



Bush Mountain Trail between Manzanita Ridge and West Dog Canyon Environmental Assessment

Finding of No Significant Impact

Introduction

Guadalupe Mountains National Park was authorized by Public Law 89-667, October 15, 1966, "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 purpose of the park is further defined in the National Park Service Organic Act of 1916, as amended: "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

The park was formally established on September 30, 1972, of which 46,850 acres were designated as the Guadalupe Mountains Wilderness under the National Parks and Recreation Act of 1978, Public Law 95-625, November 10, 1978. Today, the park encompasses 86,416 acres of Chihuahuan desert plains, canyons and uplifted Permian age reef. The three major biotic regions that come together here include the Chihuahuan Desert, Rocky Mountains and Great Plains. Elevations range from 3,624 to 8,749 feet. There are over 900 identified species of plants, 56 species of reptiles and amphibians, over 300 species of birds, 61 species of mammals, 32 known caves, 29 historic structures, more than 400 archeological sites, and 83 miles of trail within the park.

Purpose

The purpose of developing an environmental assessment was to evaluate the alternatives under which the park would accomplish the goal to provide appropriate trail access for hikers and equestrians through the Manzanita Ridge – West Dog Canyon area of park wilderness. The decision to be made based on this assessment of alternatives would be to either retain the existing trail or to construct a new ½ mile segment of trail across previously undisturbed terrain to correct safety, erosion, and maintenance deficiencies. Under either alternative, construction would be performed by a crew with hand tools and the use of pack stock to preserve wilderness values. The park proposes to accomplish the selected alternative in summer 2006 after completion of the environmental analysis process.

The Endangered American Wilderness Act, Public Law 95-237, February 24, 1978, states that "trails, trail signs and necessary bridges are all permissible when designed in keeping with the wilderness concept." Vegetation and soils in the Guadalupe Mountains Wilderness are sparse and slow to recover if repeatedly disturbed. The concept of providing and maintaining a trail system within this wilderness area is in keeping with the above-referenced Act and the Wilderness Act, Public Law 88-577, September 3, 1964, so that this area shall be administered "in such manner as will leave [it] unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of [this] area [and] the preservation of [its] wilderness character." A clearly defined and well-maintained trail system in the park is also in keeping with the goal to keep park landscapes and resources unimpaired as mandated in the Organic Act. Multiple social trails established by wilderness users, erosion slides from steep and improperly drained or graded trails, and unnecessary hazards to hikers and equestrians are issues that the park seeks to prevent or correct by selecting the appropriate alternative.

Need

The original trails present when the park and wilderness area were established were remnants of livestock, wildlife, goatherd, and possibly Indian trails. Between 1979 and 1983, the park improved some of these trails, abandoned or obliterated others, and constructed entirely new trails for the safety of recreationists and the conservation of park resources. By 1984, 52 miles of the current trail system had been constructed or re-worked, however, Congress failed to appropriate the funds to improve or construct the remaining 31 miles of connecting trails. The trail area between Manzanita Ridge and West Dog Canyon is one of the last sections of the park trail system in need of reconstruction or reroute to meet the above purposes.

The ¼ mile existing trail segment under review is on a west-facing slope at the 6,440 to 6,780 foot elevation range, mid-way between the top of Manzanita Ridge and the floor of West Dog Canyon. This trail segment is the remnant of a goatherd trail and averages a 26% grade. This pitch is sufficiently steep enough that gravity is continually at work to cause down-slope slide of trail tread material with every passing hiker, horse, or heavy rainfall. Two segments each less than 50' long pass over bedrock which, at this grade, poses a slipping safety hazard for equestrians and pack stock.

The project is needed to remedy the current condition of this trail segment and meet the following objectives:

- to retain a safe and maintainable trail system appropriate to wilderness users
- to manage this area of the park without derogation to wilderness values
- to prevent resource impairment as justified in the above purpose statements

Some action must take place with respect to this trail segment, otherwise the park may be considered to have allowed an attractive nuisance to develop as a result of the outlying suitably designed trail directing recreationists to this inappropriate segment.

Selected Alternative: Alternative B – (Preferred Alternative) Construct a ½ mile rerouted trail segment.

