CHAPTER 1:
INTRODUCTION

PURPOSE OF AND NEED FOR THE PLAN

INTRODUCTION

This *Draft General Management Plan / Environmental Impact Statement* articulates the management philosophy and establishes the framework for long-term decision making at Guadalupe Mountains National Park. It is intended to guide the actions of the National Park Service (NPS) with regard to the park for a 15- to 20-year period.

Key regulations and guidance documents that were used in preparing this plan and environmental impact statement included the following:

- "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (Council on Environmental Quality 1978)
- *Director's Order #12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision Making* (NPS 2001a)
- *Management Policies 2006* (NPS 2006b)
- *Program Standards for Park Planning* (NPS 2004)
- *Director's Order #41: Wilderness Preservation and Management* (NPS 1999b)

This plan and environmental impact statement present and analyze four alternatives for the future management and use of Guadalupe Mountains National Park. One of the alternatives has been identified as the NPS' preferred alternative. In accordance with regulations and policies, the potential environmental impacts of all alternatives have been identified and assessed and have been documented in this plan.

BRIEF HISTORY AND DESCRIPTION OF THE PARK

Guadalupe Mountains National Park was authorized by an act of Congress (Public Law 89-667) in 1966. The stated goal was to preserve "an area possessing outstanding geological values together with scenic and other natural values of great significance." A copy of this act and other legislation relating to Guadalupe Mountains National Park is provided in appendix A. The park, with 76,293 acres, was formally established in 1972.

In 1978, 46,850 acres of the park's backcountry were formally designated by Congress as wilderness. This action was authorized by Public Law 95-625, the National Parks and Recreation Act of 1978.

On October 28, 1988, Congress passed legislation (Public Law 100-541, 102 Stat. 2720) that enlarged the park by 10,123 acres. The new land included gypsum and quartzose dunes in an area west of and adjacent to the park boundary. Land acquisition was completed in conformance with the park's *Land Protection Plan* (NPS 1992).

All of the land identified in the 1988 legislation was deeded to the National Park Service except 226 acres owned by The Nature Conservancy. The current status and future plans for The Nature Conservancy lands are described later in this chapter under the heading "Relationship of Other Planning Efforts to This General Management Plan."

Today, Guadalupe Mountains National Park includes 86,416 acres in west Texas, just south of the New Mexico border and north of U.S. Highway 62/180. Highway 62/180 is a major tourist thoroughfare and scenic corridor that passes through the southeast corner

of the park. As shown on the Guadalupe Mountains National Park Region map, the park is about 110 miles east of El Paso and 55 miles southwest of Carlsbad, New Mexico. The nearest lodging, food, and gasoline are available at Whites City, New Mexico, about 35 miles northeast of the park on U.S. Highway 62/180.

The Guadalupe Mountains National Park map shows park features. The park's main visitor center is at Pine Springs, shown on the Park Existing Conditions map. Camping is permitted year-round at Pine Springs and Dog Canyon, plus there are 10 backcountry campgrounds (no water). Developed picnic areas are available at Pine Springs, Dog Canyon, McKittrick Canyon, and Frijole Ranch. More than 82 miles of hiking trails range from easy to difficult and offer a wide range of opportunities for exploring.

The Guadalupe Mountains rise more than 3,000 feet from the arid Chihuahuan Desert that surrounds them. El Capitan, the park's most striking feature, is a 1,000-foot-high limestone cliff. Nearby Guadalupe Peak, at 8,749 feet above sea level, is the highest point in Texas.

The Guadalupe Mountains are part of a 400-mile-long, horseshoe-shaped, fossilized reef formation, called the Capitan Reef, that extends through a large area of west Texas and southeastern New Mexico. Most of the reef formation is buried. The longest exposed stretch of the Capitan Reef extends from Guadalupe Mountains National Park northeast nearly to the city of Carlsbad, New Mexico. This 250-million-year-old formation is one of the world's finest examples of an ancient marine fossil reef. The reef's fossil-bearing strata are also associated with the rich "oil patch" of west Texas.

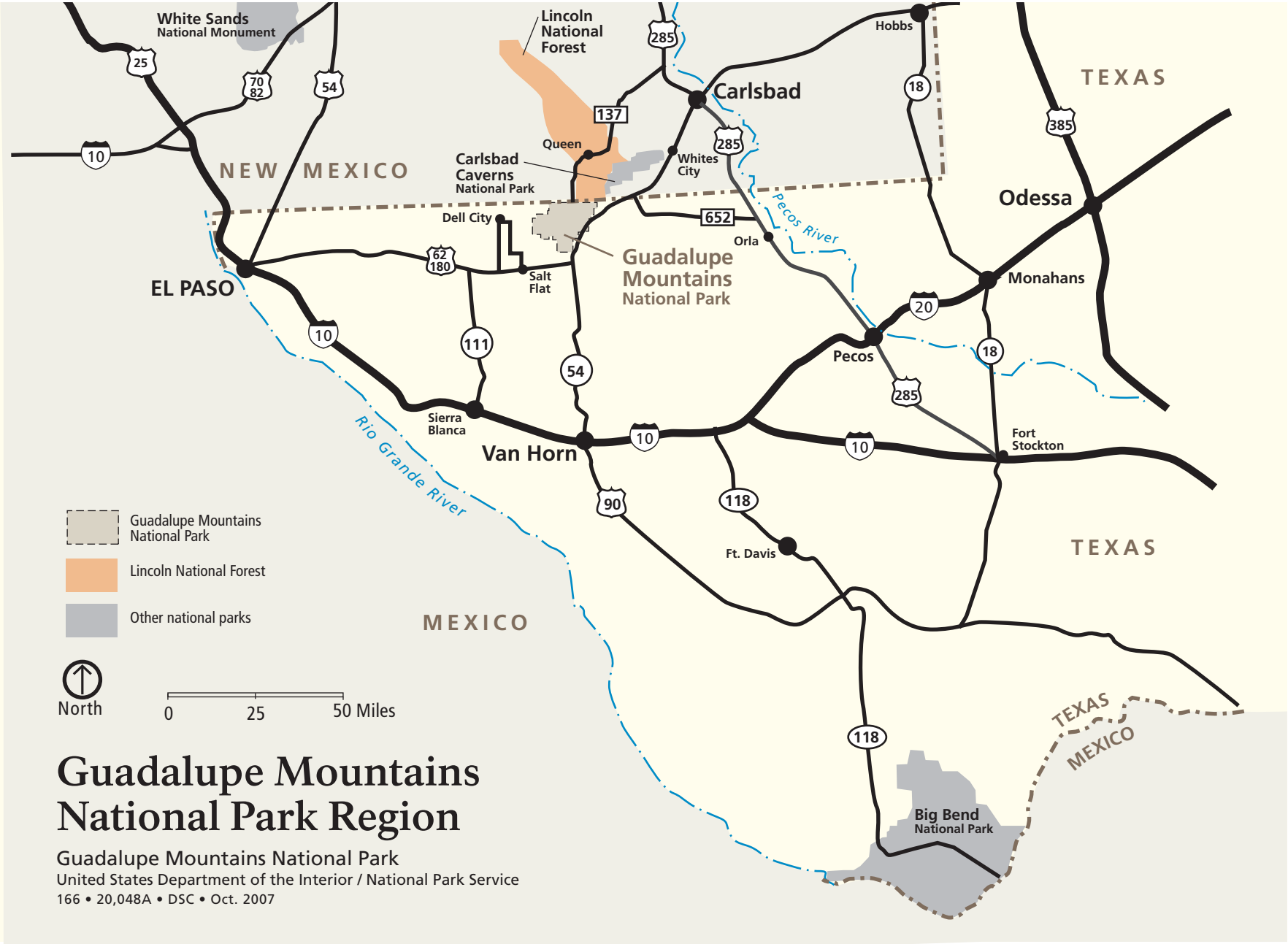
Three internationally significant geological stratotype sections are found in the park. Stratotypes are outstanding examples of exposed rock that represent a certain period of geologic time. Information on the stratotypes is provided in the "Geologic Resources" section in Chapter 3: Affected Environment.

