpose of developing project alternative. This meeting resulted in the definition of project objectives as described in the Purpose and Need, and a list of five alternatives that could potentially meet these objectives. Three alternatives are being carried forward for further evaluation in this Environmental Assessment. Two alternatives were dismissed; therefore, three alternatives are discussed in the “alternatives carried forward” section below. A summary table comparing alternative components is presented at the end of the chapter.

Alternatives Carried Forward

Alternative A – No-Action (Figure 5)

Under Alternative A, the proposed gravel parking area would not be constructed. The existing operations at the Frijole Ranch Historic District would continue as they have in the past to provide park visitors with an opportunity to explore the park’s cultural museum and learn about the cultural history of this area. The park would continue to be in violation of Director’s Order #83: Public Health, B.5 and B.6: chemical toilets are for temporary use only, because they require frequent service and pumping to prevent objectionable odors. Costs associated with maintenance and frequent pumping of the chemical toilet would continue to delay or prevent other park projects or maintenance needs. By not providing a functional universally accessible restroom visitors are prevented from having a quality NPS visitor experience. The Frijole Ranch Historic District would continue to be minimally accessible to mobility challenged individuals and the ranch house would remain inaccessible to wheelchair users causing the park to be in violation of the Americans with Disabilities Act.

Current Parking Area at Frijole Ranch Historic District - Park visitors driving large SUVs or RVs along with buses and the large trucks that deliver hay and horse supplies would continue to have difficulty navigating around parked vehicles in the current parking area. The landscape condition could be lowered from good to fair since the parking area would continue to experience sheet flooding with resulting erosion and deposition of debris and gravels during heavy rain events. Dust and vehicular air pollution would continue to negatively impact the historic district preventing visitors from experiencing the natural quiet that the early farmers and ranchers would have experienced. There would continue to be tension between large groups picnicking in the yard of the Frijole ranch house and smaller groups of visitors who must negotiate around them to view the out buildings associated with the ranch house.

Administrative Horse/Mule Operation – The horse/ mule corral would continue to be supported from this location. Large trucks delivering feed and supplies would continue to attempt to navigate around parked vehicles because there is too little space to safely turn around in the Frijole Ranch parking area. The livestock would continue to add to the erosion on the banks of the nearby wash due to the funneling design that forces them to cross the wash in the same confined area. The current pasture of 131.34 acres would continue to be used. Nitrates would continue to be flushed into the wash during heavy rain events.

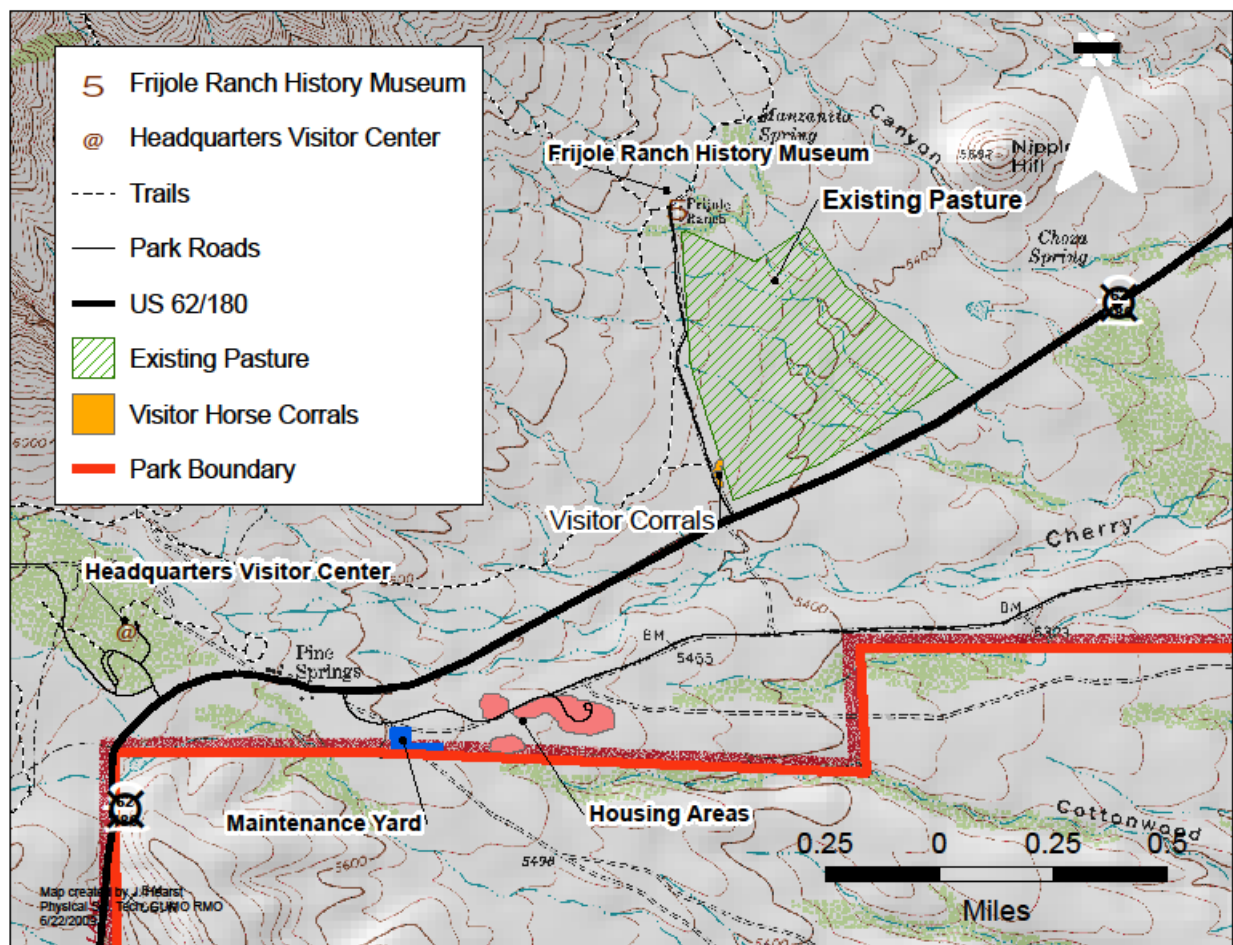


Figure 5 – Alternative A: Existing Conditions

Deficient Culverts – The two 36-inch metal culverts located at the end of the Frijole Ranch road where the road enters the Frijole Ranch parking area and a second set located along the Frijole Ranch road about ½ mile north of U.S. Highway 62/180, would continue to impede water flow by acting as a levee preventing natural flows from flushing through the wash during heavy rain events. High-volume flows are forced to back up and continue to deposit material upstream of the culverts. The culvert next to the Frijole Ranch Historic District is also experiencing severe channel down cutting at the outlet. The waterfall action on the downstream side of the culvert would continue to erode the wash beneath the administrative horse/mule corral. During flood flows, the culverts could become compromised and with the potential for failure (NPS 2008a).

Alternative B – Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, keep the park’s administrative horse/mule operation on the same footprint, build a prefabricated barn on a slab at the south end of the current pasture and construct an accessible path through the orchard. (Figures 6, 7, and 8)

Alternative B proposes to construct a new gravel parking area on the south side of the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area and on the west side of the Frijole Ranch road. A universally accessible path would join the proposed

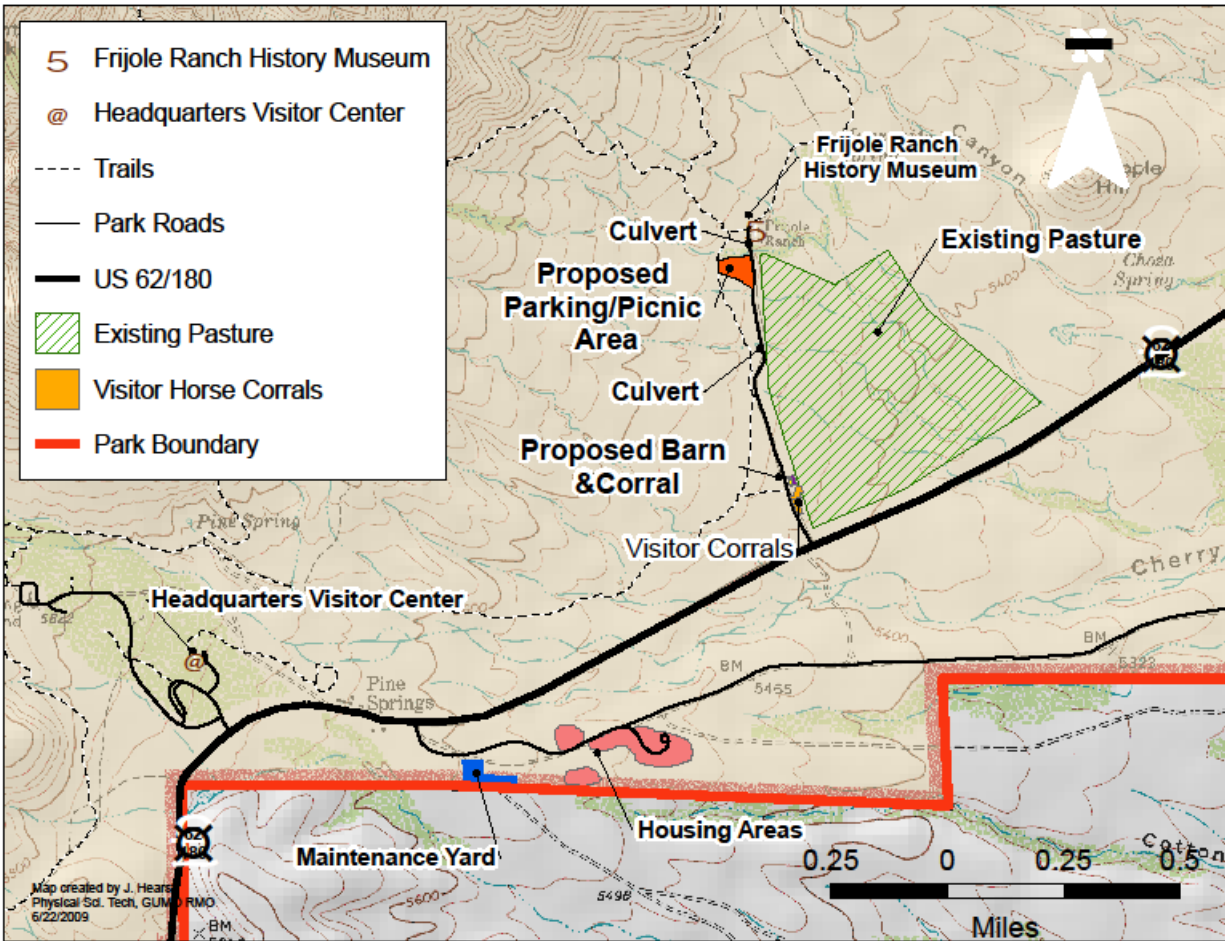


Figure 6 – Alternative B: showing the current NPS mule pasture and the location of the proposed barn along the southwestern side

parking area with the Frijole Ranch Historic District. The proposed parking area would include 2-4 shade covered accessible single family picnic tables and one shade covered accessible group picnic area. A universally accessible restroom and drinking fountain would be installed. The overhead utility service within the historic district would be buried to more closely evoke the historic scene. The current parking area would be partially rehabilitated (0.07 acre) to address the sheet flooding problem with water being diverted to the wash. A prefabricated barn would be constructed on a concrete slab on the south side of the present horse/ mule pasture near the existing visitor corrals. This would move the administrative horse and mule operation away from the Frijole Ranch Historic District. The new barn would be accessible from the Frijole Ranch road and a driveway would be constructed off the road. All areas with proposed ground disturbance have been surveyed for cultural resources. No eligible cultural resources are present in the proposed parking lot or barn areas. The utility service would be buried in fill that was previously placed by the NPS and would not impact any deposits related to historic or prehistoric periods. The following text further describes the components of Alternative B.

Proposed Frijole Ranch Parking Area – An area west of the Frijole Ranch road and immediately south of the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area is the location that is being considered for the proposed parking area. This

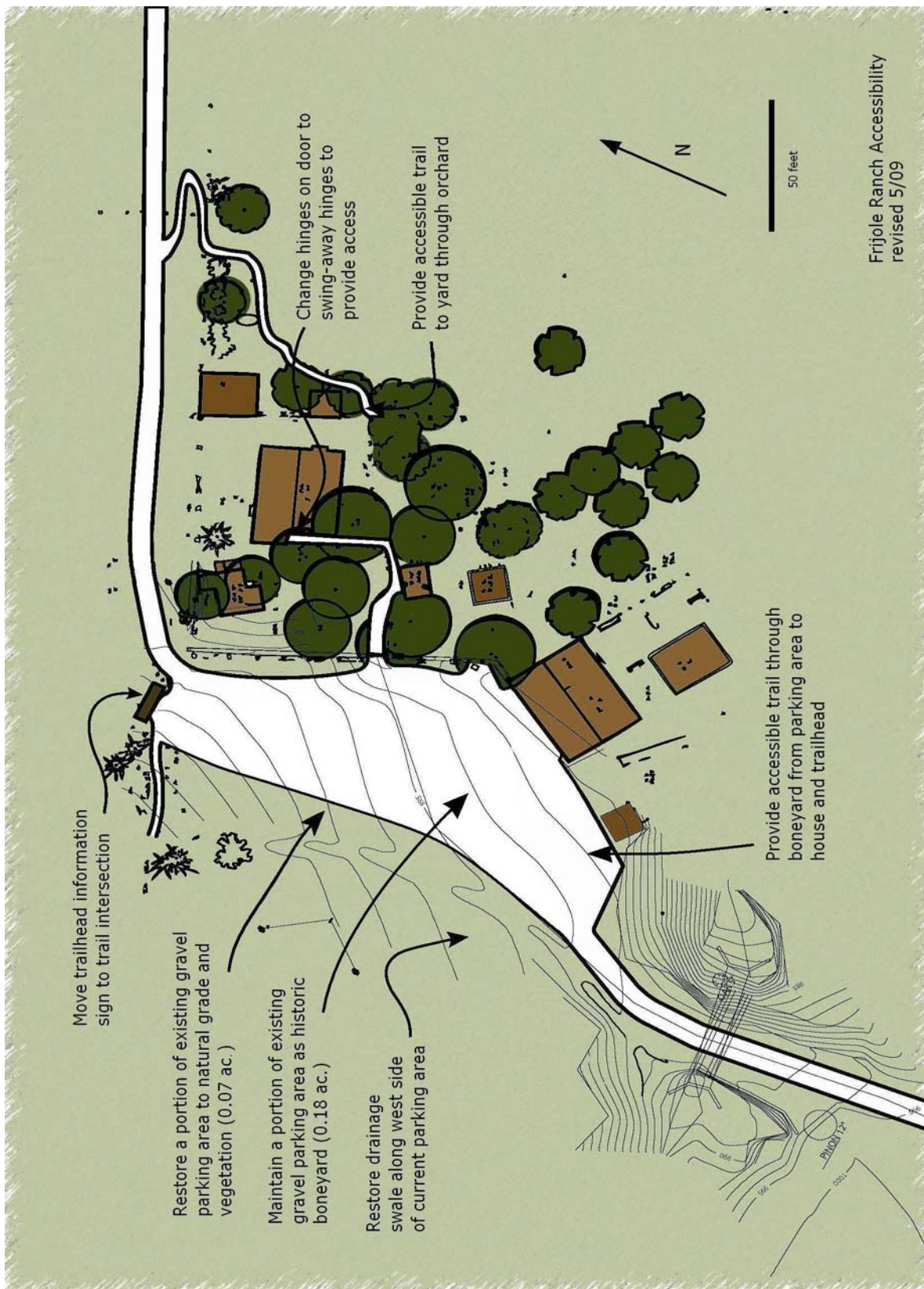


Figure 7 – Landscape Architect's proposed design for Frijole Ranch area for Alternative B and C



Figure 8 – Landscape Architect's proposed design for the picnic and parking area for Alternative B and C

area would include parking spaces for 18-22 passenger vehicles and 2-4 spaces for RVs. Turning radius for larger vehicles would be accommodated in the parking design. 2 to 4 shade covered accessible single table picnic areas would be intermingled along the edge of this area and one large shade covered group picnic area containing 4-8 accessible picnic tables would be included. The picnic area could be landscaped with chinkapin oaks to create an area as equally inviting as the existing ranch yard. A universally accessible restroom (SST – Sweet Smelling Toilet) and a drinking fountain would be constructed. The restroom facilities would be self-contained with solar operated lighting. Water would be brought in from an existing waterline that is buried on the other side of the Frijole Ranch road for the drinking fountain. An interpretation sign would also be installed in the proposed parking and picnic area.

Create More Accessible Opportunities Within the Historic District– A universally accessible trail would join the proposed parking area to the Frijole Ranch Historic District. An accessible trail would be added that originated at the Manzanita and Smith Spring trail and would pass through the orchard behind the house and terminate at the edge of the yard by the stone gate. The design fabric, and construction methods for the accessible path would be similar to the existing trail to Manzanita Spring, i.e. natural appearing stabilized soil. There are two irrigation ditches along the proposed route for the accessible trail through the orchard. Limestone slabs would be installed to continue the accessible path over the ditches. Limestone is historically compatible material. The hinges on the back door of the ranch house could be replaced with off-set hinges and the door stops removed to allow the door to fully swing open providing wheelchair access into the interior of the ranch house. These proposed changes to the back door would change the historic fabric, but the change is reversible and the original hinge could easily be replaced. This action would allow more of the historic district to be accessible to wheelchair users and families with strollers (Appendix A).

Current Parking Area – The western portion of the current parking area (0.07 acre) next to the Frijole Ranch Historic District would be recontoured and rehabilitated to alleviate the sheet flooding. Water would be diverted to the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area via a previous natural drainage. A single lane road leading to an NPS access area for emergency and maintenance vehicles would remain. A portion of this area could be used to extend the interpretive program to include outdoor displays. The Frijole Ranch road would be closed to vehicular traffic north of the wash except for emergency and maintenance vehicles. An accessible trail leading from the newly proposed parking and picnic area would follow the historic stone wall that separates the current parking area from the historic district and end at the Manzanita and Smith Spring trailhead. The overhead utility service would be buried to more closely evoke the historic scene. The temporary portable lavatory would be removed.

Current Barn – The present horse/mule barn would be cleaned out and modified for educational purposes, both for storage of interpretive materials and as a location for school groups to gather and get out of the weather.

Proposed Prefabricated Barn Structure on the South Side of the current pasture – A prefabricated barn would be placed on a concrete slab along the south side of the present pasture near the visitor corrals. The administrative horse/ mule operation would be accessible by the Frijole Ranch road after construction of a driveway from the road to the barn. Utilities, including water and electricity, would be brought to the site. The proposed barn would house the horse/ mule tack and feed. The current 131.34 acre pasture would continue to be used. A concrete structure would be built near the barn to be used to stock pile manure from the corrals and later transported out of the park.

Replace the Culverts– The 2 metal culverts that have been placed in the wash where the Frijole Ranch road enters the Frijole Ranch parking area and a second set located along the Frijole Ranch road about ½ mile north of U.S. Highway 62/180 would each be replaced with a single box culvert. The single box culverts would be large enough to allow the wash to naturally flush during heavy rain events. The culverts would be placed at a gradient such that the current waterfall effect causing erosion in the washes would be alleviated. All areas disturbed by construction would be revegetated and re-contoured to the style of the native landscape. Native vegetation, rocks, or other natural features would be used, as appropriate.

Alternative C (Preferred) – Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, move the park’s administrative horse/mule operation to the south side of U.S. Highway 62/180, and construct an accessible path through the orchard.

(See Figures 7, 8, and 9)

Alternative C proposes to construct a new gravel parking area on the south side of the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area and the west side of the Frijole Ranch road. The proposed parking area would include parking spaces for 18-22 passenger vehicles and 2-4 RVs. A single large group shade covered picnic area and 2-4 shade covered accessible single family picnic areas would be interdispersed around the proposed parking area. A universally accessible restroom and drinking fountain would be included. The current parking area would be rehabilitated to address the sheet flooding problem with water being diverted to the wash. A universally accessible path would join the parking area with the Frijole Ranch Historic District. Another trail would come off of the Manzanita and Smith Spring trail passing through the orchard and terminate at the edge of the yard by the stone gate. A prefabricated barn and horse/ mule corral would be built on a concrete slab approximately 1/4 mile south of U.S. Highway 62/180. This area is along an abandoned road. An archeological survey was conducted in this area on June 28, 2007. No eligible cultural resources were found. The following text further describes the components of Alternative C.