Alternative B, the agency preferred alternative, will be the selected alternative for meeting the project objectives. Under this alternative, the Manzanita Ridge mid-slope segment of the Bush Mountain Trail will be rerouted to produce a new trail segment approximately ½ mile in length to connect between existing, suitable trail. The new segment will descend at an approximate 12% slope which will correct safety, erosion and maintenance deficiencies, and provide a trail slope that sheds water and stays in place under hiker and equestrian traffic. The proposed trail route has been selected to keep excavation and landscape scarring to a minimum. The trail base will be built up to permit drainage, particularly where the trail crosses an intermittent drainage. Vegetation from the new route will be transplanted onto the old route to speed recovery of the trail scar. In the long-term, the new trail segment will be less visible than the existing trail segment from other points within the park as a result of ameliorating the erosion problem. This alternative will also correct the current human-induced safety hazard of directing hikers and equestrians over alternating segments of loose and slick bedrock. This more sustainable trail will lengthen the required trail maintenance interval, permitting trail funds and personnel to be directed to other areas in need of attention.

Additional Mitigation Measures of the Preferred Alternative

- All trail crews, paid or volunteer, will perform trail construction and future repair and maintenance per NPS trail standards. Considerations will include proper water bar placement, drainage placement, brushing and clearing, revegetation, where to obtain fill and other materials for trails, and how to apply fill materials such as soil, gravel, rocks, etc. Trail foremen will be responsible for ensuring that their crew performs the necessary work in accordance with instructions and standards provided by the NPS.

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- If concealed archeological resources are encountered during the proposed action, all necessary steps will be taken to protect them and to notify the park resource management specialist immediately.

Alternatives Not Selected

A No Action alternative is required for assessment under the National Environmental Policy Act (NEPA) and establishes a baseline for comparing the present management direction and environmental consequences to the action alternative. The No Action alternative was the only other alternative evaluated in this assessment.

Alternative A – (No Action) Leave the ¼ mile trail segment where it is, as it is.

Under this alternative, the Manzanita Ridge mid-slope segment of the Bush Mountain Trail would remain open to hiking and equestrian use in its current state. The steep grade alternating over trail segments of loose rock and bedrock would continue to pose a safety hazard for hikers and equestrians due to routine loss of footing. Scenic, wilderness and natural values would degrade over time as the erosion scar from this segment persists and grows or as hikers and equestrians create their own bypass trails. Park trail crews would continue to maintain the trail given availability of staffing and other resources, however, in its current state it can not be maintained to trail standards. The trail may receive some periodic brushing and patrolling from park rangers, volunteers or organized conservation groups. Visitation to this area of the park may decline due to the trail grade and hazardous condition. Alternative A, the No Action alternative, was not selected because it did not meet the project objectives listed in the Need section above.

Alternatives Considered but Rejected

Re-build the trail in its current location

Although this alternative would prevent disturbance of previously undisturbed land, the severity of grade would require building or excavating stairs that would be heavy-handed on the landscape and considered unsuitable for maintaining wilderness character. The height and depth of such trail stairs would be unsafe for equestrian use for all but the most experienced handlers. The trail may need to be closed to equestrian use due to the safety factor which would severely impact the wilderness recreation opportunities for equestrians in this area of the park. The amount of construction required in this corridor to upgrade the existing route would be more costly and not as sustainable as the reroute alternative. This alternative was dismissed from further analysis.

Classify the trail as Primitive and allow it to revert to nature

The Bush Mountain Trail is one of two cross-park trails, and is used by recreationists and staff to complete hiking loops as opposed to backtracking on other park trails. Park staff have determined that this would be an undesirable alternative because recreationists would either still use the route and potentially create social trails to bypass the bad areas, increase their injury potential or the propensity to become lost which would add undue strain to the park's emergency service staff. There are no other trails in the park that are managed under this principle unless they have been decommissioned. This alternative was dismissed from further analysis.

Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. 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;
5. achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative B, the agency preferred alternative, is the environmentally preferred alternative. Alternative B strives to and meets policies 1 – 6 beyond the extent of Alternative A. It would more fully meet policies 1 and 3 through potential soil erosion reduction and aesthetic resource preservation, and satisfy policies 2 and 3 by encouraging a range of visitor enjoyment with a reduced risk to public health or safety.