The Guadalupe Mountains have a cultural history that includes native peoples and successive waves of explorers, travelers, and immigrants. Although Spanish explorers passed through the area in 1692, the arid desert and remote highlands of the Guadalupe Mountains were the domain of native Mescalero Apache people until the mid-1800s. Gradually, explorers and pioneers entered the area and navigated by the distinctive landmark of the Guadalupes. The Butterfield Stagecoach began carrying mail and passengers through the Guadalupe Mountains on the nation's first transcontinental mail route in 1858.

Settlers developed ranches around the Guadalupe Mountains in the mid-1800s, leading to periodic conflicts with the Mescaleros. During the Army's military campaign against the Mescaleros, the high country of the Guadalupe Mountains became one of the Mescaleros' last sanctuaries. By 1880, the majority of the Mescaleros were no longer occupying the Guadalupe Mountains region.

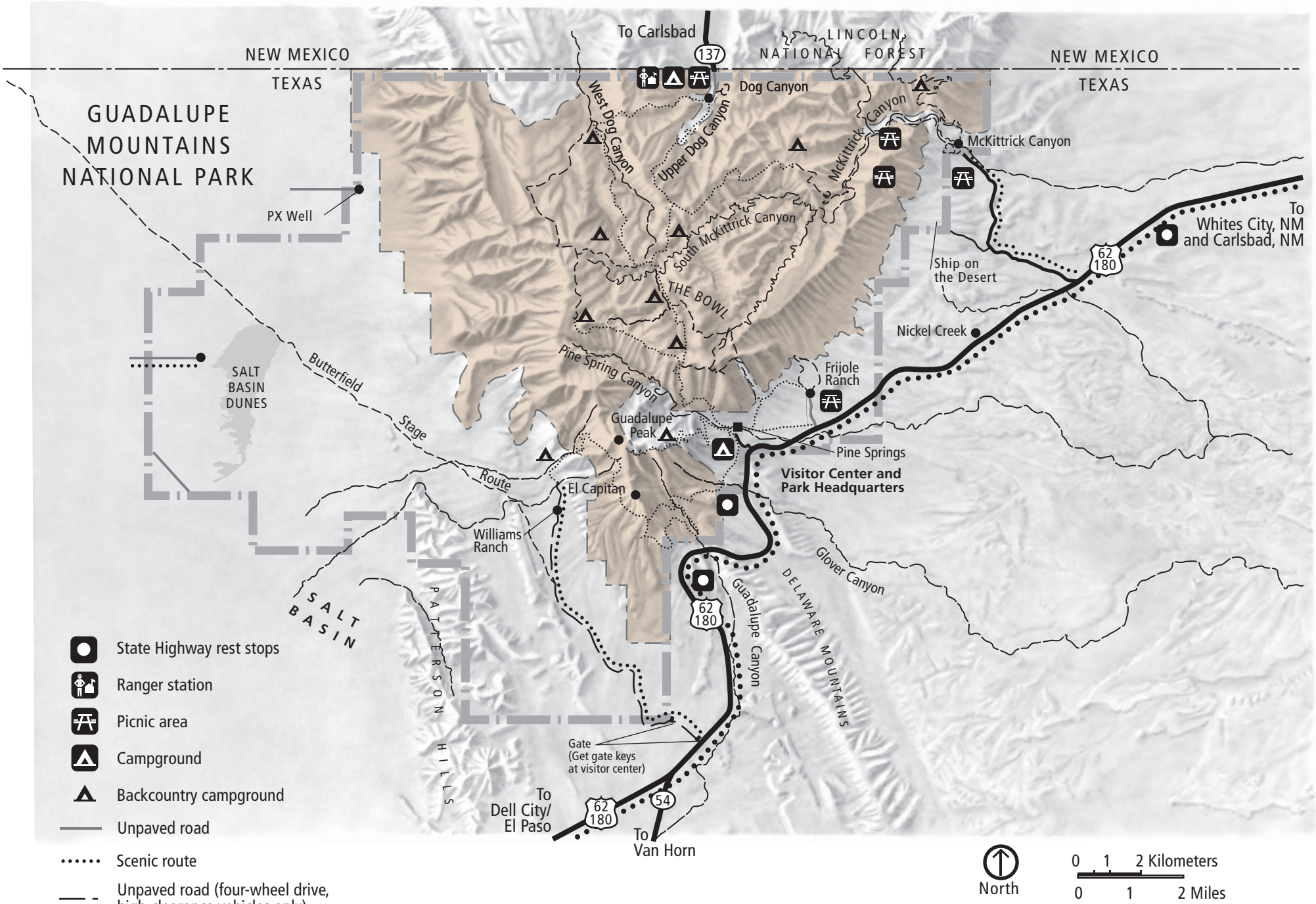
Subsequent years brought more ranchers to the area. In the 1920s and 1930s, J.C. Hunter consolidated the ranches into one large holding. Hunter built structures and an extensive livestock-watering system that pumped spring water from the southeast lowlands to the high country.

Wallace Pratt, a petroleum geologist who was charmed by the Guadalupe Mountains, bought land in McKittrick Canyon in the 1930s and built two residences that still remain. In 1959, Pratt donated his land to the National Park Service. Adjacent lands owned by Hunter and others were eventually purchased and combined into the new Guadalupe Mountains National Park.



Guadalupe Mountains National Park Region

Guadalupe Mountains National Park
United States Department of the Interior / National Park Service
166 • 20,048A • DSC • Oct. 2007



Park Existing Conditions

Guadalupe Mountains National Park

United States Department of the Interior / National Park Service

166 • 20,047A • DSC • Oct 2007

PURPOSE OF THE PLAN

The approved general management plan will be the basic document for managing Guadalupe Mountains National Park for the next 15 to 20 years. The purposes of this general management plan are as follows:

- Confirm the purpose, significance, and special mandates of Guadalupe Mountains National Park.
- Clearly define resource conditions and visitor uses and experiences to be achieved in the park.
- Provide a framework for park managers to use when making decisions about what kinds of facilities, if any, to develop in or near the park and how to best protect park resources, provide quality visitor uses and experiences, and manage visitor use.
- Ensure that this foundation for decision making has been developed in consultation with interested stakeholders and adopted by the NPS leadership after an adequate analysis of the benefits, impacts, and economic costs of alternative courses of action.

The Organic Act (16 *United States Code*, Section 1) is the legislation that established the National Park Service in 1916. The Organic Act provides the fundamental management guidance for all units of the national park system, including Guadalupe Mountains National Park. All management of this park also must conform with the park's establishing legislation and with the other federal laws, agency regulations, and policies. This plan proposes a set of actions that will help the park reach future management conditions that are consistent with this body of federal and policy requirements, as described in table 1.