Proposed Frijole Ranch Parking Area - The area west of the Frijole Ranch road and south of the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area is being considered for the proposed parking area. This area would include 18-22 parking spaces for passenger vehicles and 2-4 spaces for RVs and other large vehicles. A picnic area including 2-4 shade covered accessible single table picnic areas and one large shade covered group picnic area containing 4-8 accessible picnic tables would be intermingled along the edges of the proposed parking. The picnic area could be landscaped with chinkapin oaks to create an area as equally inviting as the existing ranch yard. A universally accessible restroom (SST – Sweet Smelling Toilet) and a drinking fountain would be constructed. The restroom facilities would be self-contained with no need for utilities. Interior lights would be solar operated. Water would be brought in from an existing waterline that is buried on the other side of the Frijole Ranch road for the drinking fountain. An interpretive sign would also be installed in the proposed parking and picnic area.

Create More Accessible Opportunities Within the Historic District – A universally accessible trail would join the proposed parking area to the Frijole Ranch Historic District. An accessible trail would be added that originates at the Manzanita and Smith Spring trail that would pass through the orchard behind the house and terminate at the edge of the yard by the stone gate. The design, fabric, and construction methods for the accessible path would be similar to the existing trail to Manzanita Spring, i.e. natural appearing stabilized soil. There are two irrigation ditches along the proposed route for the accessible trail through the orchard.

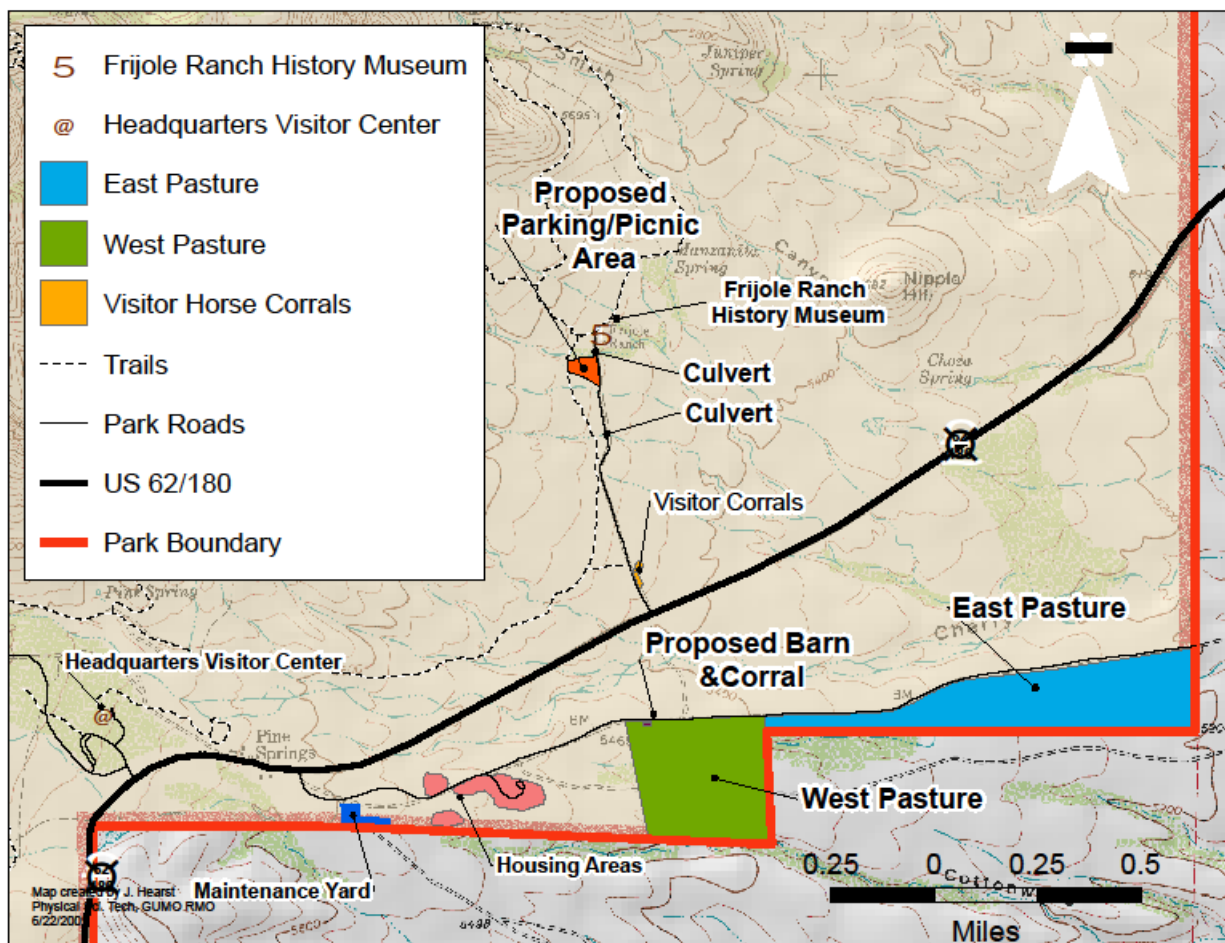


Figure 9 –Alternative C: showing proposed barn and pasture site located south of U.S. Highway 62/180

Limestone slabs would be installed to continue the accessible path over the ditches. Limestone is a historically compatible material. The hinges on the back door of the ranch house could be replaced with off-set hinges and the door stops removed to allow the door to fully swing open providing wheelchair access into the interior of the ranch house. These proposed changes to the back door would change the historic fabric, but the change is reversible and the original hinge could easily be replaced. This action would allow more of the historic district to be accessible to wheelchair users and families with strollers. (Appendix A)

Current Parking Area – The western portion of the current parking area (0.07 acre) next to the Frijole Ranch Historic District would be rehabilitated to alleviate the sheet flooding. Water would be diverted to the wash where the Frijole Ranch road enters the Frijole Ranch Historic District parking area. A single lane road leading to a NPS access for emergency and maintenance vehicles would remain. A portion of this area could be used to extend the interpretive program to include outdoor displays. The Frijole Ranch road would be closed to vehicular traffic at the wash except for emergency and maintenance vehicles. An accessible trail leading from the newly proposed parking and picnic area would follow the historic stone wall that separates the current parking area from the historic district and end at the Manzanita and Smith Spring trailhead. The overhead utility service would be buried to more closely evoke the historic scene.

The temporary portable restroom would be removed.

Current Barn – The livestock operation would be moved from the current barn to the new proposed barn, corral, and pasture area. Livestock would infrequently be brought back to the Frijole Ranch area for interpretive programs and special events. The current barn would be cleaned and could be used to provide space for interpretive programs and school groups to meet and get out of the weather.

Proposed Prefabricated Barn Structure South of U.S. Highway 62/180 – A prefabricated barn would be placed on a concrete slab in an area approximately ½ mile south of U.S. Highway 62/180. This area is along an abandoned road previously disturbed by the construction and use of the road and earlier ranching operations. Utilities, including water and electricity, would be brought to the site. The proposed barn would house the horse/ mule tack and feed. A fence would be constructed to create a corral area. A pasture of 138 acres surrounding the barn would be used for grazing and exercising for the park owned livestock. This pasture would involve installation of a 4 strand barbed wire fence from the east boundary fence along the current “boneyard road” and turning south near the existing power lines meeting up with the south boundary fence. A divider fence would be installed in the middle to establish 2 separate pastures so the park could alternate and reduce grazing impacts. The east pasture would be around 77 acres and the west pasture around 61 acres. A waterline would be installed to the barn location by tapping into the current Frijole waterline approximately 0.5 miles up the boneyard road. The waterline would be buried in the center of the current boneyard road that heads east of the barn location towards the housing area. This section of road would be upgraded by installing base course, but the footprint would remain the same. Electricity would be installed to the barn from a nearby transformer by using the existing utility poles and installing one utility pole at the barn. A concrete structure would be built near the barn to be used to stock pile manure from the corrals and later transported out of the park.

Replace the Culverts – The 2 metal culverts that have been placed in the wash where the Frijole Ranch road enters the Frijole Ranch parking area and a second set located along the Frijole Ranch road about ½ mile north of U.S. Highway 62/180 would be replaced with single box culvert. The single box culvert would be large enough to allow the wash to naturally flush during heavy rain events. The culverts would be placed at a gradient such that the current waterfall effect causing erosion in the wash would be alleviated. All areas disturbed by construction would be revegetated and re-contoured to the style of the native landscape. Native vegetation, rocks, or other natural features would be used, as appropriate.

Mitigation Measures

The following mitigation measures were developed to minimize the degree and/or severity of adverse effects and would be implemented during construction of the action alternative, as needed:

- To minimize the amount of ground disturbance, staging and stockpiling areas would be in previously disturbed sites, away from visitor use areas to the extent possible. All staging and stockpiling areas would be returned to pre-construction conditions following construction.
- Construction zones would be identified and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications and workers

would be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.

- Revegetation and recontouring of disturbed areas would take place following construction. Revegetation efforts would strive to reconstruct the natural spacing, abundance, and diversity of native plant species using native species. All disturbed areas would be restored as nearly as possible to pre-construction conditions shortly after construction activities are completed. Weed control methods would be implemented to minimize the introduction of noxious weeds. Some trees may be removed, but other existing vegetation at the site would not be disturbed to the extent possible.
- Because disturbed soils are susceptible to erosion until revegetation takes place, standard erosion control measures such as silt fences and/or sand bags would be used to minimize any potential soil erosion.
- Fugitive dust generated by construction would be controlled by spraying water on the construction site, if necessary.
- To reduce noise and emissions, construction equipment would not be permitted to idle for long periods of time.
- To minimize possible petrochemical leaks from construction equipment, the NPS and contractors would regularly monitor and check construction equipment to identify and repair any leaks.
- Construction workers and supervisors would be informed about special status species. Contract provisions would require the cessation of construction activities if a species were discovered in the project area, until park staff re-evaluates the project. This would allow modification of the contract for any protection measures determined necessary to protect the discovery.
- Should construction unearth previously undiscovered cultural resources, work would be stopped in the area of any discovery and the park would consult with the Texas Historical Commission and the Advisory Council on Historic Preservation, as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.
- The National Park Service would ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging paleontological materials, archeological sites, or historic properties. Contractors and subcontractors would also be instructed on procedures to follow in case previously unknown paleontological or archeological resources are uncovered during construction.
- Construction workers and supervisors would be informed about the special sensitivity of the park's values, regulations, and appropriate housekeeping.
- According to 2006 *Management Policies*, the National Park Service would strive to construct facilities with sustainable designs and systems to minimize potential environmental impacts. Development would not compete with or dominate the park's features, or interfere with natural processes, such as the seasonal migration of wildlife or hydrologic activity associated with wetlands. To the extent possible, the design and management of facilities would emphasize environmental sensitivity in construction, use of nontoxic materials, resource conservation, recycling, and integration of visitors with natural and cultural settings. The National Park Service also reduces energy costs, eliminates waste, and conserves

energy resources by using energy-efficient and cost-effective technology. Energy efficiency is incorporated into the decision-making process during the design and acquisition of buildings, facilities, and transportation systems that emphasize the use of renewable energy sources.

- Driving and parking of construction equipment would be limited to already disturbed areas (e.g. existing parking lots), or areas cleared for the new parking/picnic area.
- Areas of new disturbance that are not part of the new development footprint would be kept to a minimum, so as to reduce the area that requires post-construction revegetation.
- On-site project supervision would ensure that no contributing elements of the historic district are disturbed or damaged.
- Before and after photographic documentation would be completed for all changes within and adjacent to the historic district, and added to the park's record of changes made to the district over time. This record would help evaluate cumulative impacts in the future.

Alternatives Considered and Dismissed

The following 2 alternatives were considered for project implementation, but were ultimately dismissed from further analysis. Reasons for their dismissal are provided in the following alternative descriptions.

Contracting with a park neighbor to place administrative horse and mule operation on private land – This alternative was considered as an option to moving the horse/ mule barn and corral to a location away from the Frijole Ranch Historic District. This was dismissed due to the few neighbors surrounding the park who would be in close enough proximity to the areas of the park where the horse/ mules are employed. Most neighbors do not want horse/ mule operations on their lands. The cost of managing the horse/ mule operation would greatly increase if trailers, vehicles and gasoline had to be purchased each time the horse/ mules were transported to a work site or trailhead.

Move the horse/mule operation to the south side of U.S. Highway 62/180, retain the Frijole Ranch gravel parking area next to the Frijole Ranch Historic District in its current state – This alternative was considered, but determined to be inadequate because it does not address many of the objectives that need to be addressed by this proposed project. The parking area next to the Frijole Ranch Historic District would remain too small to address the current parking inadequacies. The historic district would continue to be impacted from dust, vehicle noise and exhaust associated with the parking area. Large picnic groups would continue to impact smaller groups of visitors by preventing them from experiencing the natural quiet and ability to explore the ranch outbuildings and yard. The sheet flooding and erosion issues would not be resolved. The portable lavatory would remain and the park would continue to be in violation of Director's Order 83: Public Health, B.5 and B.6 chemical toilets are for temporary use only, because they require frequent service and pumping to prevent objectionable odors. Costs associated with maintenance and frequent pumping of the portable lavatory would continue to delay or prevent other park projects or maintenance needs. By not providing a functional universally accessible restroom, visitors are prevented from having a quality NPS visitor experience. The Frijole Ranch Historic District would continue to be minimally accessible to mobility challenged individuals and the ranch house would remain inaccessible to wheelchair users causing the park to be in violation of the Americans with Disabilities Act.

Alternative Summaries

Table 1 summarizes the major components of Alternatives A, B, and C and compares the ability of these alternatives to meet the project objectives (the objectives for this project are identified in the Purpose and Need chapter). As shown in the following table, Alternative B and C address each of the objectives identified for this project, while the No Action Alternative does not address all of the objectives.

Table 1 – Alternatives Summary and Project Objectives

	Alternative A – No Action	Alternative B – Move gravel parking area to S side of wash and W side of Frijole Ranch road, keep park's horse/ mule operation on same footprint, but build barn at the south side of current pasture, and construct an accessible path through the orchard	Alternative C (Preferred) – Move the gravel parking area to S side of wash and W side of Frijole Ranch road, move park's horse/ mule operation to S side of U.S. Hwy 62/180, and construct an accessible path through the orchard
1. Provide a safe parking and picnic area that is large enough to accommodate the current traffic flow and allow RVs and buses the ability to safely turn around.	This alternative does not address this objective. The parking situation at the Frijole Ranch Historic District would remain unchanged. SUVs and other large vehicles would continue to have difficulty turning around and navigating in a space that is too small to accommodate today's larger vehicles. Visitors arriving in motorhomes, buses and vehicles towing trailers would continue to be excluded from accessing this site except for limited parking ¾ mile away. The 2 picnic tables in the ranch yard would be retained but insufficient for current use and demand.	Alternative B would meet this objective by constructing a larger parking area away from the Frijole Ranch Historic District. Parking spaces for 18-22 passenger vehicles and 2-4 spaces for RVs. Turning radius for larger vehicles including buses would be accommodated in the parking design. Between 2-4 single family picnic shelters and 1 group size picnic shelter would be developed outside the historic district.	Alternative C would meet this objective by constructing a larger parking area away from the Frijole Ranch Historic District. Parking spaces for 18-22 passenger vehicles and 2-4 spaces for RVs. Turning radius for larger vehicles including buses would be accommodated in the parking design. Between 2-4 single family picnic shelters and 1 group size picnic shelter would be developed outside the historic district.
2. Meet federal and state health and safety requirements by providing a universally accessible restroom facility with a drinking fountain.	Alternative A would not address this objective. The park would continue to be in violation of DO #83: Public Health, B.5 and B.6, chemical toilets are for temporary use only because they require frequent service and pumping to prevent objectionable odors. The current chemical toilet is not universally accessible. The existing drinking fountain and water spigot are not ADA accessible.	Alternative B would address this objective by providing a universally accessible restroom (SST-Sweet Smelling Toilet). A universally accessible drinking fountain would be constructed as a part of the proposed parking/picnic area.	Alternative C would address this objective by providing a universally accessible restroom (SST-Sweet Smelling Toilet). A universally accessible drinking fountain would be constructed as a part of the proposed parking/picnic area.
3. Create more accessible opportunities within the historic district. – Bring the facilities at the Frijole Ranch	The Manzanita Spring trail would continue to be one of the few universally accessible trails in the park. The trail	An accessible trail would be built that leads from the proposed parking and picnic area to the historic stone wall	An accessible trail would be built that leads from the proposed parking and picnic area to the historic stone wall

Historic District into compliance within the requirements of the American with Disabilities Act and the Architectural Barriers Act.	leading from the parking area to the Frijole Ranch house backdoor would continue to be universally accessible. The ranch house door is minimally accessible to wheelchairs. The rest of the historic district would remain inaccessible to the mobility challenged.	that separates the ranch yard from the parking area, which would then end at the Manzanita and Smith Spring trailhead. Another trail would be added on the east side of the ranch house leaving from the Manzanita and Smith Spring trail passing through the orchard terminating at the east edge of the yard by the stone gate. The hinges on the ranch house back door would be replaced with off-set door hinges to allow the door to fully swing open providing wheelchair users access to the inside of the house.	that separates the ranch yard from the parking area, which would then end at the Manzanita and Smith Spring trailhead. Another trail would be added on the east side of the ranch house leaving from the Manzanita and Smith Spring trail passing through the orchard terminating at the east edge of the yard by the stone gate. The hinges on the ranch house back door would be replaced with off-set door hinges to allow the door to fully swing open providing wheelchair users access to the inside of the house.
4. Correct the erosion problem associated with the improperly sized double culverts located along Frijole Ranch road in the wash ½ mile north of U.S. Hwy 62/180 and at the wash at the entrance to the current parking area of the Frijole Ranch Historic District.	Alternative A would not address this objective. The two metal culverts in the wash next to the Frijole Ranch parking area, and the two metal culverts located ½ mile north of US Hwy 62/180 along Frijole Ranch road would continue to impede water flow by acting as a levee preventing natural flows from flushing through the wash during heavy rain events. High volume flows are forced to back up and continue to deposit material upstream of the culverts. The culvert next to the Frijole Ranch parking area would continue to experience severe channel down cutting at the outlet. The waterfall action on the downstream side of the culvert would continue to erode the wash beneath the park's administrative horse/ mule feeding area.	Alternative B would address this objective by replacing the two metal culverts in the wash where the Frijole Ranch road enters the current Frijole Ranch parking area and a second set of culverts located ½ mile north of HWY 62/180 along Frijole Ranch road with a single box culvert. The single box culverts would be large enough to allow the wash in both of these locations to naturally flush during heavy rain events. The culverts would be placed at a gradient such that the current waterfall effect causing erosion would be alleviated. All areas disturbed by construction would be revegetated and re-contoured to the native landscape.	Alternative C would address this objective by replacing the two metal culverts in the wash where the Frijole Ranch road enters the current Frijole Ranch parking area and a second set of culverts located ½ mile north of HWY 62/180 along Frijole Ranch road with a single box culvert. The single box culverts would be large enough to allow the wash in both of these locations to naturally flush during heavy rain events. The culverts would be placed at a gradient such that the current waterfall effect causing erosion would be alleviated. All areas disturbed by construction would be revegetated and re-contoured to the native landscape.
5. Alleviate the sheet flooding problem associated with the current parking area.	Alternative A would not address this objective. During heavy rain events the parking area would continue to experience sheet flooding with resulting erosion and deposition of debris and gravels. The historic district would continue to negatively experience dust and vehicle air pollution from the close proximity of the parking area.	Alternative B would address this objective by recontouring and rehabilitating approximately half of the current parking area in the Frijole Ranch Historic District to alleviate the sheet flooding. Water would be diverted to the wash where the Frijole Ranch road enters the parking area next to the Frijole Ranch Historic District parking area via an existing natural drainage.	Alternative C would address this objective by recontouring and rehabilitating approximately half of the current parking area in the Frijole Ranch Historic District to alleviate the sheet flooding. Water would be diverted to the wash where the Frijole Ranch road enters the parking area next to the Frijole Ranch Historic District parking area via an existing natural drainage.
6. Maintain or enhance the historic integrity of the district.	Alternative A would only partially address this objective. While the ranch house, ranch yard, and area around Manzanita Spring would continue to be maintained to preserve	Alternative B would overall meet this objective. While some aspects of this alternative (e.g. introducing trails) would add to the cumulative addition of development and changes	Alternative C would meet this objective. While some aspects of Alternative C (e.g. relocating horses and mules, and introducing trails) would add new development and remove a contributing

	integrity, the drainage and parking lot crowding issues would still be present.	within the district, other aspects (relocating visitor parking and large service vehicles from the parking lot, correcting drainage issues, and maintaining the active horse/mule pasture adjacent to the historic district) work to enhance integrity.	element, other aspects (relocating visitor parking and large service vehicles from the parking lot, correcting drainage issues) work to enhance integrity.
7. Remove the impact of the horse and mule operation from the adjacent watershed. Improve safety and efficiency of the administrative horse/mule operation by reducing the interface of administrative and visitor vehicles, and providing a suitable area for mechanized unloading and storage of large hay bales.	Alternative A would not address this objective. The horse/ mule corral would continue to be supported from this location. Large trucks delivering feed and supplies would continue to attempt to navigate around parked vehicles because there is too little space to adequately turn around in the Frijole Ranch parking area. Horses/ mules moving from the corral area to the pasture would continue to add to the erosion and nitrate loading in the wash next to the Frijole Ranch.	Alternative B would address this objective. A prefabricated barn would be placed on a concrete slab along the south side of the present pasture near the visitor corrals. The park's horse/ mule operation would be accessible by the Frijole Ranch road. Utilities, including water and electricity would be brought to the site. The current 131.34 acre pasture would continue to be used. Horses and mules would have access to the present pasture, including the corral next to the barn near the Frijole Ranch. If food and water were not provided at the old corral site, then it would be visited out of habit and to socialize with park visitors rather than for food and water. Nitrate flushing into the wash next to the Frijole Ranch would decrease as the horse/ mules begin to spend more time near the barn along the south side of the pasture.	Alternative C would address this objective. A prefabricated barn would be placed on a concrete slab approximately ¼ mile south of Hwy 62/180. This proposed site is along an abandoned road previously disturbed by the construction and use of the road and earlier ranching operations. Utilities, including water and electricity, would be brought to the site. A 4 strand barbed wire fence would be constructed to create a corral and pasture area. This pasture would be used for grazing and exercise. Approximately 138 acres would be divided into two sections so the park could alternate between the two and reduce the impacts associated with grazing and use. Nitrate flushing into the wash next to the Frijole Ranch would eventually cease after horses/ mules had been removed from the area.

