



National Park Service
U.S. Department of the Interior
Big Thicket National Preserve
Kountze, Texas

Reestablish an Administration Facility

Environmental Assessment

May 2006



Reestablish an Administration Facility

Environmental Assessment

Summary

Big Thicket National Preserve (Preserve) proposes to reestablish an administration facility (headquarters). The former administration facility was a leased building situated in Beaumont, Texas, which incurred substantial damage from Hurricane Rita in September of 2005, causing the space to be temporarily unusable for Preserve operations. Shortly after the hurricane, in November 2005, the lease for this building expired and it was not renewed.

Without a central administration facility, Preserve employees that would normally be working within proximity of each other are currently working in a variety of locations, some as far apart as different towns. Some employees are situated in Beaumont in what is referred to as the Beaumont Annex, which is intended to serve as a Preserve storage facility. Other employees are situated in various buildings within the visitor center complex, which is located north of Kountze, in Hardin County. These buildings include the visitor center, the maintenance building, and two temporary trailers set up on the gravel lot adjacent to the maintenance building. The current proposal is needed to reestablish a permanent administration facility and to consolidate Preserve staff and administrative functions in one location.

This Environmental Assessment evaluates two alternatives; a no action alternative and an action alternative. The no action alternative is the current situation, and is primarily used as a baseline assessment from which to analyze the action alternative. The action alternative consists of expanding the existing maintenance facility which is situated within the visitor center complex, located approximately seven miles north of Kountze at the junction of U.S. 69 and FM 420. The expanded facility would serve as a combined administration and maintenance facility.

This Environmental Assessment has been prepared in compliance with the National Environmental Policy Act (NEPA) to provide the decision-making framework that 1) analyzes a reasonable range of alternatives to meet project objectives, 2) evaluates potential issues and impacts to Big Thicket National Preserve's resources and values, and 3) identifies mitigation measures to lessen the degree or extent of these impacts. Resource topics that have been addressed in this document because the resultant impacts are measurable include visitor use and experience and park operations. All other resource topics have been dismissed because the project would result in negligible or minor effects to those resources. No major effects are anticipated as a result of this project. Public scoping was conducted to assist with the development of this document, and the majority of commenters supported the proposed action to establish an administration facility near the existing visitor center.

Public Comment

If you wish to comment on the Environmental Assessment, you may do so online at the National Park Service website "Planning, Environment, and Public Comment" <http://parkplanning.nps.gov>, or you may mail comments to Todd Brindle, Superintendent; Big Thicket National Preserve; 6044 FM 420; Kountze, Texas 77625. This Environmental Assessment will be on public review for 30 days ending **June 15, 2006**. Please note that NPS makes all comments, including names and addresses of respondents who provide that information, available for public review following the conclusion of the NEPA process. Individuals may request that the NPS withhold their name and/or address from public disclosure by stating so prominently at the beginning of your comment. Commenters using the website can make such a request by checking the box "keep my contact information private." NPS will honor such requests to the extent allowable by law, but you should be aware that NPS may still be required to disclose your name and address pursuant to the Freedom of Information Act.

TABLE OF CONTENTS

PURPOSE AND NEED	1
Introduction.....	1
Purpose	1
Need	4
Relationship of the Proposed Action to Previous Planning Efforts.....	5
Scoping.....	6
Impact Topics Retained for Further Analysis	6
Visitor Use and Experience.....	6
Park Operations	7
Impact Topics Dismissed From Further Analysis.....	8
Geology and Soils	9
Vegetation	9
Wildlife.....	10
Special Status Species	10
Water Resources	11
Wetlands	11
Floodplains.....	12
Wilderness and Biosphere Reserve.....	12
Historic Structures.....	12
Archeological Resources	13
Cultural Landscapes	13
Ethnographic Resources.....	13
Museum Collections.....	14
Air Quality.....	14
Soundscape Management	14
Lightscape Management.....	15
Socioeconomics	15
Prime and Unique Farmlands	15
Indian Trust Resources	16
Environmental Justice	16
ALTERNATIVES CONSIDERED	17
Alternatives Carried Forward	17
Alternative A – No Action	17
Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions.....	17
Alternatives Considered and Dismissed.....	19
Mitigation Measures	20
Alternative Summaries.....	22
Identification of the Environmentally Preferred Alternative	24
ENVIRONMENTAL CONSEQUENCES.....	26
Visitor Use and Experience	27
Intensity Level Definitions	27

Impacts of Alternative A – No Action 28

Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions..... 28

Park Operations 30

Intensity Level Definitions 30

Impacts of Alternative A – No Action 30

Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions..... 31

CONSULTATION AND COORDINATION 33

Internal Scoping..... 33

External Scoping 33

Agency Consultation..... 33

List of Recipients and Public Review 34

List of Preparers 34

REFERENCES..... 36

LIST OF TABLES

Table 1 – Summary of Alternatives and Extent to Which Each Alternative Meets Project Objectives 22

Table 2 – Environmental Impact Summary by Alternative..... 24

LIST OF FIGURES

Figure 1 – Big Thicket National Preserve in Eastern Texas 2

PURPOSE AND NEED

Introduction

Big Thicket National Preserve (Preserve) is located in eastern Texas, northeast of Houston. The Preserve was established by the Act of October 11, 1974, Pub. L. No. 93-439, 88 Stat. 1254, codified as amended at 16 U.S.C. §698-698e, as the nation's first Preserve "to assure the preservation, conservation, and protection of the natural, scenic, and recreational values of a significant portion of the Big Thicket area in the State of Texas and to provide for the enhancement and public enjoyment thereof." The Preserve encompasses more than 97,000 acres comprised of nine land units and six water corridors located in Jefferson, Hardin, Liberty, Polk, Tyler, Jasper and Orange Counties (Figure 1).

The Big Thicket, often referred to as a "biological crossroads," is a transition zone where southwestern deserts, central plains, eastern forests and southeastern swamps intersect. In recognition of this diversity, the Preserve was designated a Biosphere Reserve in 1981 by the United Nations Educational, Scientific and Cultural Organization (UNESCO). It shares this distinction among 332 biosphere reserves in 85 countries worldwide. The biosphere reserve program (Man and the Biosphere Program) is based on the concept that it is possible to achieve a sustainable balance between the conservation of biological diversity, economic development and maintenance of associated cultural values. Furthermore, on July 26, 2001, the American Bird Conservancy recognized the Preserve as a Globally Important Bird Area joining thousands of others around the world.

The purpose of this Environmental Assessment is to examine the environmental impacts associated with reestablishing an administration facility (headquarters). The current proposed action is to expand the existing maintenance facility which is situated in the visitor center complex, located approximately seven miles north of Kountze at the junction of U.S. 69 and FM 420. The expanded facility would serve as a combined administration and maintenance facility. This Environmental Assessment has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ) (40 CFR 1508.9), and the National Park Service Director's Order (DO)-12 (*Conservation Planning, Environmental Impact Analysis, and Decision-making*).

Purpose

Until recently, General Services Administration (GSA) had leased for the National Park Service a building in Beaumont, Texas to serve as the administration facility for Big Thicket National Preserve. Primary administrative functions and staff were situated in this building for a number of years. In September of 2005, this building incurred substantial damage from Hurricane Rita, causing the space to be temporarily unusable for Preserve operations. Soon after the hurricane, the lease for the building expired in November of 2005, and it was not renewed at the request of the National Park Service.

Without a central administration facility, Preserve employees that would normally be working within proximity of each other are currently working in a variety of locations, some as far apart as different towns. Some employees are situated in Beaumont in what is referred to as the Beaumont Annex, which is intended to serve as a Preserve storage facility. Other employees are situated in various buildings within the visitor center complex, which is located north of Kountze, in Hardin County. These buildings include the visitor center, the maintenance building, and two temporary trailers set up on the gravel lot adjacent to the maintenance building. The two trailers accommodate the majority of displaced administrative employees. Having employees in so many different locations and in temporary accommodations is not conducive to productivity or efficient park operations; therefore, the purpose of the project is to reestablish a permanent administration facility to centralize administrative functions and staff in one location.

Figure 1 – Big Thicket National Preserve in Eastern Texas

See separate map on the Planning, Environment, and Public Comment website at:
<http://parkplanning.nps.gov>.

This page intentionally left blank.

Need

Preserve employees are currently working out of a number of different locations and facilities, only some of which meet current federal and state health and safety requirements for employee work areas. The structures of concern with regard to health and safety include the two temporary trailers which are currently set up near the maintenance facility. Employees have been working in these trailers essentially since Hurricane Rita damaged the former administration facility in September 2005. Sub-standard conditions of the trailers include drafty windows and doors, poor air circulation, improperly sealed windows that allow wind/water to penetrate, lights that burn out quickly, and broken floor tiles. They are also at risk from severe weather such as thunderstorms and hurricanes. These problems compromise the health and safety of employees; pose an uncomfortable work environment; and could lead to the damage of government equipment from exposure to the elements. Therefore, the project is needed to reestablish an administration facility that meets federal and state health and safety requirements for employee work areas and creates a safe and healthy work environment for employees.

The two temporary trailers do not provide adequate space for administrative functions and staff. Typical office equipment such as copiers, file cabinets, and work tables are too large to reasonably or comfortably fit in the trailers. Further, the trailers do not have space for meeting rooms, training space, visitor offices, or break areas. They also have no secured space for ranger activities such as weapon storage, evidence storage, or a gun repair area. Therefore, the project is needed to reestablish an administration facility that provides adequate and functional space for administrative and management staff and activities.

Employees are current working in a variety of locations which is not conducive to productivity. Without a central administration facility, administrative staff and functions are situated in different areas, as far apart as different towns, making it difficult for employees to efficiently meet with each other and access central files. Extra time and money has been spent for employees to coordinate among themselves out of these various locations. Displaced and “invaded” employees do not have a “home base”, creating a sense of disorder and “homelessness”. Therefore, to increase employee productivity and decrease tension among employees, the project is needed to consolidate administrative and management functions and staff into one location.