Why the Preferred Alternative Will Not Have a Significant Effect on the Human Environment

As defined in Title 40, Code of Federal Regulations (CFR) §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse:

The trail reroute, preferred alternative, will have no impacts on air quality, water quality, wetlands, floodplains, threatened or endangered species, candidate species, species of management concern, invasive wildlife, archeological and other cultural resources, lightscapes, prime and unique farmlands, environmental justice or the socioeconomic environment.

The trail reroute alternative will have:

- Short-term, negligible to minor adverse impacts on visitor experience, wilderness lands and values, native and invasive vegetation and native wildlife.
- Long-term, moderate beneficial impacts on soil conservation, scenic and aesthetic values, wilderness lands and values, and visitor safety.
- Short-term, moderate adverse impacts to natural soundscapes, however, they will be intermittent, short-lived (2-3 months), and self-correcting upon conclusion of the construction.
- Short- and long-term, negligible to minor adverse and beneficial impacts on geologic and paleontologic resources, and on ethnographic uses.
- Short-term, minor adverse impacts on park operations and infrastructure improvement, but long-term, moderate to major beneficial impacts on park operations and infrastructure improvement.

Degree of effect on public health and safety:

Rerouting the trail to provide a gentler grade would provide a stable and maintainable surface for hikers and equestrians, and would reduce loss of footing incidents that could result in injury. A gradual grade would reduce personal stresses that could contribute to heat-related illnesses. The rerouted trail would create short- and long-term, minor to moderate, beneficial impacts with respect to visitor safety and accident rates.

This alternative would have a greater beneficial impact on the potential for, and on actual visitor injuries and accidents than the No Action alternative.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

No prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas will be affected by the proposed action.

Rerouting the trail would contribute to a long-term, moderately beneficial impact on park scenic and aesthetic values. The gentler grade proposed in this alternative would wind through natural topography, be less prone to erosion, and easily concealed by natural features which would reduce the visual impact of the trail from other points in the West Dog Canyon viewshed. This action would be coupled with revegetation of the existing trail segment to aid in concealing the old scar.

Public scoping with tribes claiming cultural affiliation with the Guadalupe Mountains generated no response of concern with this proposed alternative to reroute the trail segment. No materials of cultural significance were discovered during the archeological survey of the area of potential effect. This alternative is considered to have minor to negligible, adverse, short- and long-term impacts to ethnographic resources because of the footprint of the new trail segment on the landscape; however, it could have a minor beneficial impact because the new trail would allow easier access for tribal members to accommodate a group's traditional practices or beliefs.

Degree to which the effects on the quality of the human environment are likely to be highly controversial:

The proposed action was found to be not at all controversial during the public review of the EA. There was one phone inquiry from a local citizen about how to obtain a copy of the EA, but no comments received. Two comment letters from non-governmental organizations, the Conservationist's Wilderness Committee in Dallas, and the New Mexico Wilderness Alliance were in favor of the trail reroute alternative. The NM Wilderness Alliance stated, "your plan to reroute a small portion of the Bush Mountain Trail will provide responsible access without significantly impacting the wilderness character of the area."

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks:

The preferred alternative will construct a trail segment on rocky terrain very similar to the other 83 miles of park trail that has been developed. Methods have been developed and will be employed to construct the new segment to a grade and quality that will possess a long interval between required maintenance cycles. There should be no uncertain, unique, or unknown risks to users of the new trail segment, and construction workers will be aware of the risks inherent to using hand tools, winches, drills and the techniques of trail construction.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:

The preferred alternative neither establishes a precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:

The preferred alternative will not result in significant cumulative impacts when added to other past, present, or reasonably foreseeable future actions.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historical resources:

Cultural resources typical of the park span 5 millennia and consist of more than 400 currently recorded archeological sites. Resources of the historic period include remnants of the Butterfield stage route, military encampments, ranching, mining and settler activities. A single, isolated, non-diagnostic, lithic core (stone tool source item) of presumed Native American origin was found during a pedestrian survey within the area of potential effect. After applying the Advisory Council on Historic Preservation's criteria of adverse effects (36 CFR part 800.5, Assessment of Adverse Effects), and taking into consideration there are no previously documented archeological or cultural resources nor were there found to be any archeological or cultural resources of significance as a result of the pedestrian survey within the project area, the National Park Service concludes that there would be no cultural or historic properties affected by the preferred alternative. The Texas Historical Commission concurred with that assessment.