NEED FOR THE PLAN

The last comprehensive planning effort for Guadalupe Mountains National Park was its 1976 master plan (NPS 1976). Much has changed since then. Examples include the

- evolution of patterns and types of visitor use
- Congressional designation of part of the park as wilderness
- 1988 addition of lands to the national park

Each of these changes has major implications for how visitors access and use Guadalupe Mountains National Park and the facilities needed to support those uses, how resources are managed, and how the National Park Service manages its operations. Therefore, a general management plan is needed to establish goals for the next 15 or 20 years and to broadly define how those goals will be achieved.

This plan also is needed to meet the requirements of the National Parks and Recreation Act of 1978 and NPS policy. Both mandate the development of a general management plan for each unit in the national park system.

PLAN REVIEW AND PUBLIC COMMENT

After the distribution of the *Draft General Management Plan / Environmental Impact Statement,* there will be a 60-day public review and comment period. After the comment period closes, the NPS planning team will evaluate substantive comments from other federal agencies, tribes, organizations, businesses, and individuals and will incorporate appropriate changes into a *Final General Management Plan / Environmental Impact Statement*. The final plan will include letters from governmental agencies, any substantive comments on the draft document, and NPS responses to substantive comments.

Table 1: Conditions to Be Achieved at Guadalupe Mountains National Park Based on Servicewide Mandates and Policies

Topic	Conditions to Be Achieved at Guadalupe Mountains National Park
Relations with private and public organizations, owners of adjacent land, and governmental agencies	The park is managed as part of a greater ecological, social, economic, and cultural system. Good relations are maintained with adjacent landowners, surrounding communities, and private and public groups that affect, and are affected by, the park. The park is managed to resolve external issues and concerns and to ensure that park values are not compromised. Because the park is an integral part of a larger regional environment, the National Park Service works cooperatively with others to anticipate, avoid, and resolve potential conflicts, protect park resources, and address mutual interests in the quality of life for community residents. Regional cooperation involves federal, state, and local agencies, American Indian tribes, neighboring landowners, and all other concerned parties.
Government-to-government relations between American Indian Tribes and Guadalupe Mountains National Park	The National Park Service and tribes culturally affiliated with the park maintain positive, productive, government-to-government relationships. Park managers and staff respect the viewpoints and needs of the tribes, continue to promptly address conflicts that occur, and consider American Indian values in park management and operation.
Natural resources: air quality	Air quality in the park meets national ambient air quality standards for criteria pollutants. Park air quality is maintained or enhanced with no significant deterioration. Nearly unimpaired views of the landscape both within and outside the park are present. Scenic views are substantially unimpaired.
Natural resources: backcountry	Backcountry use is managed in accordance with a backcountry management plan (or other plan addressing backcountry uses) that is designed to avoid unacceptable impacts on park resources or adverse effects on visitor enjoyment of appropriate recreational experiences. The National Park Service seeks to identify acceptable limits of impacts, monitors backcountry use levels and resource conditions, and takes prompt corrective action before unacceptable impacts occur.`
Natural resources: ecosystem management	The park is managed holistically, as part of a greater ecological, social, economic, and cultural system.
Natural resources: exotic species	The management of populations of exotic plant and animal species, up to and including eradication, is undertaken wherever such species threaten park resources or public health and when control is prudent and feasible.
Natural resources: fire management	Park fire management programs are designed to meet resource management objectives prescribed for the various areas of the park and to ensure that the safety of firefighters and the public are not compromised. All wildland fires are effectively managed using the appropriate management strategy, including fire use, considering resource values to be protected and firefighter and public safety, using the full range of strategic and tactical operations as described in an approved fire management plan.
Natural resources: floodplains	Natural floodplain values are preserved or restored. Long-term and short-term environmental effects associated with the occupancy and modification of floodplains are avoided. When it is not practicable to locate or relocate development or inappropriate human activities to a site outside the floodplain or where the floodplain will be affected, the National Park Service • prepares and approves a statement of findings in accordance with Director's Order 77-2 • uses nonstructural measures as much as practicable to reduce hazards to human life and property while minimizing impacts on the natural resources of floodplains. • ensures that structures and facilities are designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 *Code of Federal Regulations* 60).

Table 1: Conditions To Be Achieved At Guadalupe Mountains National Park Based On Servicewide Mandates And Policies (Continued)

TOPIC	CONDITIONS TO BE ACHIEVED AT GUADALUPE MOUNTAINS NATIONAL PARK
Natural resources: general natural resources / restoration	Native species populations that have been severely reduced in or extirpated from the park are restored where feasible and sustainable. Populations of native plant and animal species function in as natural condition as possible except where special considerations are warranted.
Natural resources: geologic resources	The park's geologic resources are preserved and protected as integral components of the park's natural systems. Caves and karst are managed in accordance with approved cave management plans to perpetuate the natural systems associated with the caves and karst.
Natural resources: land protection	Land protection plans are prepared to determine and publicly document what lands or interests in land need to be in public ownership, and what means of protection are available to achieve the purposes for which the park was created.
Natural resources: lightscape management and night sky	Excellent opportunities to see the night sky continue to be available. Artificial light sources both within and outside the park do not unacceptably adversely affect opportunities to see the night sky.
Natural resources: native vegetation and animals	All native plants and animals in the park are maintained as part of the natural ecosystem.
Natural resources: natural soundscapes	The National Park Service preserves the natural ambient soundscapes, restores degraded soundscapes to the natural ambient condition wherever possible, and protects natural soundscapes from degradation resulting from human-caused noise. Disruptions from recreational uses are managed to provide a high-quality visitor experience that is consistent with the goal to preserve or restore the natural quiet and natural sounds.
Natural resources: paleontological resources	Paleontological resources, including both organic and mineralized remains in body or trace form, are protected, preserved, and managed for public education, interpretation, and scientific research.
Natural resources: soils	The National Park Service actively seeks to understand and preserve the soil resources of the park, and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources. Natural soil resources and processes function in as natural a condition as possible, except where special considerations are allowable under policy.
Natural resources: threatened and endangered species	Federal and state-listed threatened and endangered species and their habitats are protected and sustained. Native threatened and endangered species populations that have been severely reduced in or extirpated from the park are restored where feasible and sustainable.
Natural resources: water resources	Surface water and groundwater are protected and water quality meets or exceeds all applicable water quality standards. Programs and facilities are maintained and operated to avoid pollution of surface water and groundwater. Watersheds are managed as complete hydrologic systems. This includes minimizing human-caused disturbance to the natural upland processes that deliver water, sediment, and woody debris to streams. Natural fluvial processes are allowed to proceed unimpeded, and stream processes that create habitat features are protected. Where stream manipulation is unavoidable, maximum use is made of techniques that are visually unobtrusive and that protect natural processes.