The former administration building in Beaumont was situated in a high crime part of town, and did not have a security system to deter intruders. Employees were cautioned about coming into the building after dark because it was not considered safe. In 2005, a number of burglaries occurred on the property including a vehicle break-in and two building break-ins which resulted in the loss of roughly \$20,000 worth of government and personal property. Additional robberies involving smaller losses have also occurred over the past ten years. In addition, the trailers, from which many employees are currently working, have minimal security systems in place. Therefore, the project is needed to reestablish an administration facility that improves security.

The temporary trailers lack sufficient NPS identity and signage. Without proper NPS signage, these temporary facilities do not have an identity that identifies them as the headquarters facility. Therefore, the project is needed to reestablish an administration facility that improves NPS identity. Another identity issue is related to location. The former administration facility was situated in Beaumont, Texas in an industrial area of town. This location did not promote the identity of the Preserve and its resources. Therefore, promoting an appropriate identity for an administration facility with regards to its location is also a goal of the project.

The former administration facility was located in an industrial part of Beaumont, away from the visitor center complex and outside the boundaries of the Preserve. The building itself was a typical, non-descript office building, and a number of employees and visitors were concerned that the administration facility was not in the resource. As such, the building did not have that “feel” that comes with working in a park and being surrounded by scenic landscapes, wildlife, and other resources. The former

administration building and location were un-NPS-like. The trailers are a temporary solution, and also lack aesthetic appeal, sustainable practices, and a “sense of arrival”. Nor do the trailers incorporate sustainable design or practices, and they are not compatible with the surrounding environment. Therefore, another project objective is to reestablish an administration facility that improves architectural character and incorporates sustainable practices in accordance with NPS Management Policies.

The former administration facility in Beaumont was a leased space, costing the National Park Service approximately \$100,000 per year. The money for leasing the building was not taken from the Preserve’s base funds; rather it was taken from the general NPS budget. All associated costs such as utilities and repairs to the building were either paid from the NPS budget or the owner, so the Preserve did not pay for any part of the leased building. The lease expired in November 2005, and it was not renewed. The current temporary trailers set up near the maintenance facility cost the National Park Service approximately \$4,000 per month. Leasing a building is typically less financially practical than owning a building, so the project is needed to maximize long-term cost effectiveness.

The temporary trailers do not have fire protection or suppressions systems, nor are they accessible to the mobility-impaired. Therefore, the project is needed to reestablish an administration facility that provides fire protection and suppression and complies with facility accessibility requirements.

The placement of the temporary trailers within the Preserve near the maintenance facility has the visual landscape and park operations. Therefore, the project is needed to reestablish an administration facility that minimizes impacts to and avoids impairment of park resources.

Based on the purpose and need of the project, the objectives for the proposal are to establish an administration facility that 1) Meets federal and state health and safety requirements for employee work areas and creates a safe and healthy work environment for employees; 2) Provides adequate and functional space for administrative and management staff and activities; 3) Consolidates administrative and management functions and staff into one location; 4) Improves security; 5) Improves NPS identity; 6) Improves architectural character and incorporates sustainable practices in accordance with NPS Management Policies; 7) Maximizes long-term cost effectiveness; 8) Provides fire protection and suppression; 9) Complies with facility accessibility requirements; and 10) Minimizes impacts to and avoids impairment of park resources.

Relationship of the Proposed Action to Previous Planning Efforts

The proposal to reestablish an administrative facility for Big Thicket National Preserve is consistent with National Park Service *Management Policies* (NPS 2000a). These policies call for facilities to be, “...harmonious with park resources, compatible with natural processes, esthetically pleasing, functional, energy and water efficient, cost-effective, universally designed, and as welcoming as possible to all segments of the population. Park facilities and operations will demonstrate environmental leadership by incorporating sustainable practices to the maximum extent practicable in planning, design, siting, construction, and maintenance”. These policies would be applied throughout design and construction of the proposed action.

This proposal is also consistent with previous planning efforts for the Preserve including the 1980 *General Management Plan* (NPS 1980) which recommends that the headquarters complex be centrally located to the Preserve units on or near U.S. 69/287 in the vicinity of its intersection with FM 420. The plan further states that the headquarters facility be 1) part of the interpretive facility complex (i.e., the visitor center complex), 2) be located in a natural setting, consistent with visitor expectations, and away from developed or incorporated areas, and 3) be situated near established communities that can provide services to visitors, absorb the impact of visitors with minimal disruption to normal community activities, and reduce capital risk for private investment due to the agglomeration of business activities. The objectives set forth for this project and the alternatives carried forward are intended to meet these goals.

An *Environmental Assessment to Construct a Visitor Center and Administrative Headquarters* was developed and approved in November 1991 (NPS 1991a). This Environmental Assessment recommended that a complex be constructed to serve as the Preserve's headquarters. Facilities were to include a 20,000 square foot visitor center and administrative facility, a 15,000 square foot central maintenance shop building, storage space, utilities, and paved roads, walks, and parking covering approximately 5.5 acres. It recommended that it be 32 miles northwest of the existing leased headquarters building in Beaumont, on U.S. 69/287 (in the visitor center complex). This maintenance facility was constructed under this Environmental Assessment, but the administration facility was not. The visitor center was constructed in 2001. This project is consistent with the planning efforts of this previous proposal to establish an administrative facility within the visitor center complex.

Scoping

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

Internal scoping was conducted by an interdisciplinary team of professionals from Big Thicket National Preserve and the National Park Service Intermountain Regional Office. Interdisciplinary team members met on April 11, 2006 to discuss the purpose and need for the project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable future projects that may have cumulative effects; and possible mitigation measures. Over the course of the project, team members also conducted site visits to view and evaluate the proposal to reestablish an administration facility.

External scoping was initiated with the distribution of a scoping letter and an internet posting to inform the public, stakeholders, agencies, and tribes of the proposal to reestablish an administration facility, and to generate input on the preparation of this Environmental Assessment. Press releases were also distributed to local media. A number of newspapers, and radio and television stations covered the story. During the 30-day scoping period, seventeen responses were received. The majority of commenters supported the proposed action to locate the administration facility near the visitor center. A few commenters supported moving the administration facility to the existing research station in Saratoga, while others supported moving the administration facility to Sour Lake. Still another commenter was concerned about the socioeconomic effects of employees in terms of commuting times and expenses. The tribe requested to receive a copy of the document for review. No other comments were received during scoping. More information regarding scoping can be found in *Comments and Coordination*.

Impact Topics Retained for Further Analysis

Impact topics for this project have been identified on the basis of federal laws, regulations, and orders; National Park Service *2001 Management Policies*; and National Park Service knowledge of resources at Big Thicket National Preserve. Impact topics that are carried forward for further analysis in this Environmental Assessment are listed below along with the reasons why the impact topic is further analyzed. For each of these topics, the following text also describes the existing setting or baseline conditions (i.e. affected environment) within the project area. This information will be used to analyze impacts against the current conditions of the project area in the *Environmental Consequences* chapter.

Visitor Use and Experience

According to *2001 Management Policies*, the enjoyment of park resources and values by people is part of the fundamental purpose of all park units (NPS 2000a). The National Park Service is committed to providing appropriate, high quality opportunities for visitors to enjoy the parks, and will maintain within the parks an atmosphere that is open, inviting, and accessible to every segment of society. Further, the National Park Service will provide opportunities for forms of enjoyment that are uniquely suited and

appropriate to the superlative natural and cultural resources found in the parks. The National Park Service *2001 Management Policies* also state that scenic views and visual resources are considered highly valued associated characteristics that the National Park Service should strive to protect (NPS 2000a).

Visitation to Big Thicket National Preserve has been up and down over the past ten years. In 1996, the Preserve saw an estimated 111,626 visitors. That number declined over the next few years to 63,276 visitors in 2000. The visitor center was constructed in 2001 and visitation numbers again rose reaching 98,526 in 2001. Toward the end of 2005, visitation to the Preserve dropped, because of the damage to the region that was caused by Hurricane Rita. So far, in 2006, visitation, at least to the visitor center, is below average. (Please note that some of these visitation numbers before 2005 are inaccurate due to some problems with previous tracking methods).

The visitor center is situated in what is referred to as the visitor center complex about seven miles north of Kountze, in Hardin County on U.S. Highway 69 at the junction of FM 420. The visitor center complex contains the visitor center and the maintenance facility, plus roads that provide access to each these two facilities. The road to the visitor center is paved and the one to the maintenance facility is gravel. A paved parking area is also available outside the visitor center for visitors, while a separate gravel parking area is available for Preserve staff who work in the maintenance facility.

The Preserve is comprised of nine land units and six water corridors within seven counties, so providing appropriate visitor activities can be challenging due to the distances between the units. Activities available to visitors in the Preserve include picnicking, hiking, fishing, hunting, birding, photography, backcountry camping, horseback riding, and boating.

The primary visitor activity in the proposed project area (i.e., the visitor center complex) is visiting the visitor center. The visitor center provides opportunities for the visitor to orient him/herself to the Preserve including exhibits, an orientation film, and a gift shop. The visitor center currently receives approximately 32 people a day. The number of visitors in the visitor center has increased each year. Trees and vegetation surround the visitor center and the maintenance facility, so some birding may occur in this area as well. Picnics may also take place on the porch of the visitor center. There are no established trails or camping in the visitor center complex.

The proposed project will change the visual setting of the visitor center complex for the long-term. Construction noise and dust will temporarily and adversely impact visitor enjoyment to a measurable degree. For these reasons, this topic is carried forward for further analysis.

Park Operations

Until August of 2005, the National Park Service leased a privately-owned building in Beaumont that served as the administrative headquarters for Big Thicket National Preserve. Approximately 14-18 administrative staff were situated in this building, and that number was dependent upon the number of seasonal employees at any given time. In 2005, the building and the annex were leased for \$173,541/year, providing almost 11,000 square feet of space which was sufficient for these employees and most administrative functions. The lease for the building formerly used as the administrative facility expired in November of 2005 and was not renewed.

In September of 2005, before the lease expired, Hurricane Rita caused substantial damage to the building which forced the Preserve to find temporary facilities for its administrative staff and functions. Administrative employees are currently working in a variety of temporary locations until a new administration facility is established:

- A few employees moved into the nearby Beaumont Annex building, which is also a leased space. The original intent for leasing the Beaumont Annex was to store equipment and vehicles. It is primarily a garage facility. Currently, approximately 3-10 employees are working in the Beaumont

Annex, depending on the number of seasonals. For 2006, the cost of leasing the annex is expected to be \$67,993/year.