Table 2 summarizes the anticipated environmental impacts for alternatives A, B, and C. Only those impact topics that have been carried forward for further analysis are included in this table. The Environmental Consequences chapter provides a more detailed explanation of these impacts.

Table 2 – Environmental Impact Summary by Alternative

Impact Topic	Alternative A – No Action Alternative	Alternative B	Alternative C – Preferred Alternative
Topography, Geology, and Soil Resources	The no action alternative would continue to have a minor to moderate effect, depending on the amount of rainfall, sheet flooding and deposition of debris and gravel at the present parking area. The 2 culverts along the Frijole	During construction Topography, Geology, and Soil resources would experience an adverse and beneficial negligible impact due to grading and soil manipulation of proposed parking/picnic area, the proposed site along the	During construction Topography, Geology, and Soil resources would experience an adverse and beneficial negligible impact due to grading and soil manipulation of proposed parking/picnic area, the proposed site south of U.S.

	<p>Ranch road would continue to cause erosion and down cutting during heavy rain events. Overflow parking would continue to cause erosion along the edges of the parking area and along the Frijole Ranch road.</p>	<p>south edge of the current pasture for barn on slab, associated corral, and parking. An area in the proposed parking lot would need to be prepared for a vault toilet. By creating a parking area away from the historic district it would be possible to correct the sheet flooding problem in the current parking area. By replacing the double culverts with a single box culvert it would be possible to alleviate the erosion and down cutting in the 2 washes along the Frijole Ranch road by allowing the washes to naturally flush during heavy rain events. Over the long-term this action would have an adverse and beneficial negligible impact. By providing a parking area that is sufficient in size to accommodate the number of vehicles desiring access to this location and enough space to safely turn around the need for overflow parking along the edges of the current parking area and road would be alleviated.</p>	<p>Hwy 62/180 for fencing for the proposed pasture, barn on slab, associated corral, and parking. An area in the proposed parking lot would need to be prepared for a vault toilet. By creating a parking area away from the historic district it would be possible to correct the sheet flooding problem in the current parking area. By replacing the double culverts with a single box culvert it would be possible to alleviate the erosion and down cutting in the 2 washes along the Frijole Ranch road by allowing the washes to naturally flush during heavy rain events. Over the long-term this action would have an adverse and beneficial negligible impact. By providing a parking area that is sufficient in size to accommodate the number of vehicles desiring access to this location and enough space to safely turn around the need for overflow parking along the edges of the current parking area and road would be alleviated.</p>
<p>Recreation Resources and Visitor Experiences</p>	<p>The no action alternative would continue to have an adverse minor to moderate impact because the existing parking area and park's horse/ mule operation would remain unchanged. Vehicles would continue to have difficulty turning around in the current parking area. The park would continue to be in violation of DO #83: Public Health, B.5 and B.6: due to the continued use of the chemical toilet. Because the chemical toilet is not universally accessible the park would still be in violation of the American with Disabilities Act. Mobility challenged individuals would not have access to much of the ranch house grounds nor</p>	<p>During construction this alternative would have an adverse minor impact due to inconveniences related to construction activities. Upon the completion of construction this alternative would have a beneficial minor impact related to improvements associated with the proposed parking area. A permanent universally accessible restroom and drinking fountain and accessible picnic tables would be included with the proposed parking area. These additions would allow for the increasing visitation to continue to use this area, and by being dispersed in multiple locations there would be less of an impact to the</p>	<p>During construction this alternative would have an adverse minor impact due to inconveniences related to construction activities. Upon the completion of construction this alternative would have a beneficial minor impact related to improvements associated with the proposed parking area. A permanent universally accessible restroom and drinking fountain and accessible picnic tables would be included with the proposed parking area. These additions would allow for the increasing visitation to continue to use this area, and by being dispersed in multiple locations there would be less of an impact to the</p>

	<p>the inside of the house. The ranch house would continue to be impacted by blowing dirt, vehicle exhaust, and vehicle noise from the current parking area. The sheet flooding and erosion in the current parking area would continue along with the erosion and down cutting in the 2 washes along the Frijole Ranch road.</p>	<p>historic district. Large picnicking groups would have other options than to use the grounds of the ranch house and smaller groups may have the opportunity to experience the quiet solitude of the ranch. Visitors would have a quality experience in that restrooms and drinking water would be available in this area. The erosion related to the sheet flooding of the current parking area and in the 2 washes along the Frijole Ranch road would be alleviated. Moving the barn to the south side of the current pasture would remove the need for large trucks to access the current parking area in order to deliver feed and supplies. The current barn would be available for use by interpretive staff for school groups and other events. Horses and mules could still use the entire pasture and may visit the historic district, but they would no longer be watered and fed in this area. Livestock have always been a part of the historic landscape. Over the long-term, this alternative would have a beneficial minor impact to recreation resources and visitor use.</p>	<p>historic district. Large picnicking groups would have other options than to use the ground of the ranch house and smaller groups may have the opportunity to experience the quiet solitude of the ranch. Visitors would have a quality experience in that restrooms and drinking water would be available in this area. The erosion related to the sheet flooding of the current parking area and in the 2 washes along the Frijole Ranch road would be alleviated. Moving the park's horse and mule operation to a disturbed area along an abandoned road south of U.S. Highway 62/180 would remove the impacts associated with large trucks accessing the area near the historic district to deliver feed and supplies. Horses and mules would not need to access the Frijole Ranch road while they are being loaded with supplies and equipment before taking them out to work. Placing the horse and mule operations closer to park maintenance and housing areas would place them within eye sight of employees which may provide more security to a park asset, and be more convenient for staff to feed, water, and provide for. Over the long-term this alternative would have a beneficial minor impact to recreation and visitor use.</p>
Special Status Species	<p>The no-action alternative would have no additional impact to special status species beyond those currently occurring. None of the proposed projects would be implemented. Continued erosion of the banks of the washes and continued flushing of nitrates from the horse/ mule corral during heavy</p>	<p>Actions undertaken in this alternative would produce minimal additional impact to special status species beyond those currently occurring. No Federally listed threatened or endangered species are known to exist in the Frijole Ranch area or any of the proposed project sites. Two species of concern</p>	<p>No Federally listed threatened or endangered species are known to exist in the Frijole Ranch area or any of the proposed project sites. The proposed projects would correct erosion in the washes and nitrates associated with the current horse/ mule corral would eventually cease flushing downstream</p>

	rain events would continue to impact the area downstream. The result would be an adverse negligible impact.	listed on the TX Parks and Wildlife Department County List of Texas Special Species for Culberson County could exist in this area. Erosion of the banks of the washes would be corrected but there would continue to be flushing of nitrates from the horse/ mule corral during heavy rain events causing impacts to the area downstream. Impacts under this proposed alternative would be adverse and negligible.	during heavy rain events. As the current pasture becomes revegetated and returns to normal conditions, special status species should reoccupy the area and losses versus gains of potential habitat area should effectively balance out. Impacts associated with this alternative would be adverse and negligible to minor.
Vegetation	There would be an adverse negligible impact to vegetation with the no action alternative. Vegetation would continue to be impacted by overflow parking by park visitors during very busy days along the edges of the parking area and the Frijole Ranch road.	During construction vegetation would experience an adverse minor impact. Most proposed project areas have already been disturbed by prior ranching activities. Vegetation in proposed project areas would be removed during construction. The western portion of the current parking area (0.07acre) would be recontoured and revegetated to alleviate the sheet flooding and erosion. The proposed universally accessible path in the historic district would be constructed similar to the trail to Manzanita Spring i.e. natural appearing stabilized soil surface and any damage to vegetation would be mitigated by revegetation with like flora to blend with the displaced cultural landscape. All project areas would be revegetated after construction and monitored for 2 years to ensure that non-native invasive species do not become established in these disturbed areas. The proposed barn to be located at the south side of the current pasture would require an area to be cleared for a concrete slab and utilities including electricity and water would be brought to the site.	During construction vegetation would experience an adverse minor impact. Most proposed project areas have already been disturbed by prior ranching activities. Vegetation in proposed project areas would be removed during construction. The western portion of the current parking area (0.07 acre) would be recontoured and revegetated to alleviate the sheet flooding and erosion. The proposed universally accessible path in the historic district would be constructed similar to the trail to Manzanita Spring i.e. natural appearing stabilized soil surface and any damage to vegetation would be mitigated by revegetation with like flora to blend with the displaced cultural landscape. All project areas would be revegetated after construction and monitored for 2 years to ensure that non-native invasive species do not become established in these disturbed areas. The proposed barn and pasture would be located south of U.S. Highway 62/180 along an abandoned road. The approximately 138 acre pasture would be divided into 2 pastures of 77 and 61 acre units. This

		<p>Parking for 2-4 vehicles and an area that would allow a large truck to safely turn around would be included. For the long-term the impact to vegetation would be adverse and minor. All disturbed areas would be revegetated with local flora and monitored for 2 years to ensure that non-native species did not proliferate.</p>	<p>would allow the park to control grazing impacts by alternating livestock between the two pastures. An area for the concrete slab for the proposed barn and corral would need to be cleared and utilities including electricity and water would be brought to the site. Parking for 2-4 vehicles and an area that would allow a large truck to safely turn around would be included. For the long-term the impact to vegetation would be adverse and minor. All disturbed areas would be revegetated with local flora and monitored for 2 years to ensure that non-native species did not proliferate.</p>
<p>Cultural Landscapes</p>	<p>Historic integrity of the district would not be reduced, but overall condition would be lowered from good to fair due to uncorrected erosion and water quality issues. NEPA: Adverse direct long-term moderate impact.</p>	<p>To retain historic integrity of the district, impacts of new development elements within and adjacent to the district need to be balanced with retaining and re-introducing historic elements. Overall, this alternative results in adverse and beneficial impacts balancing out, with no resulting net loss of historic integrity. There would be an overall improvement in landscape condition due to fixing drainage/erosion problems. NEPA: Adverse and Beneficial direct long-term moderate impacts. Section 106 Overall <i>No Adverse Effect</i> because adverse elements of the project are balanced by beneficial elements.</p>	<p>To retain historic integrity of the district, impacts of new development elements within and adjacent to the district need to be balanced with retaining and re-introducing historic elements. Overall, this alternative results in adverse and beneficial impacts somewhat balancing out. However, there would be some loss of historic integrity within the district due to relocation of the stock operation. There would be an overall improvement in landscape condition due to fixing drainage/ erosion problems. NEPA: Adverse and beneficial direct long-term moderate impacts. Section 106: Overall <i>No Adverse Effect</i> because adverse elements of the project are somewhat balanced by beneficial elements.</p>

Identification of the Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which guides the Council on Environmental

Quality (CEQ). The CEQ provides direction that “[t]he environmentally preferable alternative is the alternative that would promote the national environmental policy as expressed in NEPA’s §101:

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life’s amenities; and
- enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative A, no-action, only minimally meets the seven previously mentioned evaluation factors. The park would continue to be in violation of DO 83: Public Health, B.5 and B.6: by continuing to use temporary chemical toilets. These toilets are not universally accessible and are expensive to properly maintain. Alternative A does not address the sheet flooding and associated deposition of debris and gravels of the current Frijole Ranch parking area and the down cutting related to the double culverts during heavy rain events causing increased erosion in the wash beneath the horse/ mule feeding area. The horse/ mule feeding area would continue to be a source of increased nitrate flushing into the wash at this location during heavy rain events. By not offering an alternative to large picnicking groups, the park would not be achieving balance between population and resource use. If another pleasant location were available for picnickers then there may be fewer groups dominating the grounds around the ranch house and other visitors would more likely be able to experience the quiet solitude of the Frijole Ranch environment.

Alternative B addresses many of these seven evaluation factors. By providing a permanent universally accessible restroom and drinking fountain and an alternative area for families and large groups to picnic, the park is assuring for all generations and populations a safe, healthful, productive, esthetically, and culturally pleasing surroundings. Providing these services would help to disperse the focus of the visitation and spreads the impacts associated with increasing numbers of visitors to this special resource. The trail to Manzanita Spring and the footpath to the ranch house yard have previously been made wheelchair accessible. It is one of the few areas within the park that could be adapted for universal accessibility. Families with small children, school groups, and mobility challenged populations would be able to have expanded opportunities for experiences including hiking on universally accessible trails, visiting a historic ranch house, exploring the yard around the house and associated orchard, and enjoy the solitude and quiet while picnicking in an area with potable water and a universally accessible restroom before continuing on their way. The restroom, a SST – Sweet Smelling Toilet, would be more pleasant than a temporary chemical toilet with less objectionable smell and would require less frequent maintenance and pumping. By moving the horse/ mule operation to the south side of the current corral, only the area where the concrete slab for the prefabricated barn

and the area immediately surrounding the barn would need to be impacted. Utilities including electricity and water would need to be brought to the site. The existing corral is already fenced and is currently in use. The new location for the barn would continue to be accessible from the Frijole Ranch road and large trucks delivering feed and supplies would be provided with a space large enough to safely turn around. The nitrates that currently flush into the wash from the present horse/ mule feeding area would be lessened. Although the overall amount of acres impacted by Alternatives B and C is similar, under Alternative B, the current pasture area would remain impacted; however with Alternative C, a new pasture area would be created while the previous pasture would be allowed to recover and would no longer be in use. Alternative B is the environmentally preferred alternative because there would be fewer new impacts.

Alternative C addresses many of the seven evaluation factors. By providing a permanent universally accessible restroom and drinking fountain and alternative areas for families and large groups to picnic the park is assuring for all generations and populations, a safe, healthful productive and esthetically and culturally pleasing surroundings. Providing these services would help to disperse the focus of the visitation and spreads the impacts of increasing numbers of visitors to this special resource. The trail to Manzanita Spring and the footpath to the ranch house yard have previously been made wheelchair accessible. It is one of the few areas within the park that could be adapted in this way. Families with small children, school groups, and mobility challenged populations would be able to have expanded opportunities for experiences including hiking on universally accessible trails, visiting a historic ranch house, exploring the yard around the house and associated orchard, and enjoy the solitude and quiet while picnicking in an area with potable water and a universally accessible restroom before continuing on their way. The restroom, a SST – Sweet Smelling Toilet, would be more pleasant than a temporary chemical toilet with less objectionable smell and would require less frequent maintenance and pumping. Moving the horse/ mule operation to a location south of U.S. Hwy 62/180 would require the construction of new fence line in addition to a concrete slab for the prefabricated barn. Utilities including water and electricity would need to be brought to the site. A new location would allow the opportunity to divide the corral into two areas so that impacts to the pasture due to grazing could be managed. Having the park's administrative horse/ mule operations away from the public may better protect the park's stock from contact with malicious visitors or visitor's horses. On very few occasions, the current barn has been broken into and tack and saddles were stolen. Locating the barn within eye sight of the park's housing area may provide some added protection to park assets. The nitrates that currently flush into the wash from the present horse/ mule feeding area would eventually cease.

No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in this document. Both Alternative B and Alternative C meet the purpose and need for the project and the project objectives. Alternative B is the environmentally preferred alternative, but Alternative C could provide the park with more options in managing the horse/ mule operations and preserves scenic views of the mountains from the highway by placing the proposed barn south of the highway near other park development. The proposed corral would be situated so that it could be divided into two pastures thus allowing alternate grazing of each pasture while allowing the unused pasture time to recover from grazing activity. The corral would be within eye sight of the park housing area which could provide more security to park assets and require less time and resources to reach the corral to feed and maintain the horse/ mule operation. The proposed corral area would have space to allow for turning radius of large trucks which would facilitate in the collection and removal of excess manure. Having this operation away from the historic district would remove the negative impacts of flies. Moving the horse/ mule corral away from the historic district would cause a loss of historic integrity. Livestock was always a part of

the Smith Family Ranch and the Guadalupe Ranch. Alternative C would provide the park with several necessary options. But, the park believes that the flexibility that the proposed site south of Hwy 62/180 would be valuable enough to make Alternative C the preferred alternative. For the remainder of the document, Alternative C will be referred to as the preferred alternative.

ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the potential environmental consequences, or impacts, that would occur as a result of implementing the proposed project. Topics analyzed in this chapter include topography, geology, and soil resources, recreation resources and visitor experiences, special status species, vegetation, and cultural landscapes. Direct, indirect, and cumulative effects, as well as impairment are analyzed for each resource topic carried forward. Potential impacts are described in terms of type, context, duration, and intensity. General definitions are defined as follows, while more specific impact thresholds are given for each resource at the beginning of each resource section.

- **Type** describes the classification of the impact as either beneficial or adverse, direct or indirect:
 - *Beneficial*: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.
 - *Adverse*: A change that moves the resource away from a desired condition or detracts from its appearance or condition.
 - *Direct*: An effect that is caused by an action and occurs in the same time and place.
 - *Indirect*: An effect that is caused by an action but is later in time or farther removed in distance, but is still reasonably foreseeable.
- **Context** describes the area or location in which the impact will occur. Are the effects site-specific, local, regional, or even broader?
- **Duration** describes the length of time an effect will occur, either short-term or long-term:
 - *Short-term* impacts generally last only during construction, and the resources resume their pre-construction conditions following construction.
 - *Long-term* impacts last beyond the construction period, and the resources may not resume their pre-construction conditions for a longer period of time following construction.
- **Intensity** describes the degree, level, or strength of an impact. For this analysis, intensity has been categorized into negligible, minor, moderate, and major. Because definitions of intensity vary by resource topic, intensity definitions are provided separately for each impact topic analyzed in this environmental assessment.

Cumulative Effects

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 et seq.), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for actions resulting from each alternative.