Thirteen tribes claiming cultural affiliation with the Guadalupe Mountains were notified and included in the public review process and two tribal groups returned comments. The Ysleta del Sur Pueblo and Pueblo of Isleta each stated that the preferred alternative would not adversely affect traditional, religious or culturally significant sites of their pueblos, however, they wanted to be notified in the event of inadvertent discoveries during construction.

Field survey of the area of potential effect by the park geologist and other staff found the area not to be rich in fossil-containing rock. The preferred alternative to reroute the trail segment would have minor, adverse, permanent impacts on geologic features in few areas in order to move or remove bedrock for the trail to be placed at a suitable grade. Disturbance of fossil-containing rock would be considered a minor, adverse and beneficial, long-term effect because the project area is not in a fossil-rich portion of the resource but such disturbance could reveal exemplary or new research specimens for the understanding of the paleo-environment.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat:

There are no federal or state listed plant species or candidate plant species for listing, and there are no federal listed or candidate animal species for listing within the project area; however, the Mountain Short-horned Lizard is a state listed animal species that inhabits the project area and is found widely across the park. Although actions under the range of alternatives could temporarily displace individual lizards from the project area, none of the actions would affect the overall population or habitat. There was no formal biological assessment prepared for submission to the US Fish and Wildlife Service because there are no federally listed or candidate species known to occupy the project area.

The Fish and Wildlife Service, consultation response #21450-2006-TA-0148 dated April 18, 2006 concurred with a determination that the proposed action is not likely to adversely affect any federally listed species.

Whether the action threatens a violation of federal, state, or local environmental protection law:

The preferred alternative to reroute the trail violates no federal, state, or local environmental protection law.

Impairment:

In addition to reviewing the list of significance criteria, the NPS determined that implementation of the alternative to reroute the trail (preferred alternative) will not constitute an impairment of resources and values within Guadalupe Mountains National Park. This conclusion is based on a thorough analysis of the impacts described in the EA, the agency comments received, and the professional judgment of the decision-maker in accordance with the NPS's *Management Policies, 2001*. As described in the EA, implementation of the preferred alternative will not result in major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing proclamation of Guadalupe Mountains National Park; (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or (3) identified as a goal in the park's general management plan or other relevant NPS planning documents.

Public Involvement

Public scoping for the development of the alternatives for the EA included a direct mailing on February 3, 2006 to 2 affiliated Indian tribes, 9 non-governmental conservation organizations, and 4 federal and state government agencies responsible for natural and cultural resource protection (all listed in the Consultation and Coordination section of the EA). Public notification that project alternatives were under development was published to the public side of the Planning, Environment, and Public Comment (PEPC) web site on March 10, 2006.

Upon completion of the development of alternatives and the EA, the document was released for public review between March 27 and April 30, 2006. The EA was posted to the public access side of the PEPC web site on March 27, 2006 and was the subject of an expanded direct mailing on March 30, 2006 to 7 federal agencies, 2 state agencies, 13 affiliated tribes, 9 non-governmental conservation organizations, and requests to publish notice of availability to 5 local and major newspapers (all listed in the Consultation and Coordination section of the EA).

Printed copies of the EA were made available for public review and comment at the Pine Springs Visitor Center and the NPS administrative office in Carlsbad, NM.

All comments received were in support of the preferred alternative to construct a ½ mile reroute of the Bush Mountain Trail. The Austin Field Office of the US Fish and Wildlife Service concurred that the preferred alternative was not likely to adversely affect listed species. The Texas Historical Commission consented that no historic properties would be affected and the described project may proceed. The tribes of Isleta Pueblo and Ysleta del Sur Pueblo concurred that the preferred alternative would not adversely affect traditional, religious or culturally significant sites. The Conservationist's Wilderness Committee and the New Mexico Wilderness Alliance were both in favor of the reroute in order to provide responsible access without significantly impacting the wilderness character of the area.

As a result of receiving no comments that would substantially change the development or assessment of the alternatives, the NPS has determined that no changes to the considered alternatives or to the findings of the analysis would be warranted, and it is not necessary to re-write or revise the EA in response to public comment.

Conclusion

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment. Negative environmental impacts that will occur will be negligible to moderate in intensity, and short-term and localized. There are no significant adverse impacts on public health, public safety, threatened or endangered species, historic properties either listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Approved:



Michael D. Snyder
Director, Intermountain Region



Date