- The Superintendent and his executive assistant moved to the classroom of the visitor center. Because this room is now being used as staff offices, there is no classroom to use for student field trips, interpretive programs, or for displaying the Preserve's collection of black and white photos.
- The majority of employees are temporarily stationed in two trailers set up near the existing maintenance facility in the visitor center complex. Approximately 4-5 employees are working out of each trailer. Temporary offices have been established in the trailers; however, they are cramped and offer limited space to comfortably function. The trailers have limited security and fire protection, and restrooms are basic. Of the three total restrooms in the two trailers, two of them are being used for storage, and the third restroom does not permit solid waste due to limitations of the temporary septic system. The cost for leasing these two trailers is roughly \$4,000/month.
- The information technology (IT) specialist is situated in the hallway of the maintenance facility which was originally to be used as a mail and filing area. Now this area contains the main Preserve server, other computer equipment, and a desk for the IT specialist.
- Interpretive employees are currently situated in the visitor center. The visitor center contains approximately 2 offices to serve the interpretive staff.

Some administrative staff were not displaced from the former administration facility because their permanent reporting locations are situated elsewhere. These staff include maintenance, fire, and a few rangers, as follows:

- The existing maintenance facility contains approximately 12,000 square feet of space, and is constructed of concrete with a steel frame. This facility contains employee offices for maintenance staff, a conference/break room, restrooms, and eight bays or garages for equipment storage and repair. Additional storage is situated on the second story of these bays. Currently, there are about 5-7 maintenance employees that permanently occupy this space.
- The fire staff is currently situated in Woodville, in a complex shared with the Texas Forest Service. Woodville is considered a central location for fire activities, particularly because of the current partnership with the state. Approximately 14 personnel, plus or minus seasonal work crews are stationed at this complex.
- Approximately 2-3 rangers occupy another building in Woodville that is currently being leased. Rangers are situated in this location to have shorter response times to this area of the Preserve.
- Some staff normally work out of the Annex in Beaumont including two rangers and the exotic plant management team (2 permanent and up to 6 seasonals).

The proposal to reestablish an administration facility will have a measurable effect on the Preserve's staff and how/where they conduct their work. For these reasons, the topic of park operations has been carried forward for further analysis in this document.

Impact Topics Dismissed From Further Analysis

Some impact topics have been dismissed from further consideration, as listed below. The rationale for dismissing these specific topics is stated for each resource.

Geology and Soils

According to the National Park Service's *2001 Management Policies*, the National Park Service will preserve and protect geologic resources and features from adverse effects of human activity, while allowing natural processes to continue (NPS 2000a). These policies also state that the National Park Service will strive to understand and preserve the soil resources of park units and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.

Topography in the area of the maintenance facility is mostly flat, with no significant geologic features. This area has been previously disturbed by past construction of the maintenance facility. A gravel lot surrounds the maintenance facility and is currently used for parking and materials storage. The gravel used for the lot is not native, but was brought in from elsewhere.

Minor modifications of the topography would be required to facilitate a level surface on which to construct the building addition, and this would have a negligible effect to the topography of this area since the area is mostly flat. Also, the top 12-18 inches of soil would be substituted with replacement material for structural requirements. The building addition construction would also require excavation to connect to utilities and to establish a foundation, which would displace and disturb soils, primarily in the footprint of the new addition. Because these soils were previously disturbed, this would be a negligible to minor adverse effect for the long-term. Soils may also be disturbed and compacted on a temporary basis in the locations used to access the construction site as well as in the immediate area of the temporary staff offices (trailers) that would be used until construction of the newly expanded building is complete. Removal of the two trailers would also disturb soils.

Given that there are no significant topographic or geologic features in the project area, and that the area has been previously disturbed, the proposed actions would result in negligible to minor, temporary and permanent adverse effects to topography, geology, and soils. Because these effects are minor or less in degree, this topic has been dismissed from further analysis in this document.

Vegetation

According to the National Park Service's *2001 Management Policies*, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of plants (NPS 2000a). The proposed project area is situated within the footprint of the current maintenance facility and its surrounding gravel lot. No vegetation is present in this area, therefore this proposal is expected have no effect or negligible effects on vegetation. Following construction of the building addition, landscaping treatments may introduce vegetation in this area; however, this is expected to be a minor beneficial effect due to improved aesthetics. Because these effects are minor or less in degree, this topic has been dismissed from further analysis in this document.

There are a number of noxious weeds at Big Thicket National Preserve. The most prevalent and threatening noxious weeds include Tallow (*Triadica sebifera*), Japanese Honeysuckle, *Lonicera japonica*), Japanese Climbing Fern *Lygodium japonicum*), Chinese/European Privet, (*Ligustrum sinense*), and Slash Pine (*Pinus caribaea*). The Preserve also contains some exotic but non-invasive plants including Creeping Signal Grass (*Brachiaria plantaginea*), Carpet Grass (*Axonopus furcatus*), Common Mullein (*Verbascum thapsus*), Brazilian vervain (*Verena brasiliensis*), and a variety of lawn and garden weeds.

The proposed project would result in ground disturbance, which has the potential to introduce and promote the existence of exotic plants and noxious weeds. The proposed area of disturbance is relatively small (roughly under 3,000 square feet) and is contained within the gravel lot perimeter of the maintenance facility; therefore, measurable impacts from the spread or promulgation of exotic plants and noxious weeds are not expected. Mitigation measures would be followed to further minimize the establishment of exotic plants and noxious weeds, as described in the *Alternatives* chapter.

Wildlife

According to the National Park Service's *2001 Management Policies*, the National Park Service strives to maintain all components and processes of naturally evolving park unit ecosystems, including the natural abundance, diversity, and ecological integrity of animals (NPS 2000a). The project area is essentially comprised of the gravel lot surrounding the maintenance facility which has little to no water, minimal vegetation, and is generally flat with no major geologic features, thereby offering very little habitat for wildlife. The presence of humans, human-related activities, and structures in the area have removed or displaced much of the native wildlife habitat in the project area which has limited the number and variety of wildlife occurrences in the area. Some smaller wildlife such as birds, possum, skunks, rabbits, raccoons, the occasional deer, rodents, reptiles, and amphibians are transient in the project area. Any of these mostly transient wildlife may be displaced or eliminated during construction of the new administration addition and removal of the two temporary trailers. Disturbed areas would be rehabilitated to their current condition following construction which would result in a negligible adverse impact to the wildlife and wildlife habitat in the immediate area of construction.

During construction, noise would also increase which may disturb wildlife in the general area. Construction-related noise would be temporary, and existing sound conditions would resume following construction activities. Therefore, the temporary noise from construction would have a negligible adverse effect on wildlife.

Special Status Species

The Endangered Species Act of 1973 requires examination of impacts on all federally-listed threatened, endangered, and candidate species. Section 7 of the Endangered Species Act requires all federal agencies to consult with the U.S. Fish and Wildlife Service (or designated representative) to ensure that any action authorized, funded, or carried out by the agency does not jeopardize the continued existence of listed species or critical habitats. In addition, the *2001 Management Policies* and Director's Order #77: *Natural Resources Protection* require the National Park Service to examine the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive wildlife and vegetation species (NPS 2000a). For the purposes of this analysis, the U.S. Fish and Wildlife Service and the Texas Parks and Wildlife were contacted by letter in May 2006 with regards to federal and state-listed species to determine those species that could potentially occur on or near the project area and that may be affected by the proposed project.

Five federally-recognized special status species have the potential to occur at Big Thicket National Preserve in Hardin County. Two of these species are listed as threatened by the U.S. Fish and Wildlife Service including Bald eagle (*Haliaeetus leucocephalus*), and Louisiana black bear (*Ursus americanus luteolus*). Two species are listed as endangered including the red-cockaded woodpecker (*Picoides borealis*) and Texas trailing phlox (*Phlox nivalis ssp. Texensis*). The last of the five species is a candidate for listing, and that is the Louisiana pine snake (*Pituophis ruthveni*). According to Preserve staff, none of these species are known to inhabit the proposed project area in Hardin County; therefore, the National Park Service submitted a letter to U.S. Fish and Wildlife Service with a determination of "no effect", and is awaiting concurrence.

Nineteen state-recognized special status species have the potential to occur in Hardin County. All but two species are listed as state-threatened including Arctic Peregrine Falcon (*Falco peregrinus tundrius*), Bachman's Sparrow (*Aimophila aestivalis*), Bald Eagle (*Haliaeetus leucocephalus*), Swallow-tailed Kite (*Elanoides forficatus*), White-faced Ibis (*Plegadis chihi*), Wood Stork (*Mycteria americana*), Blue Sucker (*Cyprinostomus elongatus*), Creek Chubsucker (*Erimyzon oblongus*), Paddlefish (*Polyodon spathula*), Black Bear (*Ursus americanus*), Louisiana Black Bear (*Ursus americanus luteolus*), Rafinesque's Big-eared Bat (*Corynorhinus rafinesquii*), Alligator Snapping Turtle (*Macrochelys temminckii*), Louisiana Pine Snake (*Pituophis ruthveni*), Northern Scarlet Snake (*Cemophora coccinea copei*), Texas Horned Lizard (*Phrynosoma cornutum*), and Timber/Canebrake Rattlesnake (*Crotalus horridus*). The two state-endangered species include Red-cockaded Woodpecker (*Picoides borealis*) and Texas trailing phlox

(*Phlox nivalis* ssp. *texensis*). Some of these species are also federally-listed, as described above. According to Preserve staff, none of these species are known to occur in the proposed project area; therefore, the National Park Service submitted a letter to Texas Parks and Wildlife Department with a determination of “no effect”, and is awaiting concurrence.