Cumulative impacts were determined by combining the impacts of each alternative under consideration with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Guadalupe Mountains National Park and, if applicable, the surrounding region. The geographic scope for this analysis includes elements mostly within the park's boundaries, while the temporal scope

includes projects within a range of approximately ten years. Given this, the following projects were identified for the purpose of conducting the cumulative effects analysis, listed from past to future:

Frijole Ranch Area Past Projects:

GUMO-2009-13	Replacement in kind of cherry tree in Frijole Ranch Orchard
GUMO-2007-02	Foothills RX Burn (prescribed burn that occurred near Frijole Ranch in a portion of the area proposed for the picnic/parking area)
GUMO-2005-08	Replacement of roof on Frijole Ranch House
GUMO-2005-09	Installation of wayside exhibit at Manzanita Springs
GUMO-2005-19	Reconstruction of the historic orchard at Frijole Ranch
GUMO-2004-01	Culvert repair on Frijole Ranch Road
GUMO-2002-02	Tree maintenance at Frijole Ranch
GUMO-2002-06	Exterior surface maintenance of Frijole Ranch
GUMO-1998-02	Frijole Ranch handrail installation
GUMO-1998-03	Frijole Ranch crack monitoring
GUMO-1998-05	Frijole Ranch emergency roof repair
GUMO-1998-06	Frijole Ranch tree removal

Frijole Ranch Area Future Projects:

GUMO-2009-10	Replacement in kind of roof on Frijole Ranch Bunk House and Bath House (will occur summer or fall of 2009)
GUMO-20XX-XX	Frijole School House foundation and floor stabilization and repair
GUMO-20XX-XX	Re-create interpretive Smith Family vegetable garden
GUMO-20XX-XX	Develop ranch implement outdoor interpretive area
GUMO-20XX-XX	Visual restoration of historic water tower

The Proposed Alternative in the GMP discusses creating a low elevation, hike-in, campground approximately one to two miles away from Frijole Ranch; since the GMP is in draft form, this has not yet been approved and no funding has been obligated; it is unknown when, where and if this project will occur. If implemented, 1-2 vehicles could potentially park overnight in the proposed parking area. This should still provide ample parking for Frijole Ranch day users and picnickers.

Impairment

Management Policies, 2006 require analysis of potential effects to determine whether or not actions would impair park resources (NPS 2006). The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values.

Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values. An impact to any park resource or value may constitute an

impairment, but an impact would be more likely to constitute an impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is:

1. necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
2. key to the natural or cultural integrity of the park; or
3. identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park. A determination on impairment is made in the Conclusion section for each of the resource topics carried forward in this chapter.

Unacceptable Impacts

The impact threshold at which impairment occurs is not always readily apparent. Therefore, the Park Service applies a standard that offers greater assurance that impairment will not occur by avoiding unacceptable impacts. These are impacts that fall short of impairment, but are still not acceptable within a particular park's environment. Park managers must not allow uses that would cause unacceptable impacts; they must evaluate existing or proposed uses and determine whether the associated impacts on park resources and values are acceptable.

Virtually every form of human activity that takes place within a park has some degree of effect on park resources or values, but that does not mean the impact is unacceptable or that a particular use must be disallowed. Therefore, for the purposes of these policies, unacceptable impacts are impacts that, individually or cumulatively, would

- be inconsistent with a park's purposes or values, or
- impede the attainment of a park's desired future conditions for natural and cultural resources as identified through the park's planning process, or
- create an unsafe or unhealthful environment for visitors or employees, or
- diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or
- unreasonably interfere with
 - park programs or activities, or
 - an appropriate use, or
 - the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park.
 - NPS concessioner or contractor operations or services (NPS 2006).

In accordance with Management Policies, park managers must not allow uses that would cause unacceptable impacts to park resources. To determine if unacceptable impact could occur to the resources and values of Guadalupe Mountains National Park, the impacts of proposed actions in this environmental assessment were evaluated based on the above criteria. A determination on unacceptable impacts is made in the Conclusion section for each of the physical resource topics carried forward in this chapter.

Topography, Geology, and Soil Resources

Intensity Level Definitions

Guadalupe Mountains National Park was established “In order to preserve in public ownership an area in the state of Texas possessing outstanding geological values together with scenic and other natural values of great significance”. The methodology used for assessing impacts to topography, geology and soil resources is based on how each alternative would affect these resources. The thresholds for this impact assessment are as follows:

Topography, Geology, and Soil Resources Impact Thresholds

Negligible: The impact would be at the lowest levels of detection and would cause very little or no physical disturbance /removal, compaction, or increased erosion, when compared with current conditions.

Minor: The impact would be slight but detectable in some areas, with few perceptible effects of physical disturbance /removal, compaction, or increased erosion of soils.

Moderate: The impact would be readily apparent in some areas and would have measurable effects in terms of physical disturbance /removal, compaction, or increased erosion.

Major: The impact would be readily apparent in several areas and would have severe effects in terms of physical disturbance /removal, compaction, or increased erosion.

Impairment: A major, adverse impact to a resource or value whose conservation is
(1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
(2) key to the natural or cultural integrity of the park; or
(3) identified as a goal in the park’s General Management Plan or other relevant NPS planning documents.

Impacts of Alternative A (No-Action Alternative)

Approximately 14,000-15,000 visitors per year park their vehicles in the Frijole Ranch parking area to visit the historic district, cultural museum, and access the Frijole, Foothills, and Smith Spring trailhead. The current parking area experiences sheet flooding during heavy rain events with resulting uncontrolled erosion and deposition of debris and gravel. Peak visitation events often force visitors to park on the sides of the access road and on ungraded areas adjacent to the parking lot which causes both soil erosion and compaction. The Frijole Ranch access road crosses two drainage channels, or washes, that carry large volumes of runoff during heavy rain events. The road crosses both washes via a pair of side-by-side culverts. This configuration causes debris accumulations to impede normal flow through the washes and cause water to back up and occasionally overtop the road grade. One set located approximately ½ mile north of Hwy 62/180 on the Frijole Ranch road and the second set at the wash where the Frijole Ranch road enters the current Frijole Ranch parking area, would continue to impede water flow by acting as a levee preventing natural flows from flushing through each wash during heavy rain events, as well as eroding the road embankments when runoff overtops the grade. The culvert adjacent to the current Frijole Ranch parking area experiences severe channel down cutting at the downstream outlet. The waterfall action on the downstream side of the culvert would continue to erode the wash beneath the park’s current horse/mule feeding area. During flood flows the culverts could become compromised and ultimately could fail (NPS 2008a). Total culvert failure could potentially result in severe downstream erosion, topographic alteration of the cultural landscape, loss of road infrastructure, and temporary loss of vehicle access to the Frijole Ranch Historic District. Stock crossing the wash between the feeding area and the

current pasture would continue to cause accelerated erosion of the banks. Loss and compaction of soils in the current 131 acre pasture would continue.

The no-action alternative would continue to have *adverse local long-term minor to moderate impacts* on the topography, geology and soil resources in the Frijole Ranch area.

Cumulative Effects: An area west and north of the Frijole Ranch Historic District was treated with prescribed fire in Jan., 2009, and areas to the east and south are scheduled for similar treatment in the near future (NPS 2005c). Burned areas have a general tendency to erode during heavy rainfall events, but effectively managed prescribed burns usually recover and revegetate quickly, thus preventing significant loss of topsoils. In addition, appropriate use of fire should return the area impacted by previous ranching operations to the natural grassland habitat that originally prevailed there, thereby supporting and maintaining healthy soil structure. However, maintenance of the park's horse/mule operation within the same area would compromise the re-establishment of grasslands within that 131 acre footprint. Cumulatively, this alternative would have an *adverse local short- and long-term minor to moderate effect* on topography, geology and soil resources when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: The no-action alternative would result in minor to moderate effects depending on the amount of rainfall to the area. Visitor functions in the project area would not change. This alternative may have an *adverse local long-term minor to moderate impact* on the topography, geology, and soil resources due to the continued impacts of sheet flooding and erosion during heavy rain events in this general area that would not be improved. Because there would be no major, adverse impacts to the topography, geology, and soils, there would be no impairment of park resources or values.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Impacts of Alternative B - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, keep the park's administrative horse/ mule operation on the same footprint, but build a prefabricated barn on a concrete slab at the south side of the current pasture, and construct an accessible path through the orchard

Implementation of Alternative B would create a new parking area in an area previously disturbed by historic ranching operations. The proposed site disturbance is estimated to be approximately 1.25 acres to allow for 18-22 passenger vehicles and 2-4 spaces for large vehicles such as RVs to park including enough space for a safe turning radius. In addition a universally accessible restroom and drinking fountain would be included as a part of this construction along with 2-4 universally accessible shade covered single family picnic areas and one group picnic area would be interspersed along the edge of the proposed parking area. The site is on a gentle slope immediately next to the Frijole Ranch road. An area would need to be prepared to set the vault of the proposed restroom facility and water would need to be brought to the site from the waterline buried along the side of the Frijole Ranch road to service the drinking fountain. All other grading and soil manipulation would be along the immediate surface of the proposed site. A portion (0.07 acre) of the current Frijole Ranch parking area would be graded to redirect drainage and revegetated to alleviate the sheet flooding problem and consequent erosion. The overhead utility service would be buried at this time to more closely evoke the historic scene.

The temporary disturbed margins of the proposed parking/ picnic area would be revegetated and landscaped to blend with the natural environment once construction had been completed. By providing a parking area that is large enough to support the visitation to the Frijole Ranch Historic District area, including enough space for larger vehicles to turn around, the park is less likely to experience visitors parking their vehicles alongside the Frijole Ranch road or on soils and vegetation immediately next to the current parking area. Parking in undesignated areas causes increased erosion, and impacts to the historic district due to loose soils blowing into that area. Construction of facilities at the proposed parking/picnic area would result in compaction and covering of soils in a relatively small area and slight modification of the original topography. Moving the horse/ mule operation away from the historic district would remove the need to drive large trucks delivering feed and supplies from this inadequately-sized parking area and reduce erosion on the banks of the wash where livestock currently cross. Impacts to the topography, geology, and soils would be *adverse and beneficial local long-term and minor*.

The topography, geology and soils of the location where the proposed prefabricated barn on slab would be constructed on the southwest edge of the existing corral would be impacted. The area would include the installation of a concrete slab, graveled vehicle access, parking for 2-4 vehicles and sufficient space for a large truck to turn around. Utilities including electricity and water would need to be brought to the site. Both utilities exist along the Frijole Ranch road. The site would need to be leveled and trenches installed for utility services. The surrounding area would be revegetated following construction disturbance to prevent erosion. Impacts to the topography, geology, and soils would be *adverse local short- and long-term negligible*.

Twin metal culverts in each of the two washes on the Frijole Ranch road would be removed and replaced with concrete box culverts that are adequate to carry large volumes of runoff from heavy rainfall events. Construction of appropriately designed box culverts fitted to local channel gradient and size would reduce channel and bank erosion in the Frijole Ranch Historic District and help to re-establish natural runoff velocities and volumes during high rainfall events. Impacts to the topography, geology, and soils would be *beneficial local long-term minor*.

Cumulative Effects: This alternative would produce both *adverse and beneficial local long-term negligible to minor impacts* to soils and topography in three areas totaling less than 2 acres. An area west and north of the Frijole Ranch Historic District was treated with prescribed fire in Jan., 2009, and areas to the east and south are scheduled for similar treatment in the near future (NPS 2005c). Burned areas have a general tendency to erode during heavy rainfall events, but effectively managed prescribed burns usually recover and revegetate quickly, thus preventing significant loss of topsoils. In addition, appropriate use of fire should return the area impacted by previous ranching operations to the natural grassland habitat that originally prevailed there, thereby supporting and maintaining healthy soil structure. However, maintenance of the park's horse/mule operation within the same area would prevent the re-establishment of grasslands and soil health within that 131 acre footprint. Cumulatively, this alternative would have an *adverse local short- and long-term minor to moderate effect* on topography, geology and soil resources when considered with other past, present, and reasonably foreseeable future actions. No additional actions are planned in the vicinity. Cumulatively, this would have an *adverse local long-term minor effect* on topography, geology and soil resources when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: Under the Alternative B, the proposed actions would have an *adverse and beneficial local long-term minor impact* to the topography, geology, and soils. Because there would be no major, adverse impacts to the topography, geology, and soils, there would be no impairment of park resources or values.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006

Impacts of Alternative C – Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, relocate the park’s administrative horse/ mule operation to the south side of U.S. Highway 62/180, and construct an accessible path through the orchard (Preferred Alternative).

Implementation of Alternative C would create a new parking area in an area previously disturbed by historic ranching operations. The proposed site disturbance is estimated to be approximately 1.25 acres to allow for 18-22 passenger vehicles and 2-4 spaces for large vehicles such as RVs to park including enough space for a safe turning radius. In addition a universally accessible restroom and drinking fountain would be included as a part of this construction along with 2-4 universally accessible shade covered single family picnic area and one group picnic area would be interspersed along the edge of the proposed parking area. The site is on a gentle slope and immediately next to the Frijole Ranch road. An area would need to be prepared to set the vault of the proposed restroom facility and water would need to be brought to the site from the waterline buried along the side of the Frijole Ranch road to service the drinking fountain. All other grading and soil manipulation would be along the immediate surface of the proposed site. A portion (0.07 acre) of the current Frijole Ranch parking area would be graded to redirect drainage and revegetated to alleviate the sheet flooding problem and consequent erosion. The overhead utility service would be buried at this time to more closely evoke the historic scene. The temporarily disturbed margins of the proposed parking/picnic area would be revegetated and landscaped to blend with the natural environment once construction had been completed. By providing a parking area that is large enough to support the visitation to the Frijole Ranch Historic District area, including enough space for larger vehicles to turn around, the park is less likely to experience visitors parking their vehicles alongside the Frijole Ranch road or on soils and vegetation immediately next to the current parking area. Parking in undesignated areas causes increased erosion, and impacts to the historic district due to loose soils blowing into that area. Construction of facilities at the proposed parking/picnic area would result in compaction and covering of soils in a relatively small area and slight modification of the original topography. Moving the horse/ mule operation away from the historic district would remove the need to drive large trucks delivering feed and supplies from this inadequately-sized parking area and reduce erosion on the banks of the wash where livestock currently cross. Impacts to the topography, geology, and soils would be *adverse and beneficial local long-term and negligible*.

The topography, geology and soils of the location where the proposed prefabricated barn on slab would be constructed along with fence installation for approximately 138 acres on the south side of U.S. Highway 62/180 would be impacted. A concrete structure would be placed near the barn to collect manure from the corrals to later be transported out of the park. An area would be impacted by the construction of prefabricated barn on concrete slab. Parking for 2-4 vehicles with enough space for a large truck to turn around would be next to the barn. Utilities including electricity and water would need to be brought to the site along the current abandoned road. The site where the proposed barn would be constructed would need to be leveled and a trench installed for utility services. One utility pole would be to be installed next to the barn to support electrical service. The surrounding area would be revegetated following construction disturbance to prevent erosion. Impacts to the topography, geology, and soils would be *adverse and beneficial local long-term and minor*.

Twin metal culverts in each of the two washes on the Frijole Ranch road would be removed and replaced with concrete box culverts that are adequate to carry large volumes of runoff from heavy rainfall events. Construction of appropriately designed box culverts fitted to local channel gradient and size would reduce channel and bank erosion in the Frijole Ranch Historic District and help to re-establish natural runoff velocities and volumes during high rainfall events. Impacts to the topography, geology, and soils would be *beneficial local long-term minor*.

Cumulative Effects: This alternative would produce negligible adverse and beneficial impacts to soils and topography in three areas totaling less than 2 acres. Negative impacts to soils and topography would cease within the current 131 acre pasture for the park's horse/mule operation. The proposed 138 acre pasture area under this alternative is located within areas previously disturbed by ranching activities, but recovery of that area would be interrupted by the return of stock to the area. No additional actions are planned in the vicinity. This alternative would have an *adverse and beneficial local long-term minor* effect on topography, geology and soil resources when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: Under the Alternative C, the proposed actions would have an *adverse and beneficial local long-term minor impact* to the topography, geology, and soils. Because there would be no major, adverse impacts to the topography, geology, and soils, there would be no impairment of park resources or values.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies, 2006*.

Recreation Resources and Visitor Experience

Intensity Level Definitions

The Frijole Ranch Historic District serves to interpret ranching history of the area for the public and to provide parking for a universally accessible trailhead. This hiking trail is one of the few in the park that is accessible to most populations regardless of ability and very popular with families that have small children. The methodology used for assessing impacts to recreation resources and visitor experience is based on how a new parking area and moving the park's horse and mule operation would affect the visitor, particularly with regards to the visitors' enjoyment of the park's primary cultural resource area. The thresholds for this impact assessment are as follows:

Recreation Resources and Visitor Experiences Impact Thresholds

Negligible: The impact would be barely detectable and/or would affect few visitors.

Minor: The impact would be slight but detectable, and/or would affect some visitors.

Moderate: The impact would be readily apparent and/or would affect many visitors.

Major: The impact would be severely adverse or exceptionally beneficial and/or would affect the majority of visitors.

Impairment: A major, adverse impact to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;

(2) key to the natural or cultural integrity of the park; or

(3) identified as a goal in the park's General Management Plan or other relevant NPS planning documents.

Impacts of Alternative A (No-Action Alternative)

The no-action alternative would continue to have minor to moderate impacts on recreation resources and visitor experience because the conditions and accommodations around the existing Frijole Ranch parking area and the park's administrative horse/ mule operation would remain unchanged. Larger SUVs and RVs would continue to have difficulty turning around and parking in the Frijole Ranch parking area. Guadalupe Mountains National Park would continue to be in violation of Directors Order #83: Public Health, B.5 and B.6: chemical toilets are for temporary use only, because they require frequent service and pumping to prevent objectionable odors. Costs associated with maintenance and frequent pumping of the chemical toilet would continue to delay or prevent other park projects or maintenance efforts. Some visitors would be prevented from having a quality NPS visitor experience if a functional universally accessible restroom is not provided. The Frijole Ranch Historic District would continue to be minimally accessible to mobility challenged individuals. The designated accessible parking space in the current parking area consists of loose gravel and is not provided with a hardened surface, or a hardened smooth surfaced connection with the accessible portion of the Smith Spring Trail that goes to Manzanita Spring. Although a universally accessible path exists from the current parking area to the back door of the ranch house, the inside of the ranch house would remain minimally accessible to wheelchair users and the majority of the yard and out buildings would continue to be non-accessible.

Visitors to the Frijole Ranch Historic District would continue to experience blowing dust and dirt from the parking area and noise and exhaust from vehicles passing in and out of the parking area in close proximity to the ranch house. Large trucks delivering feed and supplies or the routine presence of the park stock handler's truck and horse trailer present an unnecessary safety hazard to pedestrian visitors as they continue to experience difficulty when negotiating around parked vehicles and attempting to turn around. Conflicts would continue when large vocal picnic groups dominate the ranch house yard while small groups of visitors are forced to maneuver around the large group and are thereby prevented from experiencing the quiet solitude of the ranch. Inconveniences resulting from sheet flooding in the current Frijole Ranch parking area would continue.

The presence of overhead utility services would continue to interrupt the scenic qualities of the historic district and the surrounding landscape. Inconveniences and intermittent road closures resulting from flooding and erosion associated with the two double culverts located along the Frijole Ranch road would continue. Overall, impacts to recreational resources and visitor experience resulting from this alternative would be *adverse local long-term minor to moderate*.

Cumulative Effects: The Frijole Ranch parking area would continue to be undersized and not able to accommodate the current level of visitation to the Frijole Ranch Historic District, Guadalupe Mountains National Park Cultural Museum, Manzanita Spring, and the Smith Spring, Frijole, and Foothills trailheads. The problems currently experienced at the Frijole Ranch Historic District would continue and could become worse as visitation increases. Considering these past, present, and reasonably foreseeable future actions, cumulative effects to recreation resources and visitor experience would be *adverse local long-term minor to moderate impacts*.

Conclusion: The no-action alternative would provide no changes to the current situation. Park visitors would continue to experience inconvenient situations resulting from increased visitation, erosion disturbances from heavy rainfall, and impacts associated with the park's administrative horse/ mule operation. Park visitors would continue to receive a less than quality National Park

Service experience due to the lack of adequate parking, accessible restroom facilities, and potable water. Mobility challenged visitors would experience facilities inconsistent with ADA standards. There would continue to be incompatible visitor interactions within the historic district. Visitor safety issues resulting from large delivery trucks and stock handling vehicles operating in a high-visitation area would not be effectively resolved. Improper parking and resulting collateral effects would continue to diminish the quality of the visitor experience. This alternative would result in *adverse local long-term minor to moderate impacts* to recreational resources and visitor experience.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Impacts of Alternative B - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, keep the park's administrative horse/ mule operation on the same footprint, but build a prefabricated barn on a concrete slab at the south side of the current pasture, and construct an accessible path through the orchard

Constructing a new parking area that would accommodate 18-22 passenger vehicles, 2-4 RVs or other large vehicles, sufficient turning radius for large vehicles, universally accessible restroom with a drinking fountain, and 2-4 shade covered accessible single table picnic areas and one shade covered accessible multi table group area, would increase visitor's opportunities and allow for the impacts of increased visitation to be dispersed between the Frijole Ranch Historic District and the proposed parking area.