Table 1: Conditions To Be Achieved At Guadalupe Mountains National Park Based On Servicewide Mandates And Policies (Continued)

TOPIC	CONDITIONS TO BE ACHIEVED AT GUADALUPE MOUNTAINS NATIONAL PARK
Natural resources: wetlands	The natural and beneficial values of wetlands are preserved and enhanced. A "no net loss of wetlands" policy is implemented, with an associated goal of net gain of wetlands through the restoration of previously degraded wetlands. The destruction or modification of wetlands is avoided. New construction in wetlands does not occur wherever there is a practicable alternative. The National Park Service compensates for unavoidable adverse impacts on wetlands by restoring wetlands that have been previously degraded.
Natural resources: wilderness	Wilderness characteristics and values are retained and protected. Visitors continue to find opportunities for solitude and primitive, unconfined recreation. Signs of people remain substantially unnoticeable.
Cultural resources: archeological resources	Archeological sites are identified and inventoried, and their eligibility for listing in the National Register of Historic Places determined and documented. The qualities that contribute to the listing or eligibility for listing are protected in accordance with the *Archeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (Secretary of the Interior 1983) (unless it is determined through a formal process that disturbance or natural deterioration is unavoidable). Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that disturbance or natural deterioration is unavoidable. In such cases, the site is mitigated and professionally documented and excavated for data recovery. The resulting artifacts, materials, and records are curated and conserved in the park's museum collections and archives. Concurrence for mitigation is in consultation with the Texas state historic preservation officer (and American Indian tribes, if applicable). Some archeological sites that can be adequately protected may be interpreted to the visitor.
Cultural resources: historic structures	Historic structures are inventoried and their integrity and eligibility are evaluated under National Register of Historic Places criteria. The qualities that contribute to the listing or eligibility for listing of historic structures in the National Register of Historic Places are protected in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties: with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (Secretary of the Interior 1995a) (unless it is determined through a formal process that disturbance or natural deterioration is unavoidable).
Cultural resources: ethnographic resources	Appropriate cultural anthropological research is conducted in cooperation with groups associated with the park. The National Park Service accommodates access to and ceremonial use of American Indian sacred sites by American Indian religious practitioners and avoids adversely affecting the physical integrity of sacred sites. NPS general regulations on access to and use of natural and cultural resources in the park are applied in an informed, balanced manner that is consistent with park purposes, does not unreasonably interfere with American Indian use of traditional areas or sacred resources, and does not result in the degradation of park resources. American Indians and other individuals and groups linked by ties of kinship or culture to ethnically identifiable human remains, sacred objects, objects of cultural patrimony, and associated funerary objects are consulted when such items may be disturbed or are encountered on park lands. All ethnographic resources listed in the National Register of Historic Places or determined eligible for listing are called traditional cultural properties and are protected through tribal consultation. If disturbance of such resources is unavoidable, formal consultation with the Texas historic preservation officer and the Advisory Council for Historic Preservation, if necessary, and as appropriate with American Indian tribes, is conducted.

Table 1: Conditions To Be Achieved At Guadalupe Mountains National Park Based On Servicewide Mandates And Policies (Continued)

TOPIC	CONDITIONS TO BE ACHIEVED AT GUADALUPE MOUNTAINS NATIONAL PARK
Cultural resources: ethnographic resources (continued)	The April 29, 1994, Presidential memorandum on "Government-to-Government Relations with Native American Tribal Governments," codified at 3 *Code of Federal Regulations* 1007 (1995), states in part, "Each executive department and agency shall consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments before taking actions that affect federally recognized tribal governments. All such consultations are to be open and candid so that all interested parties may evaluate for themselves the potential impact of relevant proposals." Section 5.2.1 of *Management Policies 2006* (NPS 2006b) states in part that "traditionally associated peoples should be consulted about … proposed NPS actions that may affect the treatment of, use of, and access to cultural and natural resources with known or potential cultural meaning for the groups." The identities of community consultants and information about sacred and other culturally sensitive places and practices will be kept confidential when research agreements or other circumstances warrant.
Cultural resources: cultural landscapes	Cultural landscape inventories are conducted to identify landscapes potentially eligible for listing in the National Register of Historic Places, and to assist in future management decisions for landscapes and associated cultural and natural resources. The management of cultural landscapes focuses on preserving the physical attributes, biotic systems, and use when that use contributes to their historical significance. The preservation, rehabilitation, restoration, or reconstruction of cultural landscapes is undertaken in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (Secretary of the Interior 1995b).
Cultural resources: museum collections	All museum collections (objects, artifacts, specimens, and manuscript collections) are identified and inventoried, catalogued, documented, preserved, and protected. Provision is made for access to and use of items in the collections for exhibits, research, and interpretation. The qualities that contribute to the significance of collections are protected in accordance with established standards.
Visitor use and experience: park use requirements	Park resources are conserved "unimpaired" for the enjoyment of future generations. Visitors have opportunities for types of enjoyment that are uniquely suited and appropriate to the superlative natural and cultural resources found in the park. No activities occur that would cause derogation of the values and purposes for which the park was established. For all zones, districts, or other logical management divisions within the park, the types and levels of visitor use are consistent with the desired resource and visitor experience conditions prescribed for those areas. Park visitors have opportunities to understand and appreciate the significance of the park and its resources, and to develop a personal stewardship ethic. To the extent feasible, programs, services, and facilities in the park are accessible to and usable by all people, including those with disabilities.
Visitor use and experience: commercial services	All commercial services are authorized, are necessary and appropriate, and are economically feasible. Appropriate planning is done to support commercial services authorization.
Visitor use and experience: public health and safety	Within the constraints of the Organic Act to not impair resources, and any other limitations on capability, the National Park Service and its concessioners, contractors, and cooperators seek to provide a safe and healthful environment for visitors and employees. The park staff strives to identify recognizable threats to safety and health and to protect property by applying nationally accepted standards. Consistent with mandates and the prohibition on impairment, the park staff will reduce or remove known hazards and/or apply appropriate mitigation measures, such as closures, guarding, gating, education, and other actions.

Table 1: Conditions To Be Achieved At Guadalupe Mountains National Park Based On Servicewide Mandates And Policies (Continued)

TOPIC	CONDITIONS TO BE ACHIEVED AT GUADALUPE MOUNTAINS NATIONAL PARK
Other topics: sustainable design and development	Visitor management facilities are harmonious with park resources, compatible with natural processes, aesthetically pleasing, functional, as accessible as possible to all segments of the population, energy-efficient, and cost-effective. All decisions regarding park operations, facilities management, and development in the park, from the initial concept through design and construction through operation and maintenance, reflect principles of resource conservation. Thus, all park developments and park operations are sustainable to the maximum degree possible and practical. New developments and existing facilities are located, built, and modified according to the *Guiding Principles of Sustainable Design* (NPS 1993) or other similar guidelines. Management decision making and activities throughout the park use value analysis, which is mandatory for all Department of the Interior bureaus, to help achieve this goal. Value planning, also called value analysis, value engineering, and value management, is used when value methods are applied on general management and lower-tier planning activities.
Other topics: transportation to and within the park	Visitors have reasonable access to the park. Connections exist from the park to regional transportation systems, as appropriate. Transportation facilities in the park provide access for the protection, use, and enjoyment of park resources. They preserve the integrity of the surroundings, respect ecological processes, protect park resources, and provide high visual quality and a rewarding visitor experience. The National Park Service participates in all transportation planning forums that may result in links to the parks or impacts on park resources. This may involve working with federal, tribal, state, and local agencies on transportation issues to address park access and transportation connectivity.
Other topics: utilities and communication facilities	Park resources or public enjoyment of the park are not denigrated by nonconforming uses. Telecommunication structures do not jeopardize the park's mission and resources. No new nonconforming use or rights-of-way are permitted through the park without specific statutory authority and approval by the director of the National Park Service or his representative, and are permitted only if there is no practicable alternative to such use of NPS lands.

Following distribution of the *Final General Management Plan / Environmental Impact Statement* and a 30-day no-action period, a record of decision approving a final plan will be signed by the NPS regional director. The record of decision documents the NPS selection of an alternative for implementation. The plan can then be implemented.

IMPLEMENTATION OF THE PLAN

Full implementation of the approved plan is anticipated within the 15- to -20-year life span of the plan. Although some aspects of the approved plan may begin immediately, others, such as new facility development, will depend on future funding availability. It should be understood that the approval of the plan does not guarantee that the funding and staff needed for plan implementation will be available.