Further protection under the Migratory Bird Treaty Act makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition, this act serves to protect environmental conditions for migratory birds from pollution or other ecosystem degradations. The maintenance complex is surrounded by wooded areas which may contain some migratory birds including year-round residents such as the woodpeckers, cardinals, and wrens; winter residents such as the sparrow's; and some summer breeding birds such as the warblers and vireos. The immediate project area (i.e., the maintenance facility and surrounding gravel lot) contains little to no suitable habitat for migratory birds. There are no known nesting sites in the immediate project area, and this area is not vital for foraging or roosting. Construction-related noise could potentially disturb the bird species in the outlying wooded areas, but these adverse impacts would be 1) temporary, lasting only as long as construction, and 2) negligible, because suitable habitat for transient birds is found throughout the region.

Because there are no special status species in the area of potential effect, implementation of the proposed action would result in no effect to species of management concern; therefore, the topic of special status species was dismissed from further analysis.

Water Resources

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

The proposed project area does not contain surface waters, and is mostly dry, except for periodic runoff during storm events. Water quality, water quantity, and drinking water are not expected to be affected by the project. The size of the new administration building's footprint (approximately 1,000 to 3,000 square feet) in addition to expanded parking would increase the amount of impervious surface in the area, which could possibly increase the erosion potential of the area; however, the removal of the two existing trailers should offset or mitigate this effect to some degree. A nearby intermittent drainage exists; however, the footprint of the building will not impact it. Additional hardscape (i.e., the building itself and any paving) in the area may contribute to increased runoff in the drainage, and this would be a negligible to minor long-term effect. To further assist with erosion and water quality, disturbed areas would be rehabilitated following construction. Because the project results in negligible to minor effects to water resources, this topic has been dismissed from further consideration.

Wetlands

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

Executive Order 11990 *Protection of Wetlands* requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge or dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands as

stated in *2001 Management Policies* and Director's Order #77-1: *Wetlands Protection*, strive to prevent the loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands (NPS 2000a, NPS 2002). In accordance with DO 77-1 *Wetlands Protection*, proposed actions that have the potential to adversely impact wetlands must be addressed in a Statement of Findings for wetlands. No wetlands are located in the project area; therefore, a Statement of Findings for wetlands will not be prepared, and the topic of wetlands has been dismissed from further consideration.

Floodplains

Executive Order 11988 *Floodplain Management* requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. The National Park Service under *2001 Management Policies* and Director's Order #77-2: *Floodplain Management* will strive to preserve floodplain values and minimize hazardous floodplain conditions. According to Director's Order #77-2: *Floodplain Management*, certain construction within a 100-year floodplain requires preparation of a statement of findings for floodplains (NPS 2000a, NPS 2003). No floodplains are located in the project area; therefore, a Statement of Findings for floodplains will not be prepared, and the topic of floodplains has been dismissed from further consideration.

Wilderness and Biosphere Reserve

According to the National Park Service's *2001 Management Policies*, the National Park Service will evaluate all lands it administers for their suitability for inclusion within the national wilderness preservation system, and for those lands that possess wilderness characteristics, no action will be taken that would diminish wilderness suitability (NPS 2000a, NPS 1999). According to the 1964 Wilderness Act which established the national wilderness preservation system, wilderness is defined as, "...an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." There is no Congressionally designated or recommended wilderness at Big Thicket National Preserve; therefore, the topic of wilderness has been dismissed from further consideration.

The Preserve was designated a Biosphere Reserve in 1981 by the United Nations Educational, Scientific and Cultural Organization (UNESCO). It shares this distinction among 332 biosphere reserves in 85 countries worldwide. The biosphere reserve program (Man and the Biosphere Program) is based on the concept that it is possible to achieve a sustainable balance between the conservation of biological diversity, economic development and maintenance of associated cultural values. Furthermore, on July 26, 2001, the American Bird Conservancy recognized the Preserve as a Globally Important Bird Area joining thousands of others around the world. These designations for Big Thicket National Preserve would not be affected by the proposal because the proposed project will occur in an already disturbed area; therefore, these topics have been dismissed from further consideration.

Historic Structures

Section 106 of the National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq.*); the National Park Service's Director's Order #28: *Cultural Resource Management Guideline*; and National Park Service *2001 Management Policies* (NPS 2000a) require the consideration of impacts on historic properties that are listed or eligible to be listed in the National Register of Historic Places. The National Register is the nation's inventory of historic places and the national repository of documentation on property types and their significance. The above-mentioned policies and regulations require federal agencies to coordinate consultation with the State Historic Preservation Officer (SHPO) regarding the potential effects to properties listed on or eligible for the National Register of Historic Places.

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

principles contained in the *2001 Management Policies* and Director's Order #28: *Cultural Resource Management* (NPS 1998).

The proposed location for the administration building expansion was previously surveyed for cultural resources in preparation of the 1991 *Environmental Assessment to Construct a Visitor Center and Administrative Headquarters*, and no historic structures or any other types of historic properties were identified in the immediate project area (NPS 1991a,b). Therefore, this topic has been dismissed from further consideration. In a letter dated May 11, 2006, SHPO concurred with the determination of "no historic properties affected" due to the fact that there are no historic properties in the project area.

Archeological Resources

In addition to the National Historic Preservation Act and the National Park Service *2001 Management Policies* (NPS 2000a), the National Park Service's Director's Order #28A: *Archeology* (NPS 2004a), affirms a long-term commitment to the appropriate investigation, documentation, preservation, interpretation, and protection of archeological resources inside units of the National Park System. As one of the principal stewards of America's heritage, the National Park Service is charged with the preservation of the commemorative, educational, scientific, and traditional cultural values of archeological resources for the benefit and enjoyment of present and future generations. Archeological resources are nonrenewable and irreplaceable, so it is important that all management decisions and activities throughout the National Park Service reflect a commitment to the conservation of archeological resources as elements of our national heritage.

The proposed location for the administration building addition was previously surveyed for cultural resources in preparation of the 1991 *Environmental Assessment to Construct a Visitor Center and Administrative Headquarters*, and no archeological sites were identified in the immediate project area (NPS 1991a, b). Therefore, the proposed project area is not expected to contain archeological deposits; however, appropriate steps would be taken to protect any archeological resources that are inadvertently discovered during construction. Because the project would not disturb any known archeological sites, the affect of the project on archeological resources is expected to be negligible, and this topic has been dismissed from further analysis.

Cultural Landscapes

According to the National Park Service's Director's Order #28: *Cultural Resource Management Guideline*, a cultural landscape is a reflection of human adaptation and use of natural resources, and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built (NPS 1998). Although a cultural landscape inventory has not been conducted for the Preserve, the features within the general project area including the recently constructed, non-historic visitor center and the maintenance facility are not likely to contribute to a significant cultural landscape. Therefore, this topic has been dismissed from further consideration.

Ethnographic Resources

National Park Service Director's Order #28: *Cultural Resource Management*, defines ethnographic resources as any site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it (NPS 1998). According to DO-28 and Executive Order 13007 on sacred sites, the National Park Service should try to preserve and protect ethnographic resources.

Ethnographic resources are not known to exist in the proposed project area based on the lack of cultural materials present. In addition, the one Native American tribe traditionally associated the Preserve was apprised of the proposed project in a scoping brochure dated March 17, 2006, and a response was received from this tribe requesting a copy of this document. Because no significant ethnographic

resources were identified through scoping with the tribe, no impacts are expected, and this topic has been dismissed from further consideration.

Museum Collections

According to Director's Order #24: *Museum Collections Management*, the National Park Service requires the consideration of impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material), and provides further policy guidance, standards, and requirements for preserving, protecting, documenting, and providing access to, and use of, National Park Service museum collections (NPS 2004b). The proposed project will not disturb any curatorial facilities or contribute any additional collections to curatorial facilities; therefore museum collections at Big Thicket National Preserve will not be affected by the proposed project, and this topic has been dismissed from further analysis.

Air Quality

The Clean Air Act of 1963 (42 U.S.C. 7401 *et seq.*) was established to promote the public health and welfare by protecting and enhancing the nation's air quality. The act establishes specific programs that provide special protection for air resources and air quality related values associated with National Park Service units. Section 118 of the Clean Air Act requires a park unit to meet all federal, state, and local air pollution standards. Big Thicket National Preserve is designated as a Class II air quality area under the Clean Air Act. A Class II designation indicates the maximum allowable increase in concentrations of pollutants over baseline concentrations of sulfur dioxide and particulate matter as specified in Section 163 of the Clean Air Act. Further, the Clean Air Act provides that the federal land manager has an affirmative responsibility to protect air quality related values (including visibility, plants, animals, soils, water quality, cultural resources, and visitor health) from adverse pollution impacts.

Construction activities such as hauling materials and operating equipment could result in temporary increases of vehicle exhaust, emissions, and fugitive dust in the general project area. Any exhaust, emissions, and fugitive dust generated from construction activities would be temporary and localized, and would likely dissipate rapidly. Overall, the project could result in a negligible degradation of local air quality, and these effects would be temporary, lasting only as long as construction activities are being conducted. The Class II air quality designation for Big Thicket National Preserve would not be affected by the proposal; therefore, air quality has been dismissed from further consideration.

Soundscape Management

In accordance with *2001 Management Policies* and Director's Order 47 *Sound Preservation and Noise Management*, an important component of the National Park Service's mission is the preservation of natural soundscapes associated with national park units (NPS 2000b). Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among National Park Service units as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

The proposed location for the new administration building and all construction activity would occur in the previously disturbed portion of the Preserve near the maintenance facility. Existing sounds in this area are most often generated from vehicular traffic (visitors and employees entering/leaving the Preserve along with noise from the adjacent highway U.S. 69), people, climate controls for the buildings, some wildlife such as birds, and wind. The existing air conditioning unit for the maintenance facility is a particularly noisy feature in the visitor center complex.

Sound generated by the long-term operation of the expanded maintenance facility may include climate controls such as heating or air conditioning units and people using the building. Because the area

already contains man-made noises, the long-term operation of the building expansion is not expected to appreciably increase the noise levels in the general area.

During construction, human-caused sounds would likely increase due to construction activities, equipment, vehicular traffic, and construction crews. Any sounds generated from construction would be temporary, lasting only as long as the construction activity is generating the sounds, and would have a negligible to minor adverse impact on visitors and employees. Therefore, the topic of soundscape management was dismissed as an impact topic.