More areas of the Frijole Ranch Historic District would be accessible to mobility challenged individuals allowing for expanded exploration opportunities around the ranch house yard and permitting wheelchair users access to the inside of the ranch house. A universally accessible pathway would be constructed to connect between the accessible parking space and other such pathways within the historic district. For purposes of visitor safety a gate would be placed across the current access road to prevent operation of public vehicles within the pedestrian corridor between the proposed parking/picnic area and the current parking area. A universally accessible restroom with drinking fountain would greatly improve the recreation resources and visitor's experience to this site.

Construction of a prefabricated barn on a concrete slab on the southwest edge of the current corral and moving the park's horse/ mule operation away from the historic district would alleviate some of the large truck and stock handling usage to the historic district as vehicles delivering horse feed and supplies would no longer need access to the Frijole Ranch parking area. The current barn would be cleaned up and made available for school groups to have a place to get out of the weather and to store interpretive supplies for group educational events. On occasion a horse or mule may venture up to the north side of the pasture and be seen as a part of the historic landscape. The constant presence of horse/ mules and the flies and odors associated with animal husbandry would no longer be an active part of the historic district.

Adverse local temporary minor impacts to visitor use and experience would result from construction activities. The project areas are currently used by visitors, and during construction, portions of these areas could be limited to visitor use. Noise and dust from construction activities would also adversely affect visitor use and experience; however all construction-related impacts would be temporary and cease following construction activities.

Visually, the changes to the project area would have *beneficial local long-term minor impacts* on the visitor experience. Less dust and soil would blow into the historic district from the current parking area. Noise and exhaust from automobiles would be removed to a location further away from the historic district. Scenic qualities would be enhanced by burial of the current overhead utility service. More of the natural silence and solitude could be experienced by visitors to the Frijole Ranch. Large groups could be better accommodated with the proposed family and group picnic areas provided along the edge of the proposed parking area. Providing more locations for visitors to use would help to disperse the impact from increasing usage to the Frijole Ranch area. More of the Frijole Ranch would be made accessible to visitors and mobility challenged populations. Universally accessible trails would remain usable to mobility challenged visitors and visitors with small children looking for an easy hike.

Cumulative Effects: Any construction activities have the potential to affect recreation resources and visitor experience. The construction of the parking area would likely have a temporary adverse effect on the visitor experience as a result of noise, dust, and temporary limited use of park facilities. Projects such as road improvements have had or could have a temporary adverse effect on visitor use and experience because of the inconvenience of construction noise, dust, and possible off-limit areas. Ultimately, however, these actions could have a beneficial effect on visitor use and experience because of long-term improvements to the human health and safety aspects of the park; the visual and natural environment; interpretive opportunities; and functionality of the park. Potential improvements to the parking area and historic district would also have a beneficial effect on visitor use and experience. Under this alternative, although visitors may experience some confusion from the construction activity, overall visitor functions in the project area are not expected to change, and past actions have had beneficial impacts on visitor use and experience. Considering these past, present, and reasonably foreseeable future actions, the cumulative effects to recreational resources and visitor experiences would be *beneficial local long-term minor*.

Conclusion: Alternative B would provide the construction of a new parking area. This alternative would have an *adverse local short-term minor impact and a beneficial local long-term minor impact* to recreation resources and visitor experiences. Constructing a new parking area south of the wash where the Frijole Ranch road enters the parking area next to the Frijole Ranch Historic District and west of the Frijole Ranch road would allow the construction of a universally accessible restroom and drinking fountain. The park would be in compliance with Director's Order #83; Public Health, B.5 and B.6: chemical toilets are for temporary use only. RVs and other large vehicles would have access to parking and safe turning radius. Correction of both double culverts with single box culverts to allow these washes to naturally flush during heavy rain events would allow water to pass underneath the road and allow safe passage for visitors and staff. 2-4 universally accessible shade covered single family picnic tables and one universally accessible shade covered group picnic area would be dispersed along the edge of the proposed parking area. A 0.07 acre portion of the current parking area next to the historic district would be graded to alleviate the sheet flooding and revegetated to blend with the natural environment. A larger 0.18 acre portion of the current parking area would be maintained as the historic "Boneyard" which was the location for mechanical maintenance and equipment parking associated with historic ranching operations. Moving the parking area further away from the historic district would reduce or eliminate the current undesirable conditions resulting from blowing dust from the current parking area along with noise and air pollution from vehicles. This would allow visitors to be able to enjoy the solitude and silence that would have been experienced by the original ranch inhabitants.

The horse/ mule operation would remain in the same pasture, but a concrete slab and

prefabricated barn would be constructed on the south side of the pasture. A 2-4 vehicle parking area along with turning radius for stock trailers and large trucks delivering horse feed and supplies. Utilities would be brought to the site originating from the Frijole Ranch road. The current barn would be cleaned up and used for interpretive and educational purposes. Groups of visitors could also use this building as refuge from inclement weather.

Actions described in this alternative would have an *adverse local temporary minor impact* on recreation resources and visitor experience. The changes to the area from this proposed project would have a *beneficial local long-term minor impact* on recreational resources and visitor experience. Cumulatively, this alternative would have a *beneficial local long-term minor impact* to visitor use and experience when combined with other past, present, and reasonably foreseeable future actions would benefit a number of recreation resources and visitor experiences.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Impacts of Alternative C - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, relocate the park's administrative horse/ mule operation to the south side of U.S. Highway 62/180, and construct an accessible path through the orchard (Preferred Alternative)

Constructing a new parking area that would accommodate 18-22 passenger vehicles, 2-4 RVs or other large vehicles, sufficient turning radius for large vehicles, universally accessible restroom with a drinking fountain, and 2-4 shade covered accessible single table picnic areas and one shade covered accessible multi table group area, would increase visitor's opportunities and allow for the impacts of increased visitation to be dispersed between the Frijole Ranch Historic District and the proposed parking area. The sheet flooding and erosion associated with the two double culverts located in the wash at the entrance to the present Frijole Ranch parking area and the wash located ½ mile north of Highway 62/180 along the Frijole Ranch road would be alleviated.

More areas of the Frijole Ranch Historic District would be accessible to mobility challenged individuals allowing for expanded exploration opportunities around the ranch house yard and permitting wheelchair users access to the inside of the ranch house. A universally accessible pathway would be constructed to connect between the accessible parking space and other such pathways within the historic district. For purposes of visitor safety a gate would be placed across the current access road to prevent operation of public vehicles within the pedestrian corridor between the proposed parking/picnic area and the current parking area. A universally accessible restroom with drinking fountain would greatly improve the visitor's experience to this site.

Moving the park's administrative horse/ mule operation to an area south of Hwy 62/180 away from the historic district would alleviate some of the vehicle congestion. Large trucks delivering horse feed and supplies and park stock handling trailers would no longer need access to the Frijole Ranch parking area. An approximately 138 acre area would be fenced with a dividing fence so that grazing could be alternated between the 2 pastures. A prefabricated barn on a concrete slab would be constructed on a north edge of the proposed pasture along an abandoned road. Utilities would be brought to the site along the abandoned road. The current barn would be cleaned up and made accessible for school groups to have a place to shelter from inclement weather and for staff to store interpretive supplies for group educational events.

The presences of horses/ mules, flies and odors associated with animal husbandry would no longer be a part of the historic district.

Adverse local temporary minor impacts to recreation resources and visitor experience would result from construction activities. The project areas are currently used by visitors, and during construction visitor use could be limited in portions of these areas. Noise and dust from construction activities would also adversely affect recreation resources and visitor experience; however all construction-related impacts would be temporary and cease following construction activities.

Visually, the changes to the project area would have *beneficial local long-term minor impacts* on the recreation resources and visitor experience. Less dust and soil would blow into the historic district from the parking area. Noise and exhaust from automobiles would be removed to a location further away from the historic district. Scenic qualities would be enhanced by burial of the current overhead services. More of the natural silence and solitude could be experienced by visitors to the Frijole Ranch Historic District. Large groups could be better accommodated with the proposed family and group picnic areas provided along the edge of the proposed parking area. Providing more locations for visitors to use would help to disperse the impact from increasing usage in the Frijole Ranch area. More of the Frijole Ranch Historic District would be made accessible to visitors and mobility challenged populations. Universally accessible trails would be made more usable to mobility challenged visitors and visitors with small children looking for an easy hike.

Cumulative Effects: Any construction activities have the potential to affect visitor use and experience. Projects such as road improvements and parking lots could have a temporary adverse effect on recreation resources and visitor experience because of the inconvenience of construction noise, dust, and temporary limited use of park facilities. Ultimately, these actions would have a beneficial effect on recreation resources and visitor experience because of long-term improvements to the human health and safety aspects of the park; the visual and natural environment; interpretive opportunities; and functionality of the park. Considering these past, present, and reasonably foreseeable future actions would increase visitors ability to use and enjoy this valuable resource, these actions would produce *beneficial local long-term minor impacts*.

Conclusion: Alternative C would provide the construction of a new parking area. This alternative would have a *beneficial local long-term minor to moderate impact* to recreation resources and visitor experiences. Constructing a new parking area located to the west of the Frijole Ranch road immediately south of the wash where the road enters the parking area next to the Frijole Ranch Historic District would allow for the construction of a universally accessible restroom and drinking fountain. The park would be in compliance with Director's Order #83; Public Heath, B.5 and B.6: chemical toilets are for temporary use only. RVs and other large vehicles would have access to parking and safe turning radius. Replacement of both double culverts with single box culverts to allow these washes to naturally flush during heavy rain events would allow water to pass underneath the road provide safe passage for visitors and staff. 2-4 universally accessible shade covered single family picnic tables and one universally accessible shade covered group picnic area would be dispersed along the edge of the proposed parking area. A portion of the current parking area next to the historic district would be graded to alleviate the sheet flooding and revegetated to blend with the natural environment. A larger portion of the current parking area would be maintained as the historic "Boneyard," which was the location for mechanical maintenance and equipment parking associated with historic ranching operations. Moving the parking area further away from the historic district would

reduce or eliminate the current undesirable conditions resulting from blowing dust from the current parking area along with noise and air pollution from vehicles and traffic. This would allow visitors the opportunity to enjoy the solitude and silence that would have been experienced by the original ranch inhabitants.

Construction disturbances (noise, dust, limited access) would have an *adverse local temporary minor impact* on recreation resources and visitor experience. The changes to the area from this proposed project would have a *beneficial local long-term minor to moderate impact* on visitor experience. Cumulatively, this alternative would have a *beneficial local long-term minor to moderate impact* to recreation resources and visitor experience when combined with other past, present, and reasonably foreseeable future actions would benefit a number of visitor resources.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Special Status Species

Intensity Level Definitions

GUMO staff consulted with Nathan Allan of the United States Fish and Wildlife Service (USFWS) – Austin, TX in January 2008. He confirmed that the Endangered Species List on the web for Culberson County Texas was accurate and could be used as a matter of record. None of the species listed on the USFWS Endangered Species List exist in the proposed project areas (Appendix B). A letter confirming this conversation was sent to the U.S. Fish and Wildlife Service in May 2009 (Appendix D).

The Texas Parks and Wildlife Department Annotated County List of Rare Species was printed on January 24, 2008. The list was last revised on May 2, 2007 (Appendix C). The species included on the Texas Parks and Wildlife Department Annotated County List that may exist in the proposed project areas include the state threatened *Phrynosoma cornutum* Texas Horned Lizard and the species of concern *Streptanthus sparsiflorus* Sparsely-flowered jewelflower.

Guadalupe Mountains National Park received a letter from Julie Wicker – Wildlife Habitat Assessment Program, Texas Parks and Wildlife Department commenting on the scoping letter sent to them on November 30, 2007, requesting input to the proposed projects to move the parking lot next to the Frijole Ranch Historic District and the park's administrative horse/ mule operation. The Texas Parks and Wildlife Department recommended that "Adverse impacts to native vegetation should be minimized using site planning and construction techniques designed to avoid and preserve native trees, shrubs, grasses, forbs, and wetland and aquatic systems. The proposed parking lot and other planned improvements should be located in previously disturbed areas if feasible. Areas temporarily disturbed during construction should be revegetated with site-specific native plant species to control erosion and provide habitat for wildlife." Due to the project still being in the planning stages, the Texas Parks and Wildlife Department was not able to fully analyze the potential impacts of the proposed project and is looking forward to reviewing the Environmental Assessment when it is published.

Special Status Species Impact Thresholds

Negligible: An action could result in a change to a population or individuals of a species or a resource, but the change would be so small that it would not be of any measurable or perceptible consequence.

Minor: An action could result in a change to a population or individuals of a species

or a resource. The change would be small and localized and of little consequence.

Moderate: An action would result in some change to a population or individuals of a species or resource. The change would be measurable and of consequence to the species or resource but more localized.

Major: An action would have a noticeable change to a population or a large number of individuals of a species or resource. The change would be measurable and would result in a severely adverse or major beneficial impact, and possible permanent consequence, upon the species or resource.

Impairment: A major, adverse impact to a resource or value whose conservation is
(1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
(2) key to the natural or cultural integrity of the park; or
(3) identified as a goal in the park's General Management Plan or other relevant NPS planning documents.

Impacts of Alternative A (No-Action Alternative)

The no-action alternative would have no additional impact to Special Status Species. Business would continue as usual. None of the proposed projects would be implemented. No Federally listed threatened or endangered species are known to exist in the Frijole Ranch area or any of the proposed project sites. There are two species of concern listed on the Texas Parks and Wildlife Department County Lists of Texas' Special Species for Culberson County. They include the Texas horned lizard, *Phrynosoma cornutum* and the sparsely-flowered jewelflower, *Streptanthus sparsiflorus* that could exist in this area. Possible impacts to Special Status Species would continue when overflow parking extended to the edges of the current parking area or along the side of the Frijole Ranch Road. The current parking area would continue to experience sheet flooding with resulting erosion and deposition of debris and gravel during heavy rain events. Erosion of the banks of the washes could minimally reduce habitat availability. Nitrates from the horse/ mule operation would continue to flush into the wash during rain events, which could cause changes in downstream habitat.

Cumulative Effects: An area west and north of the Frijole Ranch Historic District was treated with prescribed fire in January 2009, and areas to the east and south are scheduled for similar treatment in the near future (NPS 2005c). Effectively managed prescribed burns usually recover and revegetate quickly, thus preventing significant modification of habitat for Special Status Species. In addition, appropriate use of fire should return the area impacted by previous ranching operations to the natural grassland habitat that originally prevailed there, as well as encourage recruitment of a number of native species. Texas horned lizard, *Phrynosoma cornutum* currently co-exists in the 131 acre pasture, however, maintenance of the park's horse/mule operation within the same area would compromise re-establishment of sparsely-flowered jewelflower, *Streptanthus sparsiflorus*. Cumulatively, this alternative would have an *adverse local short- and long-term negligible effect* on Special Status Species when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: The no-action alternative would result in *adverse local long-term negligible impact* to Special Status Species.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Impacts of Alternative B - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, keep the park's administrative horse/ mule operation on the same footprint, but build a prefabricated barn on a concrete slab at the south side of the current pasture, and construct an accessible path through the orchard

Actions undertaken in this alternative would produce minimal additional impact to Special Status Species beyond those currently occurring. No Federally listed threatened or endangered species are known to exist in the Frijole Ranch area or any of the proposed project sites. There are two species of concern listed on the Texas Parks and Wildlife Department County Lists of Texas' Special Species for Culberson County. They include the Texas horned lizard, *Phrynosoma cornutum* and the sparsely-flowered jewelflower, *Streptanthus sparsiflorus* that could exist in this area. Additional potential habitat in only two areas totaling less than 2 acres would be impacted. Continued erosion of the banks of the washes could minimally reduce habitat availability. Nitrates from the horse/ mule operation would continue to flush into the wash during rain events, which could cause changes in downstream habitat. This alternative would result in *adverse local long-term negligible impact* to Special Status Species.

Cumulative Effects: Cumulative effects are expected to be the same as those described under Alternative A for Special Status Species.

Conclusion: Under this alternative, impacts to Special Status Species would be *adverse local long-term and negligible*.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Impacts of Alternative C - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, relocate the park's administrative horse/ mule operation to the south side of U.S. Highway 62/180 and construct an accessible path through the orchard (Preferred Alternative)

Actions undertaken in this alternative would produce additional impact to Special Status Species beyond those currently occurring. No Federally listed threatened or endangered species are known to exist in the Frijole Ranch area or any of the proposed project sites. There are two species of concern listed on the Texas Parks and Wildlife Department County Lists of Texas' Special Species for Culberson County. They include the Texas horned lizard, *Phrynosoma cornutum* and the sparsely-flowered jewelflower, *Streptanthus sparsiflorus* that could exist in this area. Additional potential habitat in an area approximately 1.25 acre near Frijole Ranch would be adversely impacted. Additionally, 138 acres of the proposed pasture area south of Highway 62-180 would be adversely impacted. This alternative would result in *adverse local long-term minor impact* to Special Status Species.

Cumulative Effects: As the current pasture for the park's horse/mule operation gradually becomes revegetated and returns to more normal conditions, Special Status species should reoccupy the area and losses versus gains of potential habitat area should effectively balance out. Cumulatively, this alternative would have an *adverse local long-term negligible effect* on Special Status Species when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: Under the preferred alternative, impacts to Special Status Species would be

adverse local long-term and negligible to minor.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Vegetation

Intensity Level Definitions

NPS Management Policies, 2006 states that the NPS “will maintain as parts of the natural ecosystems of parks all plants and animals native to park ecosystems. The Service will successfully maintain native plants and animals by minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them.” (NPS 2006). The thresholds for this impact assessment are as follows:

Vegetation Impact Thresholds

Negligible: An action that could result in a change to a population or individuals of a species or a resource, but the change would be so small that it would not be of any measurable or perceptible consequence.

Minor: An action that could result in a change to a population or individuals of a species or a resource. The change would be small and localized and of little consequence.

Moderate: An action that would result in some change to a population or individuals of a species or resource. The change would be measurable and of consequence to the species or resource but more localized.

Major: An action that would have a noticeable change to a population or a large number of individuals of a species or resource. The change would be measurable and would result in a severely adverse or major beneficial impact, and a possible permanent consequence, on the species or resource.

Impairment: A major, adverse impact to a resource or value whose conservation is
(1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
(2) key to the natural or cultural integrity of the park; or
(3) identified as a goal in the park’s General Management Plan or other relevant NPS planning documents.

Impacts of Alternative A (No-Action Alternative)

The no-action alternative would have an *adverse local long-term minor impact* on vegetation in the areas covered by this alternative. Native vegetation would continue to be adversely impacted as a result of use of the current 131 acre corral and pasture area by the park’s horse/mule operations. The current parking area would continue to experience sheet flooding with resulting erosion and deposition of debris and gravel during heavy rain events. Erosion of the banks of the washes could minimally reduce habitat availability. Nitrates from the horse/mule operation would continue to flush into the wash during rain events, which could cause changes to small areas of vegetation downstream. Vegetation along the edges of the current Frijole Ranch parking area and the sides of the Frijole Ranch road may be overrun by vehicles during busy days when visitors’ only option is to park along the edge of the parking area and

along the Frijole Ranch road. Therefore, some impacts to the vegetation would result from visitor overuse of the current Frijole Ranch parking area because it is inadequately sized for current peak visitation loads.

Cumulative Effects: Past, present and reasonably foreseeable future actions to vegetation, would not appreciably change these impacts.

Conclusion: No changes would occur, thus the No-Action Alternative would result in continuation of *adverse local short or long-term negligible to minor impacts*.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Impacts of Alternative B - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, keep the park's administrative horse/ mule operation on the same footprint, but build a prefabricated barn on a concrete slab at the south side of the current pasture, and construct an accessible path through the orchard

The proposed parking area west of the Frijole Ranch road and south of the wash where the road enters the current Frijole Ranch parking area, is in an area disturbed by early ranching operations. Vegetation would be removed including 3 to 10 trees. These trees are not part of the cultural landscape. The proposed parking/ picnic area covering approximate 1.25 acre footprint would be graded and landscaped. An area would need to be prepared to set the vault of the proposed restroom facility and water would need to be brought to the site from the existing water line along the Frijole Ranch road to service the drinking fountain. The overhead utility service would be buried to more closely evoke the historic scene. This would require trenching approximately 150 feet across previously impacted ranching land south of the wash.