Additional studies and more detailed implementation planning, design, and environmental compliance frequently are required before proposed actions can be carried out. These steps often involve stakeholder consultation. In addition, specific actions may be required to achieve desired conditions and long-term goals. For example

- Construction planning, design, and environmental compliance, including project-specific National Environmental Policy Act document preparation, would be completed before new facilities were developed.
- Appropriate permits would be obtained before implementing actions that would impact wetlands.
- Appropriate federal and state agencies would be consulted concerning actions that could affect a threatened or endangered species.
- All actions that could affect historic structures or historic ranching elements would include consultation with the state historic preservation officer.
- American Indian tribes and the state historic preservation office would be consulted regarding actions that could affect prehistoric archeological sites.

Western Escarpment from Dunes

FOUNDATION FOR PLANNING AND MANAGEMENT

LEGISLATIVE INTENT

Public Law 89-667, passed October 15, 1966, authorized the establishment of Guadalupe Mountains National Park "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." Formal establishment of the park, with a size of 76,293 acres, occurred on September 30, 1972.

Congress formally designated 46,850 acres of Guadalupe Mountains National Park as wilderness in 1978. Based on the Wilderness Act of 1964, the intent of this action was to create within the park "an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain."

Expansion of the park's boundary occurred on October 28, 1988 (Public Law 100-541, 102 Stat. 2720) with the addition of 10,123 acres on the west side of the park. This area is scientifically important for its

- plant associations (possessing a representative segment of Chihuahuan Desert)
- rare plant species
- white gypsum and red quartzose dunes and associated ancient lakebed
- archeological resources

These laws, which are included in appendix A, show the legislative intent for the park. They are the basis for the purpose, significance, mission statements, and management goals identified in this plan.

PARK PURPOSE

National park purpose statements reaffirm the reasons for which the national park was set aside as a unit of the national park system and provide the foundation for national park management and use. The purposes of Guadalupe Mountains National Park are as follows:

1. To preserve an area possessing outstanding, globally unique geological features together with scenic, natural, and cultural values of great significance.

2. To manage a designated wilderness area where the earth and its community of life are untrammeled, and where humans are visitors who do not remain.

3. To provide opportunities for visitors to understand, enjoy, appreciate, and experience the unique nature of the park.

4. To provide educational and research opportunities that enhance stewardship and wider understanding of resources.

PARK SIGNIFICANCE

National park significance statements capture the essence of the national park's importance to our country's natural and cultural heritage. Significance statements do not inventory national park resources, but instead answer questions such as

- Why are Guadalupe Mountains National Park's resources distinctive?
- What do they contribute to our natural or cultural heritage?

Defining a national park's significance helps managers make decisions that preserve the resources and values necessary to accomplish that park's purpose. The significance of Guadalupe Mountains National Park is as follows.

1. Guadalupe Mountains National Park is situated at the western terminus of the

world's most extensive and well-exposed fossil reef, including related shelf and basinal rocks, which have achieved international designation as the world's best example of Middle Permian geology.

a) A tremendous earth fault on the west side of the park attracts major geological interest because it exposes numerous classical depositional settings superimposed over a long interval of geologic time.

b) The western area of the park contains excellent examples of playa depositional systems, including evaporite minerals, salt lake shorelines, and areas of aeolian dunes.

2. Stark contrasts between mountains and desert, overwhelming vistas stretching as far as the eye can see, brilliant fall colors created by the unusually plentiful vegetation, deep rock-ribbed canyons and sparkling white dunes contribute to the extraordinary scenic beauty of the Guadalupes.

3. Rugged and windswept, the Guadalupe Mountains' wilderness provides opportunities to experience the unaltered dynamic of life in a remote landscape resplendent in its isolated beauty and inspirational solitude.

4. Guadalupe Mountains National Park is an island within an arid sea where an interface of Chihuahuan Desert, Rocky Mountain, and Great Plains flora and fauna was isolated by environmental changes. It contains relict and endemic montane, canyon, and aquatic species in a delicate balance created by elements of physical geography, latitude, climate, and hydrology.

5. The cultural resources of the Guadalupes reflect the continuous association of peoples characterized by spiritual connections and adaptations to a dynamic environment.

PARK MISSION

The mission for the park is a visionary statement that conveys the essence of the park qualities to be protected and understood. Fulfillment of this mission reinforces a bond between people and their natural and cultural heritage.

> Guadalupe Mountains National Park is dedicated to the preservation of outstanding geological, scenic, cultural, and other natural values, in a place of untrammeled wilderness, where man does not remain. The park is committed to safeguarding these resources for the inspiration, education, and enjoyment of the American public and the world.

PARK VISION

The Guadalupe Mountains are globally unique geologic resources with a rich history of human interaction that will be managed as wilderness and adjacent wildlands with opportunities for scientific study, visitor experience and education consistent with resource preservation, ecosystem management, and the park's rugged character.

PRIMARY INTERPRETIVE THEMES

Primary interpretive themes are the most important stories, concepts, and ideas about the park that will be communicated to the public. These themes are intended to be the basis of intellectual and emotional connections with park resources that will contribute to a more meaningful experience for visitors.

Geology

Guadalupe Mountains National Park preserves the heart and western terminus of the Capitan Reef, a limestone fossil reef that

contains the world's best example of Middle Permian geological formations. The reef formations are highly exposed and, thus, have extraordinary scenic and scientific value.

Brachiopods

Ecological Communities

Four major ecological communities, including montane forest, desert, southern plains, and riparian canyon, overlap here. Diverse plants and animals exist largely because of physical geography, latitude, climate, and hydrologic processes, including relict and endemic species isolated by environmental change.

Environmental Protection

Park environmental communities are inseparable from surrounding areas; the health and survival of related natural and human communities are linked in complex and shifting relationships. Issues such as air pollution, habitat loss, acid rain, and decreasing biodiversity affect and concern park visitors and neighbors. Park resource management and the park's interpretation and education programs seek to preserve diverse, sustainable communities.

Cultural History

The park preserves remnants from thousands of years of human occupation and activities, including American Indian, Spanish, African-American, and Anglo-American exploration, settlement, transportation, and trade. Scientific research and oral traditions document diverse livelihoods, stewardship practices, adaptations, and spiritual connections to the environment and offer invaluable perspectives to inform contemporary management choices.

Wilderness

Much of the park is designated wilderness, which is managed to retain its primeval character and natural conditions. This wilderness provides a foundation for healthy, diverse ecosystems and offers humans opportunities for reflection, challenge, research, respite, and renewal.

DESIRED CONDITIONS FOR PARK MANAGEMENT

Management goals for Guadalupe Mountains National Park that will be addressed by the general management plan alternatives were developed for resource protection, visitor experience, and operational effectiveness. These goals are-consistent with requirements of the Government Performance and Results Act of 1993.

Preserve Park Resources

- The ecologic balance and biodiversity of the park's natural resources are protected, restored, and maintained.
- The park's cultural resources are preserved, stabilized, and protected.

- The nonrenewable geological and paleontological resources are protected, conserved, and maintained.
- The park's designated wilderness and all other identified backcountry lands will be managed and maintained as wilderness.
- Management decisions and interpretation are based on sound research, scientific information, resource databases, and best management practices.
- Scenic vistas from within and outside the park boundaries are protected from significant intrusions.

Provide for Public Understanding and Experience of Park Resources

- Guadalupe Mountains National Park visitors will have the opportunity to learn the information necessary for a safe, enjoyable visit and to gain an understanding and appreciation of the park's cultural and natural resources.
- Guadalupe Mountains National Park visitors will have safe and appropriate facilities and services, including educational and recreational opportunities, that address their needs, regardless of the length of stay.