Lightscape Management

In accordance with *2001 Management Policies*, the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light (NPS 2000a). Big Thicket National Preserve strives to limit the use of artificial outdoor lighting to that which is necessary for basic safety requirements. The Preserve also strives to ensure that all outdoor lighting is shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. The communities near the Preserve are the primary sources of light in this portion of the Preserve, along with any lights from vehicles traveling on the adjacent highway.

The proposed action would incorporate minimal exterior lighting on the expanded maintenance facility, but the lighting would be directed toward the intended subject with appropriate shielding mechanisms, and would be placed in only those areas where lighting is needed for safety reasons. The amount and extent of exterior lighting on the addition would have negligible effects on the existing outside lighting or natural night sky of the area; therefore, this topic has been dismissed.

Socioeconomics

The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Currently, the majority of Preserve employees are working in the visitor center complex, north of Kountze in Hardin County. Following the expansion of the maintenance facility to also serve administrative functions, approximately 3-10 employees would be relocated from the Beaumont Annex to the expanded facility in the visitor center complex. A few employees would remain in the Beaumont Annex at the Superintendent's discretion. Implementation of the proposed action could have a negligible beneficial impact to the economies of nearby Kountze and Hardin County due to minimal increases in local business revenues generated from having additional Preserve employees permanently duty-stationed in the visitor center complex. Construction of the expanded maintenance facility could also increase revenues in the short-term due to the additional construction workforce needed; however, this revenue would be temporary and negligible, lasting only as long as construction activities occur. Conversely, Beaumont will no longer have this 3-10 person workforce within its limits. Due to the larger population in Beaumont as compared with Kountze, this would likely not be detectible and would be a negligible adverse impact to the revenues this workforce generates in Beaumont.

Under the proposed action, employee commutes would change, and depending upon the location of their residence, it would be a beneficial or adverse effect to them in the long-term. Some employees may have to drive farther to get to work, and some may have shorter commutes. Those with longer commutes would spend more money on transportation expenses, while those with shorter commutes would spend less. Revenues from transportation expenses would likely be generated somewhere between the employee's residence and the visitor center complex, benefiting those particular towns and counties to a negligible degree. Because the impacts to the socioeconomic environment would be negligible to minor, this topic has been dismissed from further consideration.

Prime and Unique Farmlands

The Farmland Protection Policy Act of 1981, as amended, requires federal agencies to consider adverse effects to prime and unique farmlands that would result in the conversion of these lands to non-

agricultural uses. Prime or unique farmland is classified by the U.S. Department of Agriculture's Natural Resources Conservation Service, and is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. In order to be considered prime and unique, the farmland must be irrigated. The Preserve, and specifically the project area, does not irrigate any of its lands; and, therefore does not contain prime or unique farmlands. Therefore, the topic of prime and unique farmlands has been dismissed from further consideration.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by the Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes. There are no Indian trust resources at Big Thicket National Preserve. The lands comprising the Preserve are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, the project would have no effects on Indian trust resources, and this topic has been dismissed from further consideration.

Environmental Justice

Executive Order 12898 *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. Because the new maintenance facility expansion would be available for use by all park staff regardless of race or income, and the construction workforces would not be hired based on their race or income, the proposed action would not have disproportionate health or environmental effects on minorities or low-income populations or communities. Therefore, environmental justice has been dismissed as an impact topic in this document.

ALTERNATIVES CONSIDERED

During April of 2006, an interdisciplinary team of National Park Service employees met for the purpose of developing project alternatives. This meeting resulted in the definition of project objectives as described in the *Purpose and Need*, and a list of alternatives that could potentially meet these objectives.

A total of six action alternatives and the no action alternative were originally identified for this project. Of these, five of the action alternatives were dismissed from further consideration for various reasons, as described later in this chapter. One action alternative and the no action alternative are carried forward for further evaluation in this Environmental Assessment. A summary table comparing alternative components is presented at the end of this chapter as is a summary table of impacts.

Alternatives Carried Forward

Alternative A – No Action

This alternative presents the baseline, or current conditions, from which to evaluate impacts of other action alternatives. Under this alternative, an administration facility would not be reestablished. The former administration facility in Beaumont which was damaged by Hurricane Rita would not be leased, nor would a new administration building be constructed or otherwise established. Employees would continue to work from a variety of locations near and in the Preserve including the Beaumont Annex and in various buildings in the visitor center complex which is situated north of Kountze, in Hardin County. These buildings include the visitor center, the maintenance building, and the two trailers set up in the gravel lot near the maintenance facility building. The lease for the two trailers would be extended for the long-term. Should the No-Action Alternative be selected, the National Park Service would continue to manage its operations as they currently exist without modifications or improvements.

Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions

Alternative B consists of expanding the existing maintenance facility situated in the visitor center complex at the junction of U.S. Highway 69 and FM 420. The current size of the existing maintenance facility is approximately 12,000 square feet, and the building is surrounded on all sides by a gravel lot extending approximately 100-200 yards. This alternative to expand the maintenance facility would stay within the footprint of this previously disturbed gravel lot. The maintenance facility is constructed of concrete with a steel frame which weathered Hurricane Rita with minimal to no damage; therefore, it is structurally sound for the purposes of expansion.

- Building Features** - Under this alternative, the existing maintenance facility would be expanded to also serve as the Preserve's headquarters. The size of the expansion is roughly estimated between 1,000 to 3,000 square feet, and it would extend approximately 30-50 feet from the south side of the current building. The current maintenance facility already contains restrooms and a break room, so additional similar facilities would not be constructed under this alternative. The building would be made accessible to mobility-impaired persons, and would contain appropriate fire protection and suppression systems, which would be retrofitted from the current system. Secured area(s) would be established for ranger activities such as gun and evidence storage as well as for computers. The existing alarm system would be retrofitted to facilitate the entire building. The fence around the facility would be adjusted as necessary to accommodate the new footprint. On the off-chance that a new fire facility in Woodville is not constructed, the existing maintenance facility may be expanded even more to include space for fire equipment, employees, and functions.

The exterior of the building would be constructed to match the existing architecture in terms of materials, color, and form. Landscaping treatments and additional signage would be applied to establish the presence of the building as the combined headquarters and maintenance facility.

- **Building Use** - All administrative functions and most staff for the Preserve would be moved into this newly expanded building while also maintaining the existing maintenance functions of the building. Therefore, the building would be a combined headquarters and maintenance facility. Some of the staff who currently work in the Beaumont Annex would have a new permanent duty station in the administrative/ maintenance facility. Some employees would remain in the Beaumont Annex, at the Superintendent's discretion. All of the staff who currently work in the two trailers near the maintenance facility would have a new permanent duty station in the combined administrative/ maintenance facility. Staff situated in the visitor center may also be moved into this facility. Employees in the fire division would remain in Woodville under the assumption that a new fire facility would be constructed on a parcel of recently donated land. If this land transfer does not occur, then fire staff and equipment would be combined into this facility.

Three to five bays of the interior of the building would be redesigned and reconstructed as needed to serve both administrative and maintenance staff and functions in a comfortable, functional, professional, and appropriate manner. With approximately 5-7 employees, the current space in the maintenance facility is underutilized, so some space management planning would occur to reorganize and reallocate space more efficiently. Employee offices would be established, most likely using modular furniture. Shared spaces available for use by both administrative and maintenance staff would include a break room, meeting room, storage areas, and restrooms. Central land acquisition files and library materials would also be moved from their temporary locations at Lyndon B. Johnson National Historic Site and at the research station in Saratoga into the expanded facility. Janitorial services would be acquired for the long-term to maintain the combined maintenance/administration facility.

- **Utilities** - The building would be served by existing utilities located near the site, including water, sewer, electric, and gas. Connecting these existing utilities to the administration building would likely entail excavation and placement of additional underground piping/wiring to connect with these utilities. All utilities would remain underground.
- **Access and Parking** – One road (FM 420) currently provides access to two separate roads that extend to the visitor center and the maintenance facility. These access roads would not change under this alternative, but would serve the additional employees required to report to the newly expanded facility. An employees' parking lot currently services the maintenance facility. This parking lot would be redesigned to accommodate the increased staff usage of this building.
- **Timing** – Preliminary design for the addition to the maintenance facility is currently underway for the purpose of providing information necessary to complete environmental compliance. Final design is likely to occur in Fall/Winter of 2006, and construction of the expanded facility is likely to take place in Spring/Summer of 2007. This timeline is a rough estimate.
- **Construction Staging** – During construction of the expanded maintenance facility, employees would continue to work in their current situations, to the extent possible. Equipment, files, and other office materials that are currently being stored in the maintenance facility would be temporarily relocated until the construction is complete. Construction staging including materials stockpiling and worker parking would be accommodated on the current footprint of previously disturbed areas in the visitor center complex, particularly the unpaved lot surrounding the maintenance facility. Signs or barriers would be erected to demarcate the construction zone, and any area used for staging would be recontoured and/or revegetated to its previous manner following completion of construction activities.
- **Other Facilities and Moving Employees** – The lease for the Beaumont Annex building would be retained and this building would primarily serve as storage for boats and other equipment. The offices of employees currently working in the Beaumont Annex would be moved into the newly expanded facility following construction. Also following construction, the two trailers currently set up near the maintenance facility would no longer be leased; would be moved off-site; and would be

returned to their owner. The offices of employees currently working in the trailers and some of those in the visitor center would be moved into the newly expanded facility.

This alternative is based on preliminary designs and the best information available at the time of this writing. Specific building design information including the building footprint, exterior elevations, and interior layouts used to describe the alternative are only estimates and could change during final design, which will be in consultation with an architect. If changes during final design are not consistent with the intent and effects of the selected alternative, then additional compliance would be completed, as appropriate.

Alternatives Considered and Dismissed

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

1. **Construct a New Facility** - Under this alternative, a new stand-alone administration facility would be constructed that would serve as the Preserve's headquarters. All administrative functions for the Preserve would be situated in this new building. The Beaumont Annex building would be retained to serve as storage for boats and other equipment. Fire activities and staff would remain in Woodville. A number of options were explored for the location of a new administration facility including 1) near the existing visitor center, 2) directly south of the existing maintenance facility, 3) on newly purchased lands adjacent to the current visitor center complex, 4) on the island between the visitor center parking lots, 5) on donated land, and 6) closer to a larger town.