A universally accessible path would be constructed that originates at the accessible Manzanita Spring segment of the Smith Spring trail. It would pass through the orchard terminating at the east edge of the yard by the stone gate. A universally accessible trail would be constructed to connect the proposed parking/picnic area with the existing accessible trails into the ranch yard and to the Manzanita/Smith Spring trailhead. The design, fabric, and construction methods would need to be analyzed as part of the Cultural Landscape Assessment of Effect process. Any damage to vegetation would be mitigated by revegetating with like flora to blend with the displaced cultural landscape. The disturbed area would be observed for two years to ensure that non-native invasive species did not proliferate.

The proposed location for the barn at the southwest edge of the current pasture would need to be cleared and prepared for the construction of the concrete slab foundation and installation of the prefabricated barn. Utilities including electricity and water would need to be brought to the site along the existing road. 2-4 parking spaces and an area large enough to allow for the turning radius of a large truck and stock trailers would be graded. Native vegetation would continue to be adversely impacted as a result of use of the current 131 acre corral and pasture area by the park's horse/ mule operations. The impact to vegetation would be *adverse local short-term and minor*. All impacted areas would be revegetated with native flora and monitored for two years to ensure that non-native invasive species did not proliferate in these disturbed areas.

Cumulative Effects: Any construction activities have the potential to effect vegetation in a

proposed project area. However, revegetation efforts using locally abundant plant species would allow these areas to recover in a short amount of time. Considering other past, present, and reasonably foreseeable future actions, along with the ability of vegetation to become relatively quickly reestablished, these actions would have an *adverse local long-term minor impact* to vegetation within the park.

Conclusion: Under Alternative B, vegetation would experience an *adverse local short-term minor impact*. Though vegetation in the proposed project areas would be removed during the construction period, all disturbed areas would be revegetated with local flora and monitored for two years to ensure that non-native invasive species did not proliferate in these disturbed areas.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies*, 2006.

Impacts of Alternative C - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, relocate the park's administrative horse/ mule operation to the south side of U.S. Highway 62/180, and construct an accessible path through the orchard (Preferred Alternative)

The proposed parking area west of the Frijole Ranch road and south of the wash where the road enters the current Frijole Ranch parking area is in an area disturbed by early ranching operations. Vegetation would be removed including 3 to 10 trees. These trees are not part of the cultural landscape. The proposed parking/ picnic area covering an approximate 1.25 acre footprint would be graded and landscaped. An area would need to be prepared to set the vault of the proposed restroom facility and water would need to be brought to the site from the side of the Frijole Ranch road to service the drinking fountain. The overhead utility service would be buried to more closely evoke the historic scene. This would require trenching approximately 150 feet across previously impacted ranching land south of the wash.

A universally accessible path would be constructed that originates at the accessible Manzanita Spring segment of the Smith Spring trail. It would pass through the orchard terminating at the east edge of the yard by the stone gate. A universally accessible trail would be constructed to connect the proposed parking/picnic area with the existing accessible trails into the ranch yard and to the Manzanita/Smith Spring trailhead. The design, fabric, and construction methods would need to be analyzed as part of the Cultural Landscape Assessment of Effect process. Any damage to vegetation would be mitigated by revegetating with like flora to blend with the displaced cultural landscape. The disturbed area would be observed for two years to ensure that non-native invasive species did not proliferate.

The proposed location for the barn and approximately 138 acres of pasture at a location south of Hwy 62/180 in a previously disturbed area along an abandoned road. The proposed pasture would need to be fenced. A divider fence, dividing the pasture into a 77 and 61 acre units, would allow the park to alternate pastures and reduce grazing impacts. The proposed location of the prefabricated barn on slab, parking for 2-4 vehicles and an area large enough to accommodate the turning radius of a large truck and stock trailers would need to be cleared. Utilities including electricity and water would need to be brought to the site along the abandoned road. All disturbed construction areas would be revegetated with local flora and monitored for two years to ensure that non-native invasive species did not proliferate in these disturbed areas.

Cumulative Effects: Past adverse impacts to the current 131 acre pasture, when combined with anticipated impacts to vegetation within the new 138 acre pasture and construction impacts to

approximately 2 acres would cumulatively produce *adverse local short-term minor to moderate impacts* to vegetation. Following abandonment of the current pasture, that area would begin to naturally revegetate and non-native invasive species would be treated and controlled. This would also occur in the proposed construction areas. Therefore, *long-term* cumulative impacts to vegetation would be *adverse local and minor*.

Conclusion: Under the preferred alternative there would be an *adverse local short-term and long-term minor impact* to vegetation. Cumulatively, however, actions under the preferred alternative would produce *adverse local short-term minor to moderate impacts* to vegetation. It is anticipated that the *long-term* cumulative impacts would be *adverse local and minor*.

Implementation of this alternative would not result in any unacceptable impacts and is consistent with §1.4.7.1 of *NPS Management Policies, 2006*.

Cultural Landscapes

Intensity Level Definitions

For the purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

Cultural Landscape Impact Thresholds	
<i>Negligible:</i>	The impact to cultural landscapes is at the lowest levels of detection or barely perceptible and not measurable. For the purposes of Section 106, the determination of effect would be <i>no adverse effect</i> .
<i>Minor:</i>	<p>Adverse impact: The impact to cultural landscapes would be noticeable, but would not alter the integrity of the deposit.</p> <p>Beneficial impact: Character defining features would be preserved in accordance with the <i>Secretary of the Interior's Standards</i>, therefore maintaining the integrity of the cultural landscape. For purposes of Section 106, the determination of effect would be <i>no adverse effect</i>.</p>
<i>Moderate:</i>	<p>Adverse impact: The impact would alter a character defining feature or features of the cultural landscape but would not diminish the integrity of the landscape to the extent that its national register eligibility would be jeopardized. For purposes of Section 106, the determination of effect would be <i>adverse effect</i>.</p> <p>Beneficial impact: The landscape or its features would be rehabilitated in accordance with the <i>Secretary of the Interior's Standards</i>, to make possible a compatible use of the landscape while preserving its character defining features. For purposes of Section 106, the determination of effect would be <i>no adverse effect</i>.</p>
<i>Major:</i>	<p>Adverse impact: The impact would alter a character defining feature(s) of the cultural landscape, diminishing the integrity of the resource to the extent that it would no longer be eligible to be listed on the national register. For purposes of Section 106, the determination of effect would be <i>adverse effect</i>.</p> <p>Beneficial impact: The cultural landscape would be restored in accordance with the <i>Secretary of the Interior's Standards</i> to accurately depict the features and character of a landscape as it appeared during its period of significance. For purposes of Section 106, the determination of effect would be <i>no adverse effect</i>.</p>
<i>Impairment</i>	A major, adverse impact to a resource or value whose conservation is

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| <ul style="list-style-type: none">(1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Guadalupe Mountains National Park;(2) key to the natural or cultural integrity of the park; or(3) identified as a goal in the park's general management plan or other relevant National Park Service planning document. |
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NHPA Section 106 criteria for determining effects:

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association [36 CFR 800.5(a)(1)]

P. Froeschauer-Nelson's 1994 *Cultural Landscape Report* (NPS 1994) for the Frijole Ranch provides a number of treatment recommendations for these three subareas, some of which have been completed. The following are recommendations relevant to the current project:

- Keep roads and parking areas gravel, not asphalt or concrete. Compacted crusher fines are the preferred material for providing an accessible surface that blends with the surrounding gravel surface.
- Signage needs to be kept to a minimum
- Provide specific accessible signed parking spaces within the parking lot just to the west
- Don't add a pathway through the yard across the front (south) of the house, even for accessibility
- Maintain an environment of relative quiet to help visitors gain a sense of the past
- Don't add drinking fountain(s) within the district
- Any additional parking or facility development should occur to the south, near the visitor corral
- Keep livestock on-site
- Don't add any formal visitor facilities in the orchard/garden area

Impacts of Alternative A (No-Action Alternative)

Continued parking lot congestion, noise, and dust would somewhat reduce the overall district historic integrity. Retaining the horse/ mule operation would help maintain historic character and integrity. Continued dysfunctional drainage system and sheet washing would reduce the overall landscape condition.

Cumulative Impacts: This alternative would add to cumulative impacts to historic integrity and landscape condition, as detailed above.

Conclusion: Overall, historic integrity of the district would be somewhat reduced, and overall condition would be lowered from good to fair due to uncorrected erosion and water quality issues. NEPA: *Adverse direct long-term moderate impact.*

Section 106: *Adverse Effect.*

Impacts of Alternative B - Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, keep the park's administrative horse/ mule operation on the same footprint, but build a prefabricated barn on a concrete slab at the south side of the current pasture, and construct an accessible path through the orchard

Alternative B both reduces and enhances the integrity of the historic district, resulting in an overall balancing of these impacts.

While it is not located within the historic district, the proximity, size, and new development footprint of the new parking and picnic area adjacent to the historic district boundary would result in an adverse impact on the historic district. However, the new parking/ picnic area is somewhat screened from the ranch house/ yard area by native vegetation, and moving visitor parking to the new parking/ picnic area is a beneficial impact.

Regrading and revegetating the western portion of the parking lot (0.07 acre) and restoring the natural drainage on the west side of the parking lot would address the drainage issue, and be a beneficial impact. Since the parking lot was somewhat smaller during the latter part of the period of significance, and since the reduced parking area would still function as a utilitarian area, the reduction in the parking lot size would not constitute an adverse impact. Although the horse/ mule barn would be located at the far end of the current pasture, horses and mules would still be present within the historic district and would visit the portion of the pasture adjacent to the yard at Frijole Ranch since they are accustomed to social interaction with visitors. By moving the feeding area away from the wash, the threat of corral wastes entering the drainage would be reduced.

The new accessible pathway developed through the northwest corner of the orchard area goes against CLR recommendations because it introduces new visitor facilities in this historically informal and undeveloped area. However, this alternative calls for a stabilized and unpaved surface like the existing Manzanita Spring Trail, and this surface would not affect the northwest corner of the orchard to the extent of being an adverse impact. Also, this alternative does not call for an accessible pathway in front/ south of the ranch house and this does serve to retain historic integrity. The formalization of an accessible path from the proposed new accessible path that joins the currently accessible trail to Manzanita Spring would also add to the overall level of development and formalization of the historic district landscape. As with the orchard pathway, this one would not result in an adverse effect if constructed using the same type of surface as the existing trail to Manzanita Spring.

Removing the overhead utility line within the district would have no impact either way on historic integrity. This element is noncontributing/ compatible, meaning it does not date to the period of significance but it is compatible with the overall vernacular character of the landscape, and that it can either be retained or removed without impacting integrity.

Cumulative Impacts: This alternative would result in an overall change in landscape character within and surrounding the district. Changes in this alternative would continue the trend over the years to formalize the district, resulting in a gradual erosion of historic landscape character. With some of the parking lot area retained for interpretation and/ or to restore the boneyard feature of the historic ranch, the impact of parking lot changes to historic integrity would be lessened. Impact to historic integrity and loss of historic character would also be lessened by continuing selected restoration and re-introduction of historic elements (e.g. re-introducing water tank, removing lawn) (not part of this project).

Conclusion: To retain historic integrity within the district, impacts of new development elements within and adjacent to the district need to be balanced with retaining and re-introducing historic elements.

Overall, this alternative results in adverse and beneficial impacts balancing out, with no resulting net loss of historic integrity. There would be an overall improvement in landscape condition due to fixing drainage/erosion problems.

NEPA: *Moderate, long-term, direct adverse and beneficial impacts.*

Section 106: Overall *No Adverse Effect*, because adverse elements of the project are balanced by beneficial elements.

Impacts of Alternative C – Move the gravel parking area to the south side of the wash and west side of the Frijole Ranch road, relocate the park’s administrative horse/ mule operation to the south side of U.S. Highway 62/180, and construct an accessible path through the orchard (Preferred Alternative)

Impacts of this alternative would be the same on cultural landscape resources and historic district integrity as Alternative B except that relocation of the horse/ mule operation would remove a contributing element from the district (adverse).

Cumulative Impacts: This alternative would result in an overall change in landscape character within and surrounding the district, to a greater adverse extent than Alternative B. Changes in Alternative C would continue the trend over the years to formalize the district, resulting in a gradual erosion of historic landscape character, but not enough to threaten eligibility. With part of the parking lot open area retained and used for interpretation and/ or to restore the boneyard feature of historic ranch, the impact to historic integrity would be lessened. Impact to historic integrity and loss of historic character would also be lessened by continuing selected restoration and re-introduction of historic elements (e.g. re-introducing water tank, removing lawn) as recommended in the CLR (not part of this project).

Conclusion: To retain historic integrity within the district, impacts of new development elements within and adjacent to the district need to be balanced with retaining and re-introducing historic elements.

Overall, this alternative results in adverse and beneficial impacts somewhat balancing out. There would be an overall improvement in landscape condition due to fixing drainage/ erosion problems.

NEPA: *Moderate, long-term, direct adverse and beneficial impacts.*

Section 106: Overall *No Adverse Effect*, because adverse elements of the project are somewhat balanced by beneficial elements.

CONSULTATION AND COORDINATION

Internal Scoping

Internal scoping was conducted by an interdisciplinary team of professionals from Guadalupe Mountains National Park, the NPS Denver Service Center, NPS Intermountain Regional Office, and most recently, a NPS Cultural Resources team from Santa Fe, NM. During 2007, 2008, and 2009, interdisciplinary team members met multiple times and conducted site visits to discuss the purpose and need for the project, various alternatives, potential environmental impacts, cumulative effects, and possible mitigation measures. The team also gathered background information and discussed public outreach for the project. The proposed parking area was analyzed by Denver Service Center (DSC) staff lead, Adrienne A. Anderson, and suggestions for possible parking layouts were developed during the summer of 2007. Linda Clement met with Jan Wobbenhorst on November 22, 2007 for an explanation of the proposed projects. DSC Cultural Landscape Architect, Joanne Cody, visited the park in the fall of 2008 to develop possible designs for an accessible trail that would leave from the Manzanita and Smith Springs Trail. The Cultural Resources team met with Guadalupe Mountains staff the week of January 26, 2009. Guadalupe Mountains National Park staff internal meetings and site visits occurred throughout 2007, 2008, and 2009. The results of all of these meetings are documented in this environmental assessment.

External Scoping

Public scoping was conducted to inform various agencies and the public about the proposal to consider the relocation of the Frijole Ranch parking lot and the development of limited new facilities at the Frijole Ranch area for the purposes of improving visitor access and safety. These changes would help to better protect, preserve, and interpret the historic setting of Frijole Ranch by providing adequate parking, an established universally accessible trail, and providing more areas that would be accessible to mobility challenged individuals. This effort was initiated with the distribution of a general scoping letter, which was mailed to park neighbors on the park's mailing list on November 30, 2007.

In addition to the aforementioned public entities, the agencies listed below were sent scoping information or were contacted for information regarding the project on November 30, 2007. Thirteen culturally affiliated Native American tribes were sent scoping information on April 14, 2008. Follow-up phone calls and emails were made to the Mescalero Apache Tribe and the Ysleta Del Sur Pueblo since they historically have participated in park scoping activities. The U.S. Fish and Wildlife Service was consulted and sent a biological evaluation letter on May 12, 2009.

Federal Agencies

U.S. Department of the Interior – Fish and Wildlife Service, Nathan Allan
U.S. Department of Defense - Army Corp of Engineers – Kelly Allen

State Agencies

Texas Historical Commission (Office of the State Historic Preservation Officer)
Texas Parks and Wildlife Department, Wildlife Division, Diversity and Habitat Assessment Programs

Affiliated Native American Groups

Apache Tribe of Oklahoma

Comanche Tribe of Oklahoma
Fort Sill Apache Tribe of Oklahoma
Hopi Tribe of Arizona
Isleta Pueblo
Jicarilla Apache Tribe
Kiowa Tribe
Mescalero Apache Tribe
San Carlos Apache Tribe
White Mountain Apache Tribe
Ysleta Del Sur Pueblo
Zia Pueblo
Zuni Pueblo

During the 30-day scoping period, 2 responses were received through letters. The Texas Parks and Wildlife Department, Julie Wicker, made some suggestions and expressed interest in reviewing the final Environmental Assessment. The Texas Historical Commission (TXHC) responded that they would need more information before they could comment on this project. The park will consult with the TXHC when the EA is released for public review. No responses to letters, phone calls, or emails were received from any of the thirteen culturally affiliated tribes. On June 23, 2009, Amy Roberson from the U.S. Fish and Wildlife Service called the park to inform park staff that they had reviewed the May 12, 2009 letter and concurred with the park's no effect determination and had no additional comments. The U.S. Fish and Wildlife Service will be sending a written copy of the concurrence letter within a few weeks of the phone call.

Environmental Assessment Review and List of Recipients

The environmental assessment will be released for public review in summer of 2009. To inform the public of the availability of the Environmental Assessment, the National Park Service will publish and distribute a letter to various federal and state agencies, park neighbors, tribes, libraries, county commissioners, and members of the public on the park's mailing list. The NPS will also place a press release in the local newspaper. Copies of the Environmental Assessment will be provided to interested individuals, upon request. Copies of the document will also be available for review at the park's visitor center and on the internet at <http://parkplanning.nps.gov/gumo>.

The Environmental Assessment is subject to a 30 day public comment period. During this time, the public is encouraged to submit their written comments electronically to the Planning, Environment, and Public Comment (PEPC) website at <http://parkplanning.nps.gov/gumo> or via mail to the National Park Service address at the beginning of this document. Following the close of the comment period, all public comments will be reviewed and analyzed prior to the release of a decision document. The National Park Service will issue responses to substantive comments received during the public comment period and will make appropriate changes to the environmental assessment, as needed.

List of Preparers

Preparers (developed EA content):

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Consultants (provided information):

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Lori Kinser, Visual Information Specialist, NPS Intermountain Region, Denver, Colorado
Linda Lutz-Ryan, Interpretive Specialist, NPS Intermountain Region, Denver, Colorado
Jan Wobbenhorst, Retired Chief Ranger, Guadalupe Mountains National Park, Salt Flat, TX

REFERENCES

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January 24, 2008.

APPENDICES

Appendix A



CURTIS TUNNELL
EXECUTIVE DIRECTOR

TEXAS HISTORICAL COMMISSION

P.O. BOX 12276

AUSTIN, TEXAS 78711-2276

(TELEPHONE) 512-463-6100

(FAX) 512-475-4872

(RELAY TX) 1-800-735-2989 (TDD)

DEPARTMENT OF ARCHITECTURE

29 November 1995

Ms. Catherine Colby
National Park Service
Southwest Region
PO Box 728
Santa Fe, NM 87504-0728

Re: XXX Form Review 95-10-0883 & 95-11-2369
Modifying doorways at Frijole Ranch House
Guadalupe Mountains National Park, Culberson Co.

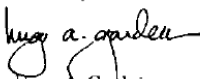
Dear Ms. Colby:

The Texas State Historic Preservation Office (SHPO), our agency, reviews any federal undertakings referenced under Section 106 of the National Historic Preservation Act of 1966, 36 CFR 800. The Department of Antiquities Protection reviews projects to determine their significance and impact to archeological properties. The National Register Programs reviews projects to determine their eligibility for listing in the National Register of Historic Places and the Division of Architecture reviews projects to determine potential architectural impact to historic properties.

We are in receipt of your correspondence dated 22 November 1995 concerning the subject property. We received the information on 27 November 1995. Thank you for addressing our previous concerns regarding the doorway modifications and the concrete ramp. We feel these modifications will further aid in the preservation of the house. Additionally, thank you very much for the copy of the new Cultural Landscape Report for the Frijole Ranch, it will be forwarded to our Library for future reference.