Ensure Organizational Effectiveness

- The work environment promotes employee development, productivity, creativity, trust, safety, and well being. The park staff works together as an efficient, effective team to achieve park goals and objectives.
- Adequate resources, including infrastructure, staffing, and budget are available to adequately operate, maintain, and protect the park.
- Cooperative relationships and partnerships with surrounding local communities, agencies, and organizations support mutual goals without compromising the integrity of the park's natural, cultural, or scenic resources.
- Park stakeholders, partners, cooperators, and neighbors contribute to the decision-making process that guides effective management of the park's resources.
- Guadalupe Mountains National Park is an effective, cooperative partner in the stewardship of natural and cultural resources beyond the park's boundaries.

RESEARCH OPPORTUNITIES

The park's natural and cultural resources offer invaluable opportunities for research in a variety of disciplines. These include, but may not be limited to, geology, paleontology, biology, ecology, history, archeology, ethnography, and anthropology.

SPECIAL MANDATES AND ADMINISTRATIVE COMMITMENTS

Special mandates and administrative commitments refer to park-specific requirements. These formal agreements are often established concurrently with the creation of a unit of the national park system. Guadalupe Mountains National Park does not have any special mandates or administrative commitments.

SERVICEWIDE MANDATES AND POLICIES

This section identifies what must be done at Guadalupe Mountains National Park to comply with federal laws and with the policies of the National Park Service. These are the measures that the National Park Service must meet, regardless of the alternative selected for the long-term management of the park. Examples of servicewide mandates and policies include

- federal legislation, such as the Endangered Species Act, National Historic Preservation Act, and Americans with Disabilities Act

- executive orders, such as those relating to wetlands (No. 11990), Indian sacred sites (No. 13007), and environmental justice (No. 12898)
- the policies of the National Park Service that are presented in director's orders and related documents and are available on the Internet at <http://home.nps.gov/applications/npspolicy/DOrders.cfm>

Many of the laws and executive orders that guide national park management, with their legal citations, are identified in appendix B. Most are applicable throughout the nation, such as requirements for clean air and clean water, protection of resources such as wetlands and migratory birds, and access opportunities for individuals with impaired mobility.

Some of the laws are applicable solely or primarily to units of the national park system. These include the 1916 Organic Act that created the National Park Service, the General Authorities Act of 1970, the act of March 27, 1978 relating to the management of the national park system, and the 1998 National Parks Omnibus Management Act.

The NPS Organic Act (16 *United States Code* Chapter 1, Subchapter I, Section 1) provides the fundamental management direction for all units of the national park system. The National Park Service is required to

> promote and regulate the use of the Federal areas known as national parks, monuments, and reservations…by such means and measure as conform to the fundamental purpose of said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life 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 National Park System General Authorities Act (16 *United States Code* Chapter 1, Subchapter I, Section 1a-1 *et sequens*) affirms that while all national park system units remain "distinct in character," they are "united through their interrelated purposes and resources into one national park system as cumulative expressions of a single national heritage." The act makes it clear that the NPS Organic Act and other protective mandates apply equally to all units of the system. Further, amendments state that NPS management of park units should not result "in derogation of the purposes and values for which the Park was established."

The NPS mission is based on the Organic Act and other legislation. It states

> The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

Even under the alternative of no action / continue current management, the National Park Service must meet all servicewide mandates and policies. Therefore, the alternatives in this plan focus primarily on the desired conditions that are *not* included in servicewide mandates and policies.

Table 1 summarizes the conditions that must be achieved at Guadalupe Mountains National Park, based on servicewide mandates and policies. Appendix C expands on this information by citing the sources of law or policy and giving examples of the types of actions being pursued by NPS staff. Revisions and updates to the NPS' management policies and directors orders will supersede some of those referenced here. Continuing compliance with revisions to these directives will ensure that this general management plan will remain applicable throughout its intended life.

RELATIONSHIP OF OTHER RESOURCE PLANNING AND MANAGEMENT TO THIS GENERAL MANAGEMENT PLAN

Guadalupe Mountains National Park is in Culberson and Hudspeth Counties in west Texas. Most properties surrounding the park are privately owned and are used for agricultural and residential purposes. The Lincoln National Forest is adjacent to part of the park's northern border, and there is Bureau of Land Management property to the northwest and northeast. Both the states of Texas and New Mexico own parcels of land adjacent to or near the park boundary, and the state of Texas owns the lands associated with U.S. Hwy 62/180. There are no tribal lands nearby.

The Lands with High Resource Values map identifies land within and outside Guadalupe Mountains National Park that are important nationally or even internationally for their geologic resources or scenic landscape features. As shown on the map, many of these resources are outside the park boundaries, which primarily follow the boundaries of the original Guadalupe Mountain Ranch. Many of these features contribute to the unique qualities of the park and the enjoyment of visitors. Also, land uses outside the park boundary could impact park resources and values. As a result, the National Park Service needs to work cooperatively with surrounding private and public landowners to protect resource and scenic values.

Several plans and/or management actions could affect or would be influenced by the approved general management plan for Guadalupe Mountains National Park. These plans and actions are associated with multiple governmental jurisdictions and private interests surrounding the park. Planning and other management actions and their relationship to Guadalupe Mountains National Park are described briefly here.

LOCAL JURISDICTIONS

Neighboring local jurisdictions have adopted dark sky ordinances that will help protect the regional visibility of the night sky. The National Park Service will continue to implement dark sky protection measures within the park and will work with local jurisdictions on measures that encourage the control of night lighting.

Local planning in Dell City and Queen could encourage development through such actions as extending city utility services. However, as described in "The Socioeconomic Environment" in Chapter 3, only limited growth is expected in the populations of the counties that contain these communities between now and 2020. No current local planning is in conflict with park planning.

COUNTY JURISDICTIONS

Guadalupe Mountains National Park lies within the Texas counties of Culberson and Hudspeth and adjoins Eddy and Otero Counties in New Mexico. The governments of these counties could affect the park through a variety of regulations and policies, such as those regarding land use, roads, night skies, and service improvements. Texas counties do not have zoning authority, and no current county planning is in conflict with the park management recommendations in this plan.

The rapidly growing metropolitan area associated with El Paso is expanding eastward, and has the potential to influence diverse aspects of the park, including dark skies, visitor numbers and expectations, and transportation. The National Park Service

will continue to work with Hudspeth County on growth-related issues that could affect Guadalupe Mountains National Park. Although Otero County is adjacent to the park's north boundary, the lands next to the park are under federal jurisdiction and will not be further analyzed in this document.

SPECIAL DISTRICTS

Groundwater in the area is managed by the Culberson County Groundwater Conservation District and the Hudspeth County Underground Water Conservation District #1. These agencies could affect groundwater quality and quantity outside and within the park by decisions and policies on groundwater pumping for agricultural and other uses, such as export to urban areas.