Constructing a new stand-alone facility is expensive. Due to budgetary constraints - constructing a facility from the ground up that would house all of the current administrative staff and functions; have a separate building support system; and duplicate space that is already available in the maintenance facility - is cost prohibitive at this time. Another option of constructing a less-expensive facility - most likely a previously-constructed modular facility - was also considered because it would be financially feasible; however, this option was ultimately dismissed because a modular facility would not withstand a hurricane; would result in greater environmental impacts than the proposed action; and would not provide a sufficient life-span for a headquarters facility. For these reasons, constructing a new stand-alone facility was dismissed from further consideration.

2. **Add on to Another Existing Facility** - Under this alternative, an existing facility would be expanded to serve as the Preserve's headquarters. All administrative functions for the Preserve would be situated in this newly expanded portion of an existing building while also maintaining the existing function of that building. The Beaumont Annex building would be retained to serve as storage for boats and other equipment. Fire activities and staff would remain in Woodville. The following options were explored for where a new addition could be constructed including 1) Attached to the existing visitor center, 2) Attached to the research station in Saratoga, 3) Attached to the existing Woodville fire office.

The first option was dismissed for having substantial impacts to visitor use and the viewshed, plus the current visitor center is constructed of wood which may not be as durable as the attaching to the maintenance facility which is constructed of concrete. The option to add on to the research station in Saratoga was ultimately dismissed because it would be cost prohibitive in terms of operational costs for not being in a central location, plus that part of Saratoga is in a technological "dead zone" whereby telephones do not work at the research station. Finally, the option of attaching a facility to the existing fire facility at Woodville was dismissed because the land is managed by the Texas Forest Service, not the National Park Service. Therefore, all of these options were dismissed from further analysis.

3. **Leasing Space** - Under this alternative, a building or space within a building would be leased to serve as the Preserve's headquarters. The Beaumont Annex building would be retained to serve as storage for boats and other equipment. Fire activities and staff would remain in Woodville.

Two market surveys have been conducted by GSA in anticipation of lease expirations of the former administration building in Beaumont: the first in 2002, and the second in 2004. In 2002, the delineated area of the market survey was based on the Preserve's preferences at the time, and the boundary included a buffer along the U.S. 69/287 corridor from Woodville on the north end to Lumberton on the south end, and also the town of Silsbee. Beaumont, Saratoga, and Sour Lake were not included in this market survey, meaning that GSA currently has no provision to lease in these communities. This survey resulted in no new viable leasing options within the market survey area. In other words, there were no buildings suitable to hold Preserve staff and functions other than the Beaumont building they were already in, which was not within the survey boundaries. The market survey conducted in 2004 included a delineated area within the city limits of Beaumont, Kountze, Silsbee and Woodville. This survey resulted in no new viable leasing options within the market survey area.

For the current proposal, a number of options were entertained for locations to lease space including the former administration building in Beaumont and a building in Sour Lake. A new delineated area would be required to include the Sour Lake area, and a procurement for this site would require full and open competition. The former administration building was dismissed due to the building condition following the hurricane and security issues.

Ultimately, the alternative to lease space in any of these locations was dismissed from further consideration because it does not meet the recommendations stated in the 1980 *General Management Plan* that the administration facility be constructed as part of the interpretive facility complex (i.e., part of the visitor center complex) (NPS 1980). Also, leasing space would not be consistent with the *Environmental Assessment to Construct a Visitor Center and Administrative Headquarters* within the visitor center complex (NPS 1991a). Therefore, this alternative is not consistent with previous planning efforts and is dismissed from further consideration.

4. **Purchase an Existing Facility** – Under this alternative, an existing building would be purchased somewhere in the outlying community to serve as the Preserve's headquarters. This option was not carried forward because there are no known buildings available for purchase in the general vicinity that would accommodate Preserve staff and functions, and this option would likely be cost-prohibitive because both land and a structure would need to be purchased.
5. **Alternative Element – Temporarily lease a facility until the new administration facility is established.** This is an element of an alternative to improve the situation for employees temporarily working in office trailers. This could be included under any of the alternatives (except the No Action) as a means to bring employees together again under one roof until the new administration facility is established; however, it was ultimately dismissed because the additional time, expense, and frustration from moving employees during the interim is too great.

Mitigation Measures

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

- To minimize the amount of ground disturbance, staging and stockpiling areas would be located in previously disturbed sites, away from visitor use areas to the extent possible. All staging and stockpiling areas would be returned to pre-construction conditions following construction.

- Construction zones would be identified and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing would define the construction zone and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.
- Revegetation and/or recontouring of disturbed areas would take place following construction, and would be designed to minimize the visual intrusion of the structure. Revegetation efforts, if needed, would strive to reconstruct the natural spacing, abundance, and diversity of native plant species using native species. All disturbed areas would be restored as nearly as possible to pre-construction conditions shortly after construction activities are completed. Weed control methods would be implemented to minimize the introduction of noxious weeds.
- Because disturbed soils are susceptible to erosion until revegetation takes place, standard erosion control measures such as silt fences and/or sand bags would be used to minimize any potential soil erosion.
- Fugitive dust generated by construction would be controlled by spraying water on the construction site, if necessary.
- To reduce noise and emissions, construction equipment would not be permitted to idle for long periods of time.
- To minimize possible petrochemical leaks from construction equipment, the contractor would regularly monitor and check construction equipment to identify and repair any leaks.
- Construction workers and supervisors would be informed about special status species. Contract provisions would require the cessation of construction activities if a species were discovered in the project area, until park staff re-evaluates the project. This would allow modification of the contract for any protection measures determined necessary to protect the discovery.
- Should construction unearth previously undiscovered cultural resources, work would be stopped in the area of any discovery and the Preserve would consult with the state historic preservation officer and the Advisory Council on Historic Preservation, as necessary, according to §36 CFR 800.13, *Post Review Discoveries*. In the unlikely event that human remains are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act (1990) would be followed.
- The National Park Service would ensure that all contractors and subcontractors are informed of the penalties for illegally collecting artifacts or intentionally damaging historic materials, archeological sites, or historic properties. Contractors and subcontractors would also be instructed on procedures to follow in case previously unknown historic or archeological resources are uncovered during construction.
- To minimize the potential for impacts to park visitors, variations on construction timing may be considered. One option includes conducting the majority of the work in the off-season or shoulder seasons. Another option includes implementing daily construction activity curfews such as not operating construction equipment between the hours of 6 PM to 7 AM in summer (May – September), and 6 PM to 8 AM in the winter (October – April). The National Park Service would determine this in consultation with the contractor.
- Construction workers and supervisors would be informed about the special sensitivity of Preserve's values, regulations, and appropriate housekeeping.

- According to *2001 Management Policies*, the National Park Service would strive to construct facilities with sustainable designs and systems to minimize potential environmental impacts. Development would not compete with or dominate Preserve's features, or interfere with natural processes, such as the seasonal migration of wildlife or hydrologic activity associated with wetlands. To the extent possible, the design and management of facilities would emphasize environmental sensitivity in construction, use of nontoxic materials, resource conservation, recycling, and integration of visitors with natural and cultural settings. The National Park Service also reduces energy costs, eliminates waste, and conserves energy resources by using energy-efficient and cost-effective technology. Energy efficiency is incorporated into the decision-making process during the design and acquisition of buildings, facilities, and transportation systems that emphasize the use of renewable energy sources.

Alternative Summaries

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

Table 1 – Summary of Alternatives and Extent to Which Each Alternative Meets Project Objectives

Alternative Elements	Alternative A – No Action	Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions
Establish a permanent administration facility	A permanent administration facility would not be established, and Preserve employees would continue to work out of various locations	A permanent administration facility would be established by adding onto the existing maintenance facility and reallocating interior space to accommodate both maintenance and administrative functions

Project Objectives	Meets Project Objectives?	Meets Project Objectives?
Establish a permanent administration facility that:		
Meets federal and state health and safety requirements for employee work areas and creates a safe and healthy work environment for employees	No. The work spaces in the trailers are not comfortable or safe, and do not comply with federal or state health and safety standards. The trailers do not comply. Temporarily-placed trailers are more susceptible to hurricane or storm damage	Yes. The administrative space in the expanded maintenance facility would meet federal and state health and safety requirements, creating a comfortable working environment. Plus this facility has withstood previous hurricanes and storms
Provides adequate and functional space for administrative and management staff and activities	No. The work spaces in the trailers are cramped, and cannot hold all of the administrative staff and office equipment	Yes. Adequate and sufficient space for staff and equipment would be created by expanding the existing maintenance facility
Consolidates administrative and management functions and staff into one location	No. Employees would continue to work out of various locations	Yes. Administrative staff and functions would be consolidated into expanded maintenance facility

Project Objectives	Meets Project Objectives?	Meets Project Objectives?
Improves security	No. The former administration facility is located in a high-crime area, plus the two temporary trailers have minimal security systems	Yes. The current alarm system in the maintenance facility would be retrofitted to accommodate the added administrative space. The site is already fenced-in
Improves NPS identity	No. Signage is not adequate to represent NPS buildings as such. Some NPS community identity would be retained with the annex building in Beaumont, the research station in Saratoga, and the fire/ranger facilities in Woodville	Yes. Signage on the expanded maintenance facility would be adequate. Some NPS community identity would be retained with the annex building in Beaumont, the research station in Saratoga, and the fire/ranger facilities in Woodville, in addition to a greater presence in Kountze
Improves architectural character and incorporates sustainable practices in accordance with NPS Management Policies	No. The current trailers have minimal architectural character and are not sustainable in the long term	Yes. The exterior of the expanded maintenance building would be constructed to match the existing architecture in terms of materials, color, and form and it would be sustainable in the long term
Maximizes long-term cost effectiveness	No. Leasing two trailers that cannot accommodate the entire staff plus having staff in various locations is not cost-effective	Yes. The added space in the maintenance facility would be more efficient than numerous buildings and staff in various locations
Provides fire protection and suppression	No. The trailers have fire extinguishers, but no fire alert system	Yes. The current fire protection and suppression system in the maintenance facility would be retrofitted to accommodate the added administrative space
Complies with facility accessibility requirements	No. The trailers are not handicapped accessible	Yes. The maintenance facility and any added space would be made handicapped accessible
Minimizes impacts to and avoids impairment of park resources	No. The current trailers have a visual impact to the visitor center complex, and are operationally inefficient in terms of park operations	Yes. The space added to the maintenance facility would be in an already disturbed area, and would be operationally efficient over the long term