Thank you very much for your interest and conservation of the cultural heritage of Texas and for your compliance with this federal review process. Should you have any questions about effects, please feel free to contact me in the Department of Architecture at 512-463-6094 or with questions on archeological resources, please contact Nancy Kenmotsu in the Department of Antiquities Protection at 512-463-6096 at your convenience. Sincerely yours,

Sincerely,


Hugo A. Gardea
Staff Architect

cc: Mr. Larry Henderson, Superintendent, Guadalupe Mountain National Park
Mr. Neil Mangum, Historian, Trans Pecos National Parks
Hon. John Conoly, Acting Chair - Culberson County Historical Commission

CBSN.106.nps
gmnp.frijole 112995

The State Agency for Historic Preservation

In reply refer to:
H30(SW-PCS)

RECEIVED
1995 NOV 24 PM 12:20
GUADALUPE MTS NATL PARK

NOV 22 1995

Mr. Hugo A. Gardea
Texas Historical Commission
Department of Architecture
P.O. Box 12276
Austin, Texas 78711

Dear Mr. Gardea:

Thank you for your comments on the proposed changes to allow accessibility at the Frijole Ranch House at Guadalupe Mountains National Park. The door stop at the top of Door A will remain, and the ramp will be constructed with a barrier to protect and prevent bonding to the existing floor.

Please find enclosed a copy of the new Cultural Landscape Report which is more comprehensive than, and supersedes, the draft HSR report from which Fred Armstrong copied the two pages attached to the XXX submittal.

If you have further questions, please do not hesitate to call Historical Landscape Architect Peggy Nelson at 505-988-6718 or Historical Architect Catherine Colby at 505-988-6788 in the Southwest System Support Office; or Cultural Resource Specialist Fred Armstrong at Guadalupe Mountains National Park (915-828-3251).

Sincerely,

/s/ Catherine Colby

Catherine Colby, Historical Architect
Cultural Resources Program,
Southwest System Support Office

Enclosure

cc:

Superintendent, Guadalupe Mountains, w/o enclosure

Fred Armstrong, Cultural Resources Specialist, Guadalupe Mountains, w/o enclosure

Neil Mangum, National Park Service, c/o Geology Department,
Room 208, Science Building, Sul Ross University,
Alpine, Texas 79832, w/o enclosure



TEXAS
HISTORICAL
COMMISSION

George W. Bush • Governor
John L. Nau, III • Chairman
Curtis Tunnell • Executive Director
The State Agency for Historic Preservation

XXX 95-15
MESSAGE LEFT
FOR LAMINE
11-8-95

DEPARTMENT OF ARCHITECTURE

25 October 1995

Mr. Barry Sulam
National Park Service
Southwest Region
PO Box 728
Santa Fe, NM 87504-0728

Re: XXX Form Review 95-10-0883
Modifying doorways at Frijole Ranch House
Guadalupe Mountains National Park, Culberson Co.

Dear Mr. Sulam:

Thank you for submitting your request for XXX Form Review to the subject project. We received the information on 3 October 1995. We understand the existing doorways at the house need to be modified to comply with current accessibility standards.

The Texas State Historic Preservation Office (SHPO), our agency, reviews any federal undertakings referenced under Section 106 of the National Historic Preservation Act of 1966, 36 CFR 800. The Department of Antiquities Protection reviews projects to determine their significance and impact to archeological properties. The National Register Programs reviews projects to determine their eligibility for listing in the National Register of Historic Places and the Division of Architecture reviews projects to determine potential architectural impact to historic properties.

The Department of Architecture has reviewed the information submitted and concurs the proposed modifications to the Frijole Ranch House doorways are necessary. However, we have questions regarding the proposed modifications. They are:

1. Doorway A. We concur removing the stops is the best way to allow accessibility with minimal modifications. However, how will the door stop? If the door is allowed to swing freely, it may cause damage to the door frames by pulling the hinges off the frame. We suggest not removing the door stop on top of the door frame. This will allow for accessibility and the need to stop the door.
2. Concrete ramp at Doorway D. What is the existing floor under the carpet? We suggest a wood ramp in lieu of a concrete ramp under the carpet. The concrete ramp, if poured on site, may bond to the existing floor causing potential damage if it were to ever be removed.
3. Report? The last two pages (pg. 48 & 53) of the XXX form appear to come from a Historic Structures Report. Please forward a copy of this report for our files. We have attached a copy of these two pages for your reference.

Thank you very much for your interest and conservation of the cultural heritage of Texas and for your compliance with this federal review process. Should you have any questions about effects, please contact Hugo A. Gardea in the Department of Architecture at 512-463-6094 or questions on archeological resources, please contact Nancy Kenmotsu at 512-463-6096 at your convenience. sincerely yours,

Sincerely,

Hugo A. Gardea

for Stanley Graves, DSHPO
Department of Architecture

cc: Mr. Larry Henderson, Superintendent, Guadalupe Mountain National Park
Mr. Neil Mangum, Historian, Trans Pecos National Parks
Mrs. Orvel Capehart, Culberson County Historical Commission

CBSN.106.nps
gmnp.frijole 102595

P. O. Box 12276 • Austin, TX 78711-2276 • 512/463-6100 • Fax 512/475-4872 • TDD 1-800-735-2989

this from
a report?

48

RECOMMENDED TREATMENTS

The purpose of this Historic Structure Report is to identify what is significant about the Frijole Ranch and make recommendations that respect the importance of the site while providing for adaptive use. The treatments include providing handicapped access, replacing the heating system, alterations to the electrical system and lighting, and providing floor and window coverings.

HANDICAPPED ACCESS TO THE RANCH HOUSE

The first concern is to provide a wheel chair-accessible route from the existing entry gate in the west site wall to the ranch house door. The recommended material for this path is stone similar to that used elsewhere on the site. Stone masonry will provide sufficient stability and firmness if set in concrete and carefully laid as well as being most appropriate in the historic setting. (Verbal approval given by David Gaines.) The masonry style, average size and color of stones and configuration and size of joints should be similar to existing retaining walls. See Fig. 3-42.

where?

Under Uniform Federal Accessibility Standards a path is considered a ramp when it slopes more than 1 in 20. Because the existing levels of the entry gate and the entrance to the house are less than 4 inches different in elevation, the proposed path to the ranch house is not considered a ramp. Handrails are therefore not required. The minimum clear width of the path must be 36 inches, and edge protection provided by a stone curb is needed because of the change in level from the path to the grass and spring trough. The new path will begin at the entry gate at an elevation of 5531 feet and end at the threshold of the east door at an elevation of 5528 feet and 3 inches, making a slope of 2 feet and 9 inches in approximately seventy five feet. See Figs. 3-43 to 3-46.

where?

Because the new raised, handicapped-accessible path to the ranch house will require some soil disturbance in the area of the prehistoric midden, archeological clearance will be required before initiating path construction.

where?

As stated in the section of this report describing the character of the Frijole site, features associated with the spring are significant. (Therefore the stone-lined trough should not be covered or filled.) In any case there is currently not enough clearance between the spring house and the stone retaining wall to permit wheel chair access. Therefore the recommendation is to rebuild the retaining wall further north, leaving a safe distance between the new curb-edged path and the trough. In this way the wood railing and walkway could be removed, uncovering the origin of the trough. See diagrams showing Uniform Federal Accessibility Standards requirements, existing conditions and the recommended solution.

The second concern is accessibility once a visitor in a wheel chair arrives at the ranch house. A landing allowing turn-around space (atleast five feet square) is required at the entrance. A landing extending 1 foot past each of the south doors is recommended. The entry door needs a minimum clear opening of 32 inches measured between the face of the door and the opposite door stop. The clear opening of some of the interior doors at the ranch house are narrower, so access to some of the rooms will be facilitated by replacing existing hinges with off-set type.

One parking space and the entry area in front of the gate will need to be made handicapped-accessible. See Fig. 3-46. These areas will have to be leveled and well drained. Acceptable paving materials are colored asphalt or crusher fines.

HEATING SYSTEM

Replacement of the current heating units and gas piping is recommended since it was installed with the earlier type of adaptive use. Because equipment and or ducts will be intrusive on the historic structure's fabric and appearance, it is necessary to decide which spaces have the highest priority for being free of visible equipment. It is most important to avoid adverse impact on the exterior of the building. Of the various possible locations: exterior, two south rooms, three north rooms, and upstairs, the upstairs is preferred, since it is not visible to visitors and has a large amount of replacement fabric. The proposed scheme for installing a gas-fired heating system minimizes length of duct runs as well as exposed ducts downstairs. See Figs. 3-47 - 3-49.

ELECTRICAL SYSTEM AND LIGHTING

Though it is a major expense, relocation of the box to a location where a cabinet would have less impact is recommended. The north wall of room 104 is a possibility. If track lighting must be used to illuminate the interpretive displays, it is recommended that their locations be directly related to the exhibits and that the existing central lighting scheme for the residential use be retained as well.

FLOOR AND WINDOW COVERINGS

Very little documentation is available about the finishes inside the ranch house before the year it was acquired by the National Park Service. Floor covering in the north rooms appears to be unpatterned in photos. Therefore a neutrally colored sheet vinyl with as close to no pattern as possible is recommended. A solution for storm windows that is more compatible with this historic structure is recommended. These will have to use the same materials, ie. wood and glass, and the same configurations of glazing and muntins, as the historic windows. They should be installed so they are easily removable in a frame that is compatible with the existing opening.

XXX 95-15



United States Department of the Interior

NATIONAL PARK SERVICE
INTERMOUNTAIN FIELD AREA
Intermountain Cultural Resource Center
P. O. Box 728
Santa Fe, New Mexico 87504-0728

RECEIVED
SEP 29 1995
NAT'L PARK

In reply refer to:
H4217(INTM-ICH)

SEP 29 1995

Memorandum

To: Superintendent, Guadalupe Mountains
From: Chief, Intermountain Cultural Resource Center
Subject: Project Compliance Approval

On September 27, 1995, the "Regional Director" (now entitled Superintendent, Southwest System Support Office) approved the enclosed XXX form for modifying the doorway at Frijole Ranch House for handicapped accessibility.

By copy of this memorandum, we are also sending the approved XXX form to the Texas State Historic Preservation Officer. Should you have any questions on this project, please contact Conservation Program Leader Barry Sulam at 505-988-6796.

Robert P. Pomeroy

Enclosure

cc:
Texas State Historic Preservation Officer, w/c enclosure
Assistant Director, Design and Construction, Denver Service Center Operations,
w/c enclosure
Attention: Manager, Central Team

DRAFT

H4217 (GUM0) VIA ELECTRONIC MAIL
NO HARD COPY TO FOLLOW

August 5, 1995

Memorandum

To: Chief, Intermountain Cultural Resource Center
From: Acting Superintendent, Guadalupe Mountains National Park
Subject: XXX/Section 106 Compliance, Frijole Ranch

Construction of the handicapped-accessible walkway to the Frijole Ranch house has begun. Park Resource Management Specialist Fred Armstrong, in a recent conversation with Historical Architect Catherine Colby, was informed that the doorway modification project may need to go through Section 106 review since these modifications do not fall within the existing Programmatic Memorandum of Agreement exclusions.

We stand a bit confused. Superintendent Henderson was informed in March that the doorway modifications could be performed under XXX review. He is presently away from the park but we desire to move ahead with the necessary compliance review. Please contact Fred Armstrong at extension 132 or Chief of Resource Management and Visitor Protection Janice Wobbenhorst at extension 102 at this office. We would like to know who was involved in the Section 106 review of this project at the State Historical Preservation Office so we may contact them and move ahead on protecting this historical resource while making it accessible to people in wheelchairs.

Richard McCamant

6. Measures to prevent or minimize loss or impairment of historic fabric, setting, integrity, or data:

The Frijole Ranch House is an adaptive use structure which presently contains the park cultural museum exhibits. Clearance through the Section 106 process has been obtained to modify the parking area and exterior walkway to the house to provide for handicapped accessibility. The following doorways must be modified, otherwise the structure and museum exhibits will remain inaccessible to people in wheelchairs:

Doorway A - Existing condition: Exterior doorway designated to provide wheelchair access to the structure once the exterior flagstone walk modification is completed. Existing door swings in, but obscures a portion of the door opening when fully open (at 90 degree position against west wall). Existing door stops on door frame provide 31" width opening. Proposed action: Place door on off-set hinges so it swings in and away from the door opening to increase width clearance. Remove the existing door stops from the door frame to increase doorway opening width to 32"; paint to match existing trim. Install weatherstripping on edges of door to prevent insect, dirt, and water intrusion.

Doorway B - Existing condition: Interior door has been removed to facilitate building use as a museum. Opening between door stops is 31.25". Proposed action: Remove door stops from door frame to increase opening width to 32.25"; paint to match existing trim.

Doorway C - Existing condition: Interior door has been removed to facilitate building use as a museum. Opening between door stops is 30.5". Proposed action: Remove door stops from door frame and shave 1/2" off the north side door jamb and fascia to increase opening width to 32"; finish and paint to match existing trim. Alternate action: To prevent alteration to structural members we would remove door stops but not shave the door frame. This action would provide an opening of 31.5", which would make the room accessible for most wheelchairs.

Doorway D - Existing conditions: Interior door has been removed to facilitate building use as a museum. Opening between door stops is 30". A 1.5" high step exists in the doorway (this was originally an exterior doorway). Proposed action: Remove door stops from door frame to increase opening width to 32"; paint to match existing trim. Lay a concrete ramp under the carpet approximately 8" long and 32" wide to feather the step to the floor.

Doorway E & F - Existing condition: The doorways are 29.5" and 28.5", respectively, and unsuitable for modification without compromising structural integrity. Proposed action: We propose to leave the doorways as they are. Visitors in wheelchairs may view some of the exhibits from the doorways, or they may transfer into a wheelchair the park can provide in that room.

All doorways will be documented with black & white photographs before any modifications take place.

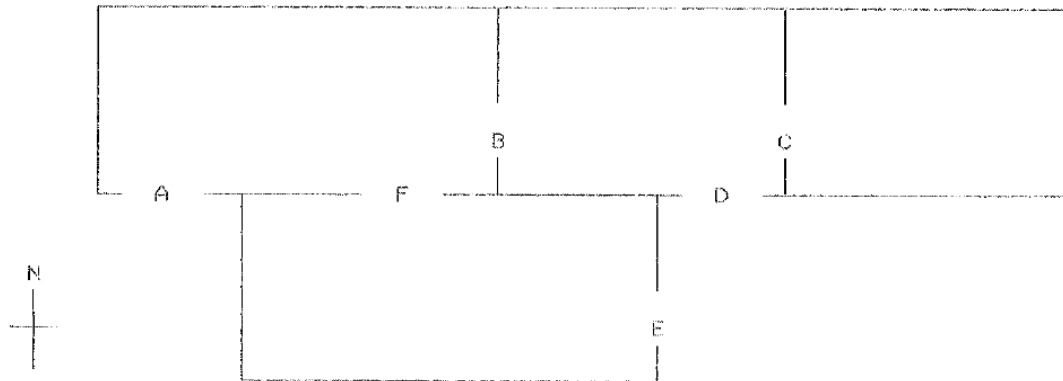
7. Programmatic Exclusions:

The proposed action meets all conditions for a programmatic exclusion under Stipulation C.1 or C.2 of the 1990 Servicewide PA. From the list of Applicable Exclusion(s), please specify which exclusion this undertaking is covered by _____.

- a. preservation maintenance (housekeeping, routine and cyclic maintenance, and stabilization) as defined in NPS-28;
 - b. routine grounds maintenance, such as grass cutting and tree trimming;
 - c. installation of environmental monitoring units, such as those for water and air quality;
 - d. archeological monitoring and testing and investigations of historic structures and cultural landscapes involving ground disturbing activities or intrusion into historic fabric for research or inventory purposes (see also: Stipulations B, H.3);
 - e. acquisition of lands for park purposes, including additions to existing parks;
 - f. rehabilitation and widening of existing trails, walks, paths, and sidewalks within previously disturbed areas;
 - g. repaving of existing roads or existing parking areas within previously disturbed areas;
 - h. placement, maintenance, or replacement of utility lines, transmission lines, and fences within previously disturbed areas;
 - i. rehabilitation work limited to actions for retaining and preserving, protecting and maintaining, and repairing and replacing in kind materials and features, consistent with the Secretary of the Interior's Standards for Rehabilitation and the accompanying guidelines.
 - j. health and safety activities such as radon mitigation, and removal of asbestos, lead paint, and buried oil tanks;
 - k. installation of fire detection and suppression systems, and security alarm systems, and upgrading of HVAC systems;
 - l. erection of signs, wayside exhibits, and memorial plaques;
 - m. leasing of historic properties consistent with NPS-38, if proposed treatments are limited to those consistent with C.1(a) and (i) and other activities excluded under C.1.
8. Supporting Study Data (attach if feasible; if action is in a plan, give name and project or page number): Frijole Ranch House Cultural Museum Design for Accessibility; Frijole Ranch House Historic Structure Report, 1990, p. 48-53.

-
9. Attachments: ☐ Maps ☐ Archeological Clearance, if applicable
☒ Drawings ☐ Specifications ☐ Photographs ☐ Scope of
Work ☐ Site plan ☐ List of Materials ☐ Samples
☐ Project Statement ☐ Other
10. Prepared by: Fred Armstrong Title: Resource Management Specialist
11. Signature of Park Superintendent: Date:

Friole Ranch House



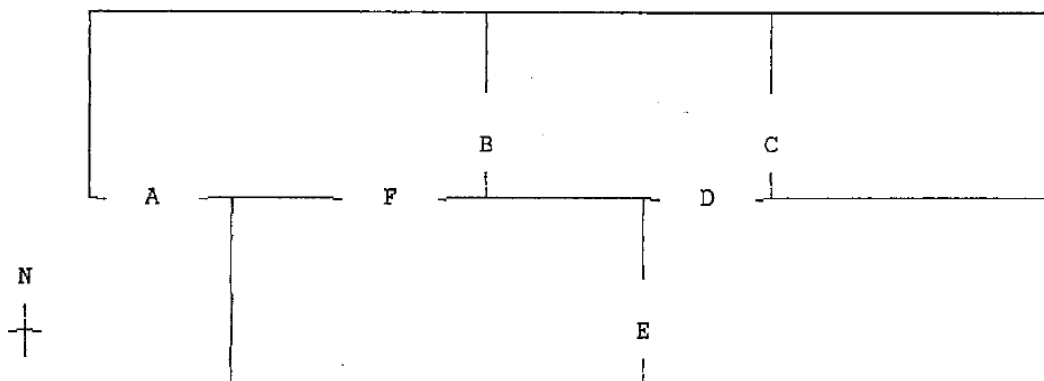
Doorways labeled for XXX reference. Other structural details have been omitted for clarity. Drawing not to scale.

(F. Armstrong, 8/95)

10. Prepared by: Fred Armstrong Title: Resource Management Specialist

11. Signature of Park Superintendent Jerry Hendrickson Date 9/4/95

Frijole Ranch House



Doorways labeled for XXX reference. Other structural details have been omitted for clarity. Drawing not to scale.

(F. Armstrong, 8/95)

RECOMMENDED TREATMENTS

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FLOOR AND WINDOW COVERINGS

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B. Regional Cultural Resources Staff Review and Certification

1. The foregoing assessment is adequate; the proposed action is consistent with all applicable NPS management policies, standards, and guidelines reviewed and concurred in by the Advisory Council; and the proposal incorporates all feasible measures to minimize adverse effects to cultural resources.
2. The proposed action is authorized by a planning document or program reviewed and concurred in by the Advisory Council.

	Yes	No	N/A	
(Negative certifications must be justified on attachments.)	1 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Robert P. Pomeroy</u>
	2 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regional Archeologist
				<u>9/25/95</u>
				Date
<input type="checkbox"/> Cultural Landscape	1 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>James E. Long</u>
	2 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regional Historian
				<u>9/25/95</u>
				Date
Regional Hist. Landscape Architect	1 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Cheryl Mullen</u>
	2 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regional Hist. Architect
				<u>9/20/95</u>
				Date
<input type="checkbox"/> American Indian Programs	1 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Barbara Stansbury</u>
	2 <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Regional Curator (acting)
				<u>9/25/95</u>
				Date
Chief, DAI				<u>9/25/95</u>
Date				Date

Additional Requirements of the proposed action:

C. Regional Director Approval of Proposed Action including Additional Requirements.

- ☐ The proposed action, including any additional requirements stated above, meets all conditions in B.1 and 2.