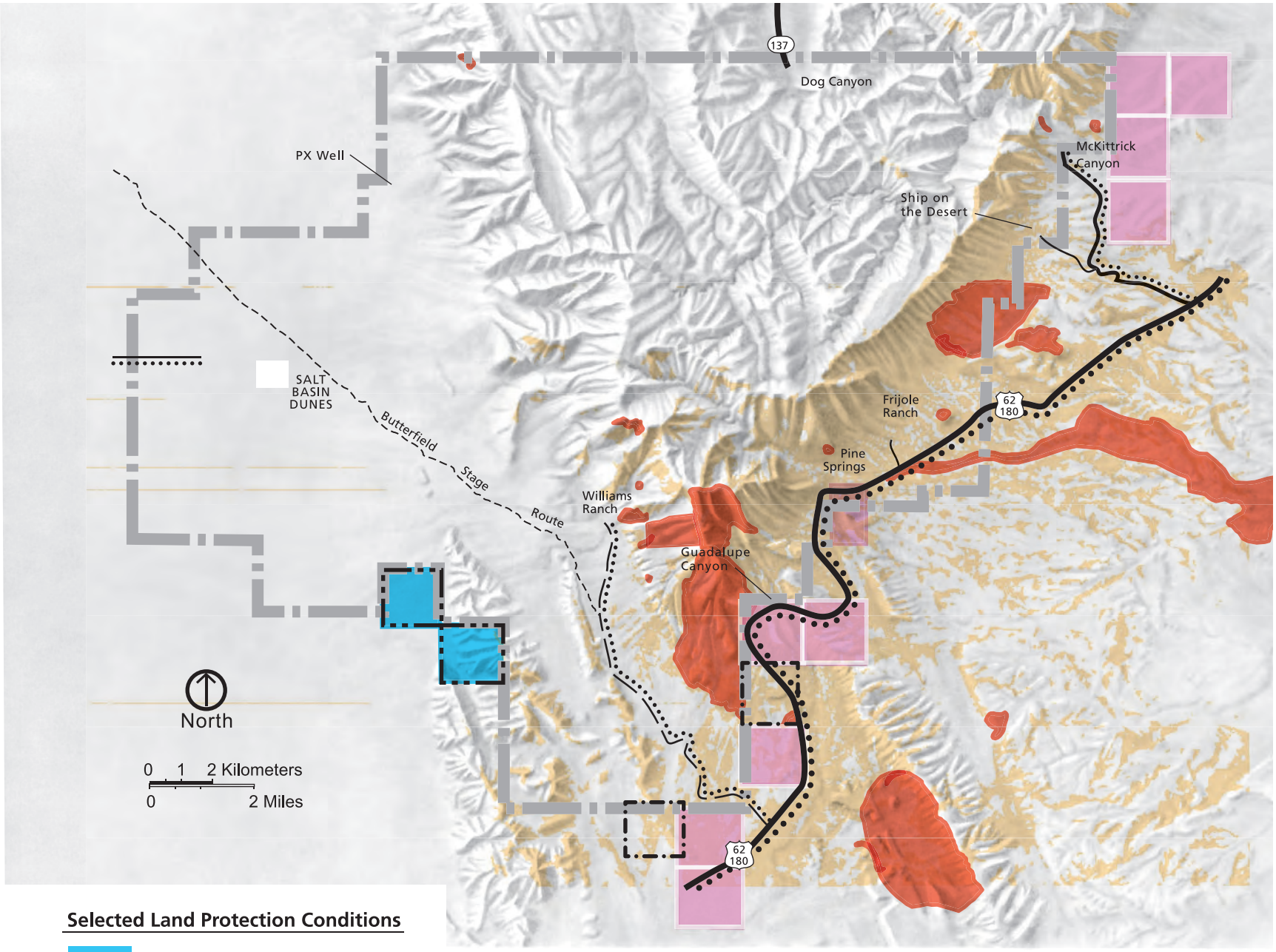
The Texas Legislature, in Senate Bill 1, established regional water planning groups to address regional issues regarding water quality and quantity. The park is within the Far West Texas Regional Water Planning Group, which will be developing regional plans on water management into the future.

The Rio Grande Council of Governments develops policies and plans regarding regional land use planning, growth, economic development, and services. Plans and policies of this group could affect the air, water, and scenic resources within and near the park, and also could influence socioeconomic and transportation issues.

PRIVATE ENTITIES

Much of the land around Guadalupe Mountains National Park is privately owned. Therefore, the National Park Service must work with private landowners to advance its goals while ensuring that the property rights of its neighbors are protected. Cooperative actions of the National Park Service with private entities that relate to the future of the park include the following.

- The National Park Service will continue to collaborate with surrounding landowners to negotiate preservation agreements, and to acquire (through willing sellers) or accept donation of lands considered critical to protecting important park-related resources from incompatible uses. These include, but are not limited to, paleontological sites and significant habitat for important species of plants and animals.
- As they become available from willing sellers or through donation, the National Park Service will seek to acquire or accept donation of lands considered critical to protecting the scenic integrity of adjacent park-related resources, including scenic landscape features.
- The National Park Service will seek agreements with landowners, including the subdivisions along the park boundary, to protect the scenic resources of the park, including vistas of the park from highways and other locations outside the park boundary. These agreements could include development of partnerships and acquisition of land rights to protect important viewsheds both within and adjacent to the park. Among other areas, the National Park Service would like to work with landowners to protect views of the salt flats.
- The National Park Service will seek agreements with landowners to provide protection for important geologic resources outside the park boundaries. These include the Getaway member of the Cherry Canyon Formation (a type locality for several fossil species) and the Reef Trail member of the Bell Canyon Formation. Agreements could include development of partnerships and acquisition of land rights to protect important resources.



Selected Land Protection Conditions

- Scenic Easement (existing)
- Miscellaneous Geological Resources within Sections
- Areas Visible from Highway
- Geologic Stratigraphic Type Sections
- Scenic Route
- Private Land
- Park Boundary

Lands with High Resource Values

Guadalupe Mountains National Park

United States Department of the Interior / National Park Service

166 • 20,054A • DSC • Oct 2007

- The National Park Service will seek to formalize access across private land at the Guadalupe Pass trailhead to provide public access to park lands and trails, including the Salt Basin Overlook Trail and El Capitan Trail.
- The National Park Service will continue to work with local governments and neighboring landowners to secure continued access to PX Well.
- The National Park Service will continue to work with oil and gas pipeline companies to mitigate impacts of pipeline transmissions through the park and to provide for public safety.
- The National Park Service will collaborate with surrounding landowners and energy developers to mitigate impacts from the construction of wind energy generation facilities in the vicinity of the park to ensure that they would not adversely impact cultural or natural resources.
- The National Park Service will continue to use signs and fencing to discourage park visitors from trespassing on private lands.

Plans and actions of private entities that could affect Guadalupe Mountains National Park include the following.

The Nature Conservancy. In the 1970s, the gypsum dunes in what is now the western part of Guadalupe Mountains National Park were being threatened with damage by off-road vehicle use and other trespassing. To ensure the protection of at least part of the dunes, The Nature Conservancy purchased a 226-acre area in 1980.

The Nature Conservancy lands subsequently were deeded to the Hudspeth Directive for Conservation, but a conservation easement was retained by The Nature Conservancy. A memorandum of understanding between The Nature Conservancy, Hudspeth Directive for Conservation, and NPS provides for management of these lands. The long-range intent is that these lands eventually will be transferred to NPS ownership.

This block of property was included in the land identified in the 1988 legislation to expand Guadalupe Mountains National Park. However, it remains a private inholding within the park. When the ownership transfer is completed, the lands will be assigned to the same management zones as the NPS lands that surround them (see management zoning for the alternatives in Chapter 2).

Blue Origin. Blue Origin, a Seattle-based company, is developing a rocket launching facility about 30 miles south of the park. The development will launch sub-orbital rockets that enable individuals to go into space and back. Facilities will include a rocket launching and landing pad and modest support structures. Aspects of this project that could affect Guadalupe Mountains National Park include the following.