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

Table 2 – Environmental Impact Summary by Alternative

Impact Topic	Alternative A – No Action	Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions
Visitor Use and Experience	Minor to moderate adverse effect on visitor use and experience for the long-term due to the classroom in the visitor center being permanently converted to office space and no longer permitting visitor uses. Moderate long-term adverse effect from the visual impact due to the two trailers near the maintenance facility which are visible to visitors as they enter the visitor center.	Minor to moderate, long-term beneficial effect from returning the classroom space in the visitor center to its normal function as an education facility, an exhibit room, and a community room. Visually, visitors would experience minor, long-term impacts from removing the two trailers near the existing maintenance facility, and permanently expanding the maintenance facility. The presence of additional employees in the general visitor center complex area would benefit visitors to a minor to moderate degree; however, it would also increase traffic on the access road which would have a long-term, minor adverse effect. Temporary construction impacts to visitors include increased noise, dust, emissions, and potentially limited parking which would be a minor, adverse effect.
Park Operations	Minor to moderate adverse effect to park operations in the long-term because employees are not centralized thereby decreasing productivity and increasing operational costs; the trailers do not meet current health and safety standards or a reasonable level of comfort for employee work areas; and minimal security systems and high-crime areas pose security risks to employees. Minor beneficial effect to park operations by having employees in Beaumont who are near to local officials with whom they meet.	Minor to moderate beneficial effect to park operations in the long-term because employees would be centralized thereby increasing productivity and reducing operational costs; the facility addition would meet current health and safety standards and have a reasonable level of comfort in employee work areas; and a security system in the expanded facility would improve employee security. Minor adverse effect to park operations by removing employees from Beaumont who are near to local officials with whom they meet. Typical construction impacts including noise, dust, and emissions would temporarily adversely effect park operations.

Identification of the Environmentally Preferred Alternative

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

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

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

Alternative A, No Action, only minimally meets the above six evaluation factors because it retains facilities that do not meet health and safety standards in terms of structural deficiencies, fire protection, security, and handicapped accessibility. While it minimizes potential impacts to park resources such as soils, it does not achieve a balance between these resources and the health and safety of Preserve staff. Originally intended for use as an interim office facility, the administration trailers have exceeded their lifespan in terms of comfortable and healthy employee working conditions. This alternative also does not meet the criteria for improving renewable resources because the existing administration facilities are inefficient with regards to energy and water use.

Alternative B is the environmentally preferred alternative because it best addresses these six evaluation factors. Alternative B (Expand the Existing Maintenance Facility to Support Administrative Staff and Functions) would provide a working environment for Preserve staff that meets health and safety recommendations, while minimizing environmental impacts to the greatest extent possible. As a permanent facility, the new administration building addition would be resilient to hurricanes and would be used by future generations. The new building would also be more energy efficient and more environmentally-friendly than the existing administration facilities. Preserve staff and functions would be centralized in one area, thereby improving operational efficiencies and costs.

No new information came forward from public scoping or consultation with other agencies to necessitate the development of any new alternatives, other than those described and evaluated in this document. Because it meets the Purpose and Need for the project, the project objectives, and is the environmentally preferred alternative, Alternative B is also recommended as the National Park Service Preferred Alternative. For the remainder of the document, Alternative B will be referred to as the Preferred Alternative.

ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the potential environmental consequences, or impacts, that would occur as a result of implementing the proposed project. Topics analyzed in this chapter include soils, vegetation, historic structures, visitor use and experience, and park operations. All remaining impact topics were dismissed as discussed in the *Purpose and Need*. Also contained in the *Purpose and Need* are descriptions of the affected environment for the resource topics included in this chapter. Direct, indirect, and cumulative effects, as well as impairment are analyzed for each resource topic carried forward. Potential impacts are described in terms of type, context, duration, and intensity. General definitions are defined as follows, while more specific impact thresholds are given for each resource at the beginning of each resource section.

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

Cumulative Effects: The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969 (42 USC 4321 et seq.), require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the No Action and Preferred Alternatives.

Cumulative impacts were determined by combining the impacts of the preferred alternative with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other ongoing or reasonably foreseeable future projects at Big Thicket National Preserve and, if applicable, the surrounding region. The geographic scope for this analysis was determined based on the smaller scale of the proposed project, and includes elements within the Preserve's boundaries. The geographic area of consideration for cumulative impacts varies slightly by impact topic. Following are some of the actions

and trends that were considered particularly important for the purpose of conducting the cumulative effects analysis:

- Geophysical (seismic) exploration, well drilling and production and pipeline operations
- Reclamation of oil and gas sites
- Maintenance of electrical transmission and residential service lines and their right-of-ways
- Road maintenance by State and County governments and oil and gas operators
- Ongoing maintenance of trails and other Preserve features
- Rehabilitation of the firing range in the Turkey Creek unit
- Restoration of Long Leaf Pine habitat
- Implementation of the Fire Management Plan including prescribed fires
- Construction of an NPS fire facility in Woodville
- Development and implementation of the Feral Hog Management Plan
- Development and implementation of the Personal Watercraft Environmental Assessment

Impairment: *National Park Service's Management Policies 2001* require analysis of potential effects to determine whether or not actions would impair park resources (NPS 2000a). The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values.

Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values. An impact to any park resource or value may constitute an impairment, but an impact would be more likely to constitute an impairment to the extent that it has a major or severe adverse effect upon a resource or value whose conservation is 1) necessary to fulfill specific purposes identified in the enabling legislation or proclamation of the park; 2) key to the natural or cultural integrity of the park; or 3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. A determination on impairment is normally made in the Conclusion section for each of the resource related topics carried forward in this chapter; however, impairment is not addressed for visitor use and park operations, which are the two topics carried forward for this document.

Visitor Use and Experience

Intensity Level Definitions

The methodology used for assessing impacts to visitor use and experience is based on how the proposed project would affect visitors, including safety considerations and maintaining the resource for future generations to enjoy. Personal observation records of visitation patterns by Preserve staff were used to estimate the effects of the alternatives on visitors. The thresholds for this impact assessment are as follows:

Negligible: Visitors would not be affected or changes in visitor use and/or experience would be below or at the level of detection. Any effects would be short-term. The visitor would not likely

be aware of the effects associated with the alternative.

- Minor:** Changes in visitor use and/or experience would be detectable, although the changes would be slight and likely short-term. The visitor would be aware of the effects associated with the alternative, but the effects would be slight.
- Moderate:** Changes in visitor use and/or experience would be readily apparent and likely long-term. The visitor would be aware of the effects associated with the alternative, and would likely be able to express an opinion about the changes.
- Major:** Changes in visitor use and/or experience would be readily apparent and have substantial long-term consequences. The visitor would be aware of the effects associated with the alternative, and would likely express a strong opinion about the changes.

Impacts of Alternative A – No Action

The No Action Alternative would have a minor to moderate adverse effect on visitor use and experience for the long-term because the classroom in the visitor center would continue to function as employee offices and not as an education facility, an exhibit room, or a community room. The classroom is currently being used as offices for the superintendent and his executive assistant, and would remain as such for the long-term. Therefore, visitors would be adversely affected to a minor degree in the long-term without the use of this facility.

Visitors would also be impacted from a visual perspective due to the long-term use of the trailers currently situated near the maintenance facility. These two trailers are visible from the visitor center, so when visitors enter the visitor center, instead of seeing the gravel parking lot that normally surrounds the maintenance facility, they instead see two trailers in the gravel lot. This is a long-term moderate intrusion on the visual landscape for visitor use and experience.

Cumulative Effects: Under this alternative, visitor functions in the project area are not expected to change; therefore, cumulatively, visitor use and experience would not appreciably change when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: The No Action Alternative would have a minor to moderate adverse effect on visitor use and experience for the long-term due to the classroom in the visitor center being permanently converted to office space and no longer permitting visitor uses. This alternative would also have a moderate long-term adverse effect from the visual impact due to the two trailers near the maintenance facility which are visible to visitors as they enter the visitor center. Cumulatively, this alternative would have a negligible effect on visitor use and experience when considered with other past, present, and reasonably foreseeable future actions.

Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions

Under this alternative, the classroom space in the visitor center would not be used as employee offices, and it would resume its normal function as an education facility, an exhibit room, and a community room. Offices for the superintendent and his executive assistant would be permanently relocated in the expanded maintenance/administrative facility. Therefore, visitors would benefit a minor to moderate degree in the long-term by reinstating the use of this facility.

Visually, the changes to the project area would have a minor effect on visitor experience, both beneficially and adversely in the long-term. Beneficially, the two trailers in the gravel lot near the maintenance facility would be removed which would improve the visual landscape for visitors. Currently, when visitors enter the visitor center, they can see the two trailers in the gravel lot which detracts from the setting. Adversely, the maintenance facility would be expanded creating a change to the visual environment from the

presence of a permanently expanded larger building. The location, size, and aesthetics of the new administration building addition would be chosen so as not to visually interfere with visitor center and to blend with the existing maintenance facility; however, changes to the visual environment would be noticeable for the long-term. Despite these changes to the visual environment, the newly expanded maintenance/administration facility would likely be more visually pleasing to visitors in comparison to the existing trailers.

Once the new expansion on the maintenance facility is constructed, most employees currently working in the trailers, in Beaumont, and in other areas of the Preserve would be relocated and permanently duty-stationed in the expanded facility. This would have a minor to moderate beneficial impact on the visitors to this area of the Preserve because they would potentially have more contact with and see more uniformed employees. Visitors generally appreciate seeing and having access to more uniformed employees, and this alternative would provide that in the visitor center complex.

Approximately 14-20 employees would be relocated to this facility, which would increase the amount of vehicular traffic in the general visitor complex area. One road (FM 420) provides access to two separate roads that extend to the visitor center and the maintenance facility. With additional employees reporting to work at the expanded maintenance facility, there would be more traffic on the FM 420 and the two access roads, particularly the gravel road leading to the maintenance facility. This would create a minor adverse impact to visitors from increased traffic and vehicular noise, dust, and emissions.