9/27/95 [Signature]
Date Regional Director

July, 1991

Appendix B

Southwest Region Ecological Services

Page 1 of 1



U.S. Fish & Wildlife Service

Endangered Species List

[Back to Start](#)

List of species by county for Texas:









Counties Selected: Culberson

Select one or more counties from the following list to view a county list:

Anderson
Andrews
Angelina
Aransas
Archer

[View County List](#)

Culberson County

Common Name	Scientific Name	Species Group	Listing Status	Species Image	Species Distribution Map	Critical Habitat	More Info
Guadalupe fescue	<i>Festuca ligulata</i>	Flowering Plants	C				P
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Birds	T				P
southwestern willow flycatcher	<i>Empidonax traillii eximius</i>	Birds	E				P
yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Birds	C				P

<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/ListSpecies.cfm>

1/24/2008

Appendix C

Texas Parks & Wildlife Dept.
Annotated County Lists of Rare Species

Page 1 of 8

Last Revision: 5/2/2007 11:16:00 AM

CULBERSON COUNTY

ARACHNIDS

Federal Status State Status

**Guadalupe Cave
pseudoscorpion**

Archeolarca guadalupensis

live in leaf mold or decaying vegetation, in soils, beneath bark and stones, and in some mammals' nests; oviparous and may produce more than one brood per year

BIRDS

Federal Status State Status

American Peregrine Falcon

Falco peregrinus anatum

DL

E

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon

Falco peregrinus tundrius

DL

T

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Baird's Sparrow

Ammodramus bairdii

shortgrass prairie with scattered low bushes and matted vegetation; mostly migratory in western half of State, though winters in Mexico and just across Rio Grande into Texas from Brewster through Hudspeth counties

Common Black-Hawk

Buteogallus anthracinus

T

cottonwood-lined rivers and streams; willow tree groves on the lower Rio Grande floodplain; formerly bred in south Texas

Ferruginous Hawk

Buteo regalis

open country, primarily prairies, plains, and badlands; nests in tall trees along streams or on steep slopes, cliff ledges, river-cut banks, hillsides, power line towers; year-round resident in northwestern high plains, wintering elsewhere throughout western 2/3 of Texas

Mexican Spotted Owl

Strix occidentalis lucida

LT

T

remote, shaded canyons of coniferous mountain woodlands (pine and fir); nocturnal predator of mostly small rodents and insects; day roosts in densely vegetated trees, rocky areas, or caves

Montezuma Quail

Cyrtonyx montezumae

open pine-oak or juniper-oak with ground cover of bunch grass on flats and slopes of semi-desert mountains and hills; travels in pairs or small groups; eats succulents, acorns, nuts, and weed seeds, as well as various invertebrates

Mountain Plover

Charadrius montanus

CULBERSON COUNTY

BIRDS

Federal Status State Status

breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Northern Aplomado Falcon *Falco femoralis septentrionalis* LE E
open country, especially savanna and open woodland, and sometimes in very barren areas; grassy plains and valleys with scattered mesquite, yucca, and cactus; nests in old stick nests of other bird species

Peregrine Falcon *Falco peregrinus* DL E T
both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, thus the species level shows this dual listing status; because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.

Prairie Falcon *Falco mexicanus*
open, mountainous areas, plains and prairie; nests on cliffs

Snowy Plover *Charadrius alexandrinus*
formerly an uncommon breeder in the Panhandle; potential migrant; winter along coast

Southwestern Willow Flycatcher *Empidonax traillii extimus* LE E

thickets of willow, cottonwood, mesquite, and other species along desert streams

Western Burrowing Owl *Athene cunicularia hypugaea*
open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Western Snowy Plover *Charadrius alexandrinus nivosus*
uncommon breeder in the Panhandle; potential migrant; winter along coast

Western Yellow-billed Cuckoo *Coccyzus americanus occidentalis* C;NL
status applies only to western population beyond the Pecos River Drainage; breeds in riparian habitat and associated drainages; springs, developed wells, and earthen ponds supporting mesic vegetation; deciduous woodlands with cottonwoods and willows; dense understory foliage is important for nest site selection; nests in willow, mesquite, cottonwood, and hackberry; forages in similar riparian woodlands; breeding season mid-May-late Sept

Zone-tailed Hawk *Buteo albonotatus* T
arid open country, including open deciduous or pine-oak woodland, mesa or mountain country, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains; nests in various habitats and sites, ranging from small trees in lower desert, giant cottonwoods in riparian areas, to mature conifers in high mountain regions

FISHES

Federal Status State Status

Pecos pupfish *Cyprinodon pecosensis* T

CULBERSON COUNTY

FISHES

Federal Status State Status

originally Pecos River basin, presently restricted to upper basin only; shallow margins of clear, vegetated spring waters high in calcium carbonate, as well as in sinkhole habitats

INSECTS

Federal Status State Status

A mayfly *Neochoroterpes kossi*

AZ, NM, west TX small streams; mayflies distinguished by aquatic larval stage; adult stage generally found in shoreline vegetation

A Royal moth *Sphingicampa raspa*

woodland - hardwood; with oaks, junipers, legumes and other woody trees and shrubs; good density of legume caterpillar foodplants must be present; Prairie acacia (*Acacia augustissima*) is the documented caterpillar foodplant, but there could be a few other woody legumes used

A tiger beetle *Cicindela hornii*

grassland/herbaceous; burrowing in or using soil; dry areas on hillside or mesas where soil is rocky or loamy and covered with grasses, invertivore; diurnal, hibernates/aestivates, active mostly for several days after heavy rains. the life cycle probably takes two years so larvae would always be present in burrows in the soil

A tiger beetle *Amblycheila picolomini*

bare rock/talus/scree, desert, grassland/herbaceous; burrowing in or using soil; invertivore; crepuscular, nocturnal, hibernates/aestivates; larva always present in burrows in soil

Barbara Ann's tiger beetle *Cicindela politula barbaraannae*

limestone outcrops in arid treeless environments or in openings within less arid pine-juniper-oak communities; open limestone substrate itself is almost certainly an essential feature; roads and trails

Guadalupe Mountains tiger beetle *Cicindela politula petrophila*

open, sunny areas; predaceous and feeds on a variety of small insects; larva lives in vertical burrows in soil of dry paths, fields, or sandy beaches

Poling's hairstreak *Fixsenia polingi*

oak woodland with *Quercus grisea* as substantial component, probably also uses *Q. emoryi*; larvae feed on new growth of *Q. grisea*, adults utilize nectar from a variety of flowers including milkweed and catslaw acacia; adults fly mid May - Jun, again mid Aug - early Sept

Texas minute moss beetle *Limnebius texanus*

adult moss beetles of this genus are aquatic and herbivorous; larvae are semiaquatic and carnivorous; found in vegetation along margins of streams

MAMMALS

Federal Status State Status

Big free-tailed bat *Nyctinomops macrotis*

CULBERSON COUNTY

MAMMALS

Federal Status State Status

habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore

Black bear *Ursus americanus* T/SA;NL T

bottomland hardwoods and large tracts of inaccessible forested areas; due to field characteristics similar to Louisiana Black Bear (LT, T), treat all east Texas black bears as federal and state listed Threatened

Black-footed ferret *Mustela nigripes* LE E

extirpated; inhabited prairie dog towns in the general area

Black-tailed prairie dog *Cynomys ludovicianus*

dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups

Cave myotis bat *Myotis velifer*

colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (*Hirundo pyrrhonota*) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore

Davis Mountains cottontail *Sylvilagus floridanus robustus*

brushy pastures, brushy edges of cultivated fields, and well-drained streambanks; active mostly at twilight and at night, where they may forage in a variety of habitats, including open pastures, meadows, or even lawns; rest during daytime in thickets or in underground burrows and small culverts; feed on grasses, forbs, twigs and bark; not sociable and seldom seen feeding together

Desert bighorn sheep *Ovis canadensis mexicana*

rough, rocky mountainous terrain; bluffs and steep slopes with sparse vegetation

Fringed bat *Myotis thysanodes*

habitat variable, ranging from mountainous pine, oak, and pinyon-juniper to desert-scrub, but prefers grasslands at intermediate elevations; highly migratory species that arrives in Trans-Pecos by May to form nursery colonies; single offspring born June-July; roosts colonially in caves, mine tunnels, rock crevices, and old buildings

Ghost-faced bat *Mormoops megalophylla*

colonially roosts in caves, crevices, abandoned mines, and buildings; insectivorous; breeds late winter-early spring; single offspring born per year

Gray wolf *Canis lupus* LE E

extirpated; formerly known throughout the western two-thirds of the state in forests, brushlands, or grasslands

Gray-footed chipmunk *Tamias canipes*

CULBERSON COUNTY

MAMMALS

Federal Status State Status

forest-dwelling; occur in Texas only in the Sierra Diablo and Guadalupe Mountains in the Trans-Pecos; favorite habitat is downed logs near edges of clearings; also occur in dense stands of mixed timber (oaks, pines, firs) and on brushy hillsides, especially with rock crevices

Guadalupe southern pocket gopher *Thomomys bottae guadalupensis*

known from Guadalupe Mountains; habitat variable, ranging from loose sands and silts to tight clays; dry deserts to montane meadows; active year round, mostly underground; diet variable, but mostly roots and tubers; breeds continuously, but main season in spring

Limpia Creek pocket gopher *Thomomys bottae texensis*

throughout Davis Mountains; habitat variable, ranging from lower canyons to higher coniferous woodlands; loose sands and silts to tight clays; dry deserts to montane meadows; active year round, mostly underground; diet variable, but mostly roots and tubers; breeds continuously, but main season in spring

Limpia southern pocket gopher *Thomomys bottae limpiae*

Limpia Canyon area of Davis Mountains; habitat variable, ranging from loose sands and silts to tight clays; active year round, mostly underground; diet variable, but mostly roots and tubers; breeds continuously, but main season in spring

Long-legged bat *Myotis volans*

in Texas, Trans-Pecos region; high, open woods and mountainous terrain; nursery colonies (which may contain several hundred individuals) form in summer in buildings, crevices, and hollow trees; apparently do not use caves as day roosts, but may use such sites at night; single offspring born June-July

Pale Townsend's big-eared bat *Corynorhinus townsendii pallescens*

roosts in caves, abandoned mine tunnels, and occasionally old buildings; hibernates in groups during winter; in summer months, males and females separate into solitary roosts and maternity colonies, respectively; single offspring born May-June; opportunistic insectivore

Western red bat *Lasiurus blossevillei*

roosts in tree foliage in riparian areas, also inhabits xeric thorn scrub and pine-oak forests; likely winter migrant to Mexico; multiple pups born mid-May - late Jun

Western small-footed bat *Myotis ciliolabrum*

mountainous regions of the Trans-Pecos, usually in wooded areas, also found in grassland and desert scrub habitats; roosts beneath slabs of rock, behind loose tree bark, and in buildings; maternity colonies often small and located in abandoned houses, barns, and other similar structures; apparently occurs in Texas only during spring and summer months; insectivorous

Yellow-nosed cotton rat *Sigmodon ochrognathus*

higher elevations in the Chisos Mountains, Davis Mountains, and Sierra Vieja; rocky slopes with scattered bunches of grass; underground dens and aboveground nests in various locations, including at base of agaves or roots of junipers; active in daytime; several litters possible during breeding season of March-October

Yuma myotis bat *Myotis yumanensis*

CULBERSON COUNTY

MAMMALS

Federal Status State Status

desert regions; most commonly found in lowland habitats near open water, where forages; roosts in caves, abandoned mine tunnels, and buildings; season of partus is May to early July; usually only one young born to each female

MOLLUSKS

Federal Status State Status

False spike mussel *Quincuncina mitchelli*

substrates of cobble and mud, with water lilies present; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins

Northern threeband *Humboldtiana ultima*

leaf litter in mesic canyons of limestone mountains; in soil, under rocks

REPTILES

Federal Status State Status

Chihuahuan Desert lyre snake *Trimorphodon wilkinsonii*

T

mostly crevice-dwelling in predominantly limestone-surfaced desert northwest of the Rio Grande from Big Bend to the Franklin Mountains, especially in areas with jumbled boulders and rock faults/fissures; secretive; egg-bearing; eats mostly lizards

Mountain short-horned lizard *Phrynosoma hernandesi*

T

diurnal, usually in open, shrubby, or openly wooded areas with sparse vegetation at ground level; soil may vary from rocky to sandy; burrows into soil or occupies rodent burrow when inactive; eats ants, spiders, snails, sowbugs, and other invertebrates; inactive during cold weather; breeds March-September

Texas horned lizard *Phrynosoma cornutum*

T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

PLANTS

Federal Status State Status

Chisos agave *Agave glomeruliflora*

grasslands or oak-juniper woodlands at elevations of about 1050-1850 m (3500-6000 ft); flowering July-August

Chisos coral-root *Hexalectris revoluta*

humus in oak groves along rocky creekbeds at higher elevation. in the Glass Mountains, it has been found 'among lechuguilla and shinny oak on the sunny slopes and ridges'; flowering June-July, sometimes in May when spring rains are abundant

Foster's rock-daisy *Perityle fosteri*

known only from the bluffs of the canyon walls of Panther Canyon in the Apache Mountains

CULBERSON COUNTY

PLANTS

Federal Status State Status

Guadalupe Mountains columbine *Aquilegia chrysantha var chaplinei*

perennially moist to wet limestone canyon walls; moist leaf litter and humus among boulders in wooded mesic canyons; flowering April-September

Guadalupe Mountains fescue *Festuca ligulata* C

woodlands and grasslands on mesic slopes and in creekbottoms above 6000 feet in the Guadalupe and Chisos mountains; substrates in the Chisos Mountains are gravelly and sandy loams derived from igneous materials; substrate in the Guadalupe Mountains unknown but presumed to be loamy soils over limestone; flowering August-September

Guadalupe Mountains mescal bean *Sophora gypsophila var guadalupensis*

oneseed juniper (*Juniperus monosperma*) shrublands on dry limestone or gypsum slopes above 5000 feet elevation in Guadalupe Mountains; flowering late March-May

Guadalupe Mountains pincushion cactus *Escobaria guadalupensis*

exposed slabs and fractured limestone rock on steep, mostly south-facing slopes; open coniferous woodlands above 6500 feet elevation in Guadalupe Mountains; flowering April-May; fruiting October-November

Guadalupe Mountains rabbitbrush *Ericameria nauseosa ssp texensis*

limestone ledges and open gravel alluvial areas; flowering September-October

Guadalupe Mountains violet *Viola guadalupensis*

'bullet' hole openings in dolomitized limestone rock faces, open Douglas fir (*Pseudotsuga menziesii*) woodlands at about 8000 feet elevation in the Guadalupe Mountains; flowering March-May

Gyp locoweed *Astragalus gypsodes*

gypsum or stiff gypseous clay soils on low rolling hills, mostly low elevations in areas adjacent to the Guadalupe Mountains; many of the known locations are on the Castile Formation (Permian); flowering April-June

Royal red penstemon *Penstemon cardinalis ssp regalis*

pine-oak woodlands in canyons at higher elevations in the Davis and Guadalupe mountains; flowering May-June (-August)

Sand sacahuista *Nolina arenicola*

windblown Quaternary sand in dune areas east of Van Horn; also in shrublands on steep Permian limestone slopes in the Guadalupe Mountains; flowering March-August

Smooth-stem skullcap *Scutellaria laevis*

on mountain slopes and in arroyos along dry streambeds; known from Beach and Guadalupe mountains; flowering April-September

CULBERSON COUNTY

PLANTS

Federal Status State Status

Sparsely-flowered jewelflower *Streptanthus sparsiflorus*

shaded areas in dry gravelly limestone canyons and arroyos, especially in McKittrick and Pine canyons in the Guadalupe Mountains; flowering May-June; yearly populations vary widely depending on rainfall

Texas wolf-berry *Lycium texanum*

semi-desert grasslands and thorn shrublands on sandy, gravelly, and/or loamy soils, on very gently sloping terrain as well as in rocky areas in canyons, often over limestone at moderate elevations; flowering March-October

Warnock's coral-root *Hexalectris warnockii*

leaf litter and humus in oak-juniper woodlands in mountain canyons in the Trans Pecos but at lower elevations to the east, often on narrow terraces along creekbeds

Appendix D



United States Department of the Interior
NATIONAL PARK SERVICE
GUADALUPE MOUNTAINS NATIONAL PARK
400 PINE CANYON DRIVE
SALT FLAT, TEXAS 79847-4755
915/828-3251



IN REPLY REFER TO:

N1621 (GUMO)

May 12, 2009

Field Supervisor
US Fish and Wildlife Service
Ecological Services Field Office
Compass Bank Building
10711 Burnet Rd., Suite 200
Austin, TX 78758

Field Supervisor:

Guadalupe Mountains National Park is preparing an environmental assessment for a project to improve visitor and administrative facilities in the Frijole Ranch and Pine Springs area within Culberson County. The preferred alternative is proposing to install a new visitor parking lot and picnic area that will be less than 1 acre of new disturbance, grade existing paths to make them handicapped accessible, and construct a new barn and corral in conjunction with moving the park administrative mule operation to a new 138 acre pasture area. The current 131 acre pasture would be monitored and treated for any exotic vegetation and allowed to recover. Your office will receive a copy of the EA once it is ready for review and comment.

Federally listed and candidate species for Culberson County was obtained from the USFWS web site on May 7, 2009. Field reconnaissance of the area of potential effect by the park natural resource program manager identifies that none of the listed or candidate species nor suitable habitat for them occurs within the project area. We request a reply of concurrence with our assessment of "*no effect*".

Although the proposed action involves construction, it is not a "major construction activity," therefore the following biological evaluation is included and a biological assessment will not be prepared or submitted.

Listed Species

The following listed species have been determined to occur or have potential habitat in Culberson County, Texas:

Guadalupe fescue

Festuca ligulata

C

Mexican spotted owl	<i>Strix occidentalis lucida</i>	T
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C

Description of Project Area

The project area is located at 5,500' elevation on broad, alluvial slopes of less than 5% grade at the eastern base of the Guadalupe Mountains. Habitat is characterized as semi-desert grassland punctuated by pinyon, juniper and scrub oak. There is no riparian habitat within the project area, although Frijole Spring and associated runoff located immediately adjacent to the existing parking lot and stock pasture attracts avifauna such as mockingbirds, sage thrashers, canyon towhees, chipping sparrows and other species. It is anticipated that 4-6 trees or shrubs may be affected with the proposed new parking lot and barn construction. Some of the existing parking lot will be restored to native conditions.

Analysis of Effects to Listed Species

Guadalupe fescue – This species was documented in riparian habitat of McKittrick Canyon in 1965 but nowhere else in the park. It is unknown when the last time this grass was observed or documented and is presumed to be extirpated. Park personnel and staff familiar with the species from Big Bend and Texas Parks and Wildlife performed 2 days of pedestrian transect surveys in suitable habitat in 2002 with negative results. The arid, alluvial plain of the proposed project is not suspected habitat for the species, and the last known habitat is 2 miles away. We consider the proposal to have “**no effect**” on this species or its habitat.

Mexican spotted owl – This species resides within narrow canyons of the park, selecting north-facing cliffs on which to nest where there is associated deciduous riparian woodland for day roosting and foraging. This habitat does not exist within the project area. The closest proximity of documented occupied habitat to the project area is 2 miles away. We consider the proposal to have “**no effect**” to this species or its habitat.

Southwestern willow flycatcher – This species has never been documented within the park. There are no incidental observations in our natural history records nor any observations resulting from repeated, structured riparian area bird surveys in the park, 2004-2006 (Seasonal Inventory of Birds in Riparian Habitats at Four Chihuahuan Desert Network Parks, La Tierra Environmental Consulting, March 2006). The preferred habitat of riparian trees and large shrubs that overhang creeks and streams does not occur within the project area. The outflow from Frijole Spring is through grassland with cane cholla and redberry juniper associates. We consider the proposal to have “**no effect**” on this species or its habitat.

Yellow-billed cuckoo – The park has 3 documented observations of this species in the summers of 1991, 1996, and 2005 within woodland habitat in the wide mouth of McKittrick Canyon, 6 miles distant from the project area. The species was not detected in the 2004-2006 systematic surveys performed by La Tierra Environmental Consulting. The species has never been documented by avid birdwatchers in the vicinity of Frijole Spring, therefore, we consider the proposal to have “**no effect**” on this species or its habitat.

Although the park is still developing the alternatives for the environmental assessment, our assessments of effects to these species and their habitats would be the same under any alternative. Please reply with your agency's opinion, or contact Fred Armstrong at (915) 828-3251, extension 251 if you need additional supporting information to concur with this assessment.

Sincerely,



John V. Lujan
Superintendent

Attachment