- The project will add dust and other air borne particles to the atmosphere, which might affect air quality, particularly visibility, in the park.
- The launching of rockets could create a visual and sound intrusion on the wilderness areas of the park, especially at night when it could affect the night sky and disturb the otherwise quiet wilderness environment.
- Spaceport operations might result in additional traffic, including hazardous materials, traveling through the park.
- The presence of the spaceport could attract other development to the region, with its related impacts

Wallacetown. A developer has purchased the small town of Cornudas, approximately 50 miles west of the park. The owner intends to develop a theme park and resort community at this location. The owner already has moved a historic town development to the site and is presenting concerts and other entertainment. Future plans include the expan-

sion of the existing café and the addition of stores, condominiums, and a motel/hotel, spa, and golf course.

If this development were to succeed, it would have the potential to change regional demographics. This would increase the demand for water in the region, alter transportation needs, increase traffic on the highway through the park, and possibly alter park visitation patterns. Depending on the size of the development, it also could reduce the visibility of the night sky in the wilderness areas of the park.

Subdivisions. Two subdivisions have been platted on the park's boundaries. The Hudspeth County subdivision is east of Dell City adjacent to the west boundary of the park near the Salt Basin Dunes. The Culberson County subdivision surrounds the south parcel of land that is owned by the NPS and that is proposed for incorporation into the park by a boundary change. Commercial entities have extended utilities, such as telephone lines and electrical power, to these subdivisions. These subdivisions have the potential to reduce visibility by producing dust from increased vehicle traffic, and outdoor lighting could reduce the visibility of night skies in the park.

STATE JURISDICTIONS

Planning decisions made in the states of Texas and New Mexico could impact park management with respect to natural and cultural resource protection and management, the development of minerals rights, and transportation. The responsibilities of key state agencies as they relate to Guadalupe Mountains National Park are summarized below.

The **Texas Commission on Environmental Quality** is the lead environmental agency responsible for protecting the state's natural resources, including air and water, and the safe management of waste. This agency works with the National Park Service on environmental concerns such as air quality, prescribed burning, water quality, and hazardous materials.

The **Texas Water Development Board** works with park, state, and regional planners on water issues. It also is the agency responsible for monitoring wells and managing water and wastewater systems to ensure compliance with public health laws.

The **Texas Historical Commission** is responsible for protecting and preserving the state's historic and prehistoric resources for use, education, enjoyment, and economic benefit. The **state historic preservation officer** is the executive director of the Texas Historical Commission and is responsible for formal consultation with the National Park Service under the National Historic Preservation Act.

The **Texas Department of Transportation** is responsible for Highway 62/180, which runs through and adjacent to the park. This includes providing directional signs on roads leading to the park. Park staff work with the Texas Department of Transportation to ensure that roadside pulloffs, which provide places for visitors to enjoy many spectacular views of the park, continue to be available. Future actions of this agency could include providing additional pulloffs, if they are determined to be desirable.

The **Texas Railroad Commission** oversees the Texas oil and gas industry. This includes gas utilities, pipeline and rail safety, safety in the liquefied petroleum gas industry, and the surface mining of coal and uranium. The National Park Service works with the Texas Railroad Commission in complying with safety regulations regarding the transport and storage of propane, pipeline safety, and the management and sealing of old oil wells.

The **Texas Parks and Wildlife Department** is responsible for the management and conservation of natural and cultural resources. Activities include providing outdoor recreation, managing parks and historic areas, and managing and protecting wildlife and wildlife habitat. Agency staff members work with the National Park Service to manage wildlife, ensure that species of management concern are considered in park activities, and coordinate wildlife and wildlife habitat issues that relate to the park.

The **Texas Archeological Research Laboratory** keeps the archeological site files for the state. It assigns all site numbers for archeological sites in the park.

The **Texas Forest Service** is responsible for forest resources and wildland fire management. They coordinate local agency assistance and provide support to counties during wildland fire emergencies. At Guadalupe Mountains National Park, this agency works with the National Park Service in the coordination of the Big Tree Program and forest pest concerns, and in coordination of interagency wildland fire activities.

The **Texas General Land Office** manages state-owned lands throughout Texas, including School Board Lands, which it is charged with managing to generate revenue. This agency manages the state-owned lands adjacent to the park boundary and historically has leased them for grazing and recreational purposes, including hunting. However, Texas General Land Office is considering more intensive development that would produce higher revenues, including leasing them to corporate entities for water mining. These lands have also been considered for the installation of large, wind power generators, and the potential continues for the construction of wind farms in the Patterson Hills and between Pine Springs and Guadalupe Canyon.

The **New Mexico Department of Transportation** is responsible for the roads leading into Dog Canyon and for related park directional signs.

The **New Mexico Fish and Game Commission** is responsible for the state's wildlife and aquatic life. This agency works with the National Park Service on concerns regarding game animals and predators along the state boundary adjacent to Guadalupe Mountains National Park.

The **New Mexico Forestry Department** manages forest resources and wildland fire. This agency has agreements to work with the National Park Service on interagency wildland fire activities along the park's northern boundary. They are the lead agency in the formation of the Joint Power Operating Plan for directing interagency wildland fire activities.

FEDERAL JURISDICTIONS

The management of Guadalupe Mountains National Park is affected by the plans and/or management actions of the following federal agencies.

Coordination with other units of the **National Park Service** is required, particularly with regard to Carlsbad Caverns National Park. Both parks are within the greater Guadalupe Mountains ecosystem, and they share many management concerns.

The **Bureau of Land Management** manages the Carlsbad Resource Area, which adjoins the park's northeast boundary, and the Las Cruces Resource Area, along the park's northwest boundary, in New Mexico. Two wilderness study areas, including one in each resource area, are near the park boundary.

The **U. S. Forest Service's** Lincoln National Forest, Guadalupe Ranger District in New Mexico shares more than 4 miles of bound-

ary with the park. A designated wilderness study area in the Guadalupe Ranger District is adjacent to the park boundary. Jurisdiction over the significant riparian and canyon resource of North McKittrick Canyon is shared by this agency and the National Park Service.

The **U. S. Fish and Wildlife Service** is responsible for working with the National Park Service in managing and implementing the Endangered Species Act within the park.

The **Natural Resources Conservation Service** works with the National Park Service to protect the park's soil resources.

MULTI-AGENCY ACTIVITIES

The protection of resources such as air, water, and scenery will require cooperative action among many public and private entities. Examples of coordinated planning and management for these regional-type resources include the following.

Existing park-owned scenic easements will be maintained in perpetuity.

The National Park Service will seek agreements with landowners to provide protection for important scenic resources outside the park boundaries. These particularly include lands in the Guadalupe Pass area, Delaware Mountains, Patterson Hills, Salt Flats, and Guadalupe Escarpment north of the park. Agreements could include development of partnerships and the acquisition of land rights, such as easements, to protect important viewsheds both within and adjacent to the park.

The development of renewable wind energy in the area could involve individual structures or groups of structures. The National Park Service will work with landowners and energy developers to minimize impacts on scenic views. The National Park Service may also be able to provide information on avoiding or mitigating impacts on other important natural and cultural resources.

The National Park Service will work with area landowners and energy companies to mitigate the impacts of oil and gas development facilities and access roadways. Particularly in the Greater Otero Mesa area, such development could adversely impact scenic views and air quality within the park.

The National Park Service will continue to work with the Texas Water Development Board, Far West Texas Regional Water Planning Group, groundwater conservation districts, and surrounding landowners to minimize or avoid impacts on park resources. There is concern that activities such as groundwater exports out of the Dell City / Salt Basin area could adversely impact groundwater quality, groundwater quantity, and groundwater-related formations, such as the Salt Flats and the dune formations.