Minor, temporary, adverse impacts to visitor use and experience would result from construction activities. Construction staging would likely occur in the gravel lot surrounding the existing maintenance facility, and this area is rarely used by visitors; however, portions of the visitor center parking lot may also be used if necessary which would inconvenience visitors by reducing the number of available parking spaces. The areas that will be used for staging are visible to visitors from the visitor center which would result in a minor, temporary, adverse impact to the visual landscape from the presence of construction equipment and crews. Noise and dust from construction activities would also temporarily adversely affect visitor use and experience; however, all construction-related impacts would be temporary and cease following construction activities.

Cumulative Effects: The majority of past, present, and reasonably foreseeable future projects in the Preserve have the potential to affect visitor use and experience. Most of the projects listed in the cumulative scenario involve some sort of construction or land disturbance which adversely affects visitors in the short-term due to noise, dust, emissions, and potential area closures. Planning activities such as for the management of feral hogs and personal watercraft are long-term decision making efforts that affect how visitors are permitted to use the Preserve. The proposed project involves construction, and coupled with the other construction projects would result in a negligible to minor adverse cumulative effect on visitor use and experience in the short-term. Ultimately, however, most of these actions would have or have a beneficial effect on visitor use and experience because of long-term improvements to the human health and safety aspects of the Preserve, the visual and natural environment, and interpretive opportunities. Therefore, in the long-term, the proposed project, considered with past, present, and reasonably foreseeable future projects would cumulatively have a beneficial negligible to minor effect to visitor use and experience.

Conclusion: The Preferred Alternative would have a minor to moderate, long-term beneficial effect from returning the classroom space in the visitor center to its normal function as an education facility, an exhibit room, and a community room. Visually, visitors would experience minor, long-term impacts from removing the two trailers near the existing maintenance facility, and permanently expanding the maintenance facility. The presence of additional employees in the general visitor center complex area would benefit visitors to a minor to moderate degree; however, it would also increase traffic on the access road which would have a long-term, minor adverse effect. Temporary construction impacts to visitors include increased noise, dust, emissions, and potentially limited parking which would be a minor, adverse effect. Cumulatively, this alternative would have a negligible to minor adverse effect from numerous construction activities in the Preserve which can disrupt visitor use and enjoyment, and would also have,

in the long-term, a negligible to minor beneficial effect to visitor use and experience from improved health and safety, resources, and interpretive opportunities.

Park Operations

Intensity Level Definitions

Implementation of a project can effect the operations of a park including the number of employees needed; the type of duties that need to be conducted; when/who would conduct these duties; how activities should be conducted; and where employees report; and administrative procedures. For the purpose of this analysis, the human health and safety of park employees is also evaluated. The methodology used to assess potential changes to park operations are defined as follows:

- Negligible:** Park operations would not be affected or the effect would be at or below the lower levels of detection, and would not have an appreciable effect on park operations.
- Minor:** The effect would be detectable, but would be of a magnitude that would not have an appreciable adverse or beneficial effect on park operations. If mitigation were needed to offset adverse effects, it would be relatively simple and successful.
- Moderate:** The effects would be readily apparent and would result in a substantial adverse or beneficial change in park operations in a manner noticeable to staff and the public. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful.
- Major:** The effects would be readily apparent and would result in a substantial adverse or beneficial change in park operations in a manner noticeable to staff and the public, and be markedly different from existing operations. Mitigation measures to offset adverse effects would be needed, could be expensive, and their success could not be guaranteed.

Impacts of Alternative A – No Action

The No Action Alternative would not measurably change current park operations at Big Thicket National Preserve. Without a central administration facility, Preserve employees would continue to work in a variety of locations including the Beaumont Annex, the maintenance building, the visitor center, and out of temporary trailers set up near the maintenance facility building. Administrative staff and functions would continue to be situated in different areas, in different buildings and as far apart as different towns, making it difficult for employees to efficiently meet with each other and access central files. Extra time and money would be spent for employees to coordinate amongst themselves out of these various locations. Central files are currently not in a climate controlled environment, so they are susceptible to damage from dust and humidity. This loss of productivity and increased operational costs would have a long-term, moderate, adverse effect to park operations.

The health and safety of employees would be adversely affected in the long-term to a moderate degree due to the condition and location of their current working environments. The trailers were not intended to be used for office space in the long term, and they are already showing wear and tear from normal everyday use. Employees complain of cramped spaces, poor air circulation, leaky windows, and broken floors. These conditions would worsen over time posing additional health and safety risks and decreased comfort to employees. The trailers also would not withstand a major hurricane or similar natural disaster, which poses a threat to the health and safety of employees, but also increases operational costs if those trailers were damaged or destroyed by a natural disaster and needed to be replaced. Operational costs would also increase as the structural integrity of these trailers continues to degrade over time. Further, the trailers do not have fire protection or suppressions systems, nor are they accessible to the mobility-

impaired. There is also increased risk to employees who must drive to other areas of the Preserve to meet with other staff. For all of these reasons, the health and safety of Preserve staff would be adversely affected to a moderate degree in the long-term.

The trailers currently have minimal security systems, which puts employees and equipment at risk of potential harm or damage. Also, under this alternative, some employees would remain in the Beaumont Annex which is situated in a high crime part of town in which a number of burglaries have taken place. The security of employees and government property/equipment in this part of Beaumont would continue to be compromised on a daily basis, depending on the level of crime known in that area. All of these effects would result be long-term, minor, and adverse for the security of employees.

While having employees in so many different locations decreases productivity and operational costs, it does benefit those employees who meet or work with local people in those towns. For example, Preserve employees must occasionally meeting with local officials in Beaumont, so working out of the Beaumont Annex saves time and money. This alternative facilitates this idea of being closer to local officials in Beaumont, thereby having a negligible to minor beneficial effect to those employees who regularly deal with people in Beaumont. For those employees that do not meet with people in Beaumont, no efficiencies would be gained by being closer to local officials.

Cumulative Effects: Under this alternative, park operations associated with the current and future use of the existing administration building are not expected to change; therefore, park operations would not appreciably change when considered with other past, present, and reasonably foreseeable future actions.

Conclusion: The No Action Alternative would have a minor to moderate adverse effect to park operations in the long-term because employees are not centralized thereby decreasing productivity and increasing operational costs; the trailers do not meet current health and safety standards or a reasonable level of comfort for employee work areas; and minimal security systems and high-crime areas pose security risks to employees. This alternative has a minor beneficial effect to park operations by having employees in Beaumont who are near to local officials with whom they meet. Cumulatively, these effects would have a negligible impact to park operations when considered with other past, present, and reasonably foreseeable future actions.

Alternative B – Expand the Existing Maintenance Facility to Support Administrative Staff and Functions

The Preferred Alternative would provide a central administration facility where administrative employees would be required to report. Most employees currently working in the two trailers and in the Beaumont Annex would be duty-stationed in the newly expanded maintenance/administration facility. Having employees all in one area would improve park operations because they could efficiently meet with each other and access central files. Extra time and money would not be spent because employees would work in the same area, and would be able to coordinate with each other more effectively. This would increase productivity and decrease operational costs, thereby having a long-term, moderate, beneficial effect on park operations.

The health and safety of employees would be improved in the long-term to a moderate degree because the new administration facility addition would be constructed to meet health and safety standards. The existing maintenance facility is structurally sound and comfortable, and the design of the addition to that building would likewise have the same qualities. Structural deficiencies associated with the existing trailers would not be present in the new building. The maintenance facility already has fire protection and suppression systems, plus it is accessible to the mobility-impaired, and these features would be extended into the addition. Health and safety risks would also be reduced by centralizing employees and reducing the amount of vehicular travel currently needed by employees to meet with each other in different towns or to access central files. Light, ventilation, heating, and air quality would also be improved in the new administration building. The building expansion would be constructed to withstand major storm events.

For all of these reasons, the health and safety of Preserve staff would be improved to a moderate degree in the long-term.

Because of the improved integrity of the building over what employees use now, maintenance crews would likely have a lighter work load than if the existing facilities in various locations were to continue to be used. This facility did withstand the recent Level 5 Hurricane Rita, and it would likely be able to withstand another similar hurricane or natural disaster. With a structurally sound facility, operational costs are kept at a minimum, particularly in the event of a natural disaster.

The maintenance facility currently has a security system and this would be extended into the addition, thereby improving employee security. The employees currently located in the Beaumont Annex would be reporting to this new facility which would remove them from a high-crime area, also improving their security. Therefore, employee security would be improved in the long-term to a minor degree.

Although centralizing employees in one location will increase park operational efficiencies, there is a negligible to minor adverse effect to those employees who meet or work with local people in Beaumont. Extra time and money would be spent driving and coordinating with local officials or other people in Beaumont; however, the majority of employees do not deal with people in Beaumont on a regular basis, so this effects only a small number of Preserve employees.

During construction, employee offices would be retained in the temporary trailers, the visitor center, and in the Beaumont Annex. The typical work load for employees may increase during implementation of this project from the need to finalize project plans, hire contractors, and monitor construction. Once the new administration facility addition is constructed, normal work loads and patterns should return. Construction noise, dust, and emissions may also adversely affect the Preserve employees to a minor degree, but these inconveniences would be temporary, lasting only as long as construction.

Cumulative Effects: Park operations are continually being taxed through fewer people, tighter budgets, and increasing workloads. All of the actions listed in the cumulative scenario require the actions of Preserve staff in some manner. A new centralized administration facility would hopefully alleviate some of the burden over the long-term; however for the short-term, constructing the addition will add to the already increasing workload and stress resulting in a cumulative negligible to minor adverse effect. For the long-term, the benefit of having Preserve staff in a central location should make park operations more efficient, and this, coupled with a more demanding workload and tighter budgets would cumulative result in a moderate beneficial effect to park operations. Adding on to the maintenance facility increases the efficiency of support spaces such as restrooms, meeting rooms, break rooms, and climate controls (HVAC).

Conclusion: The Preferred Alternative would have a minor to moderate beneficial effect to park operations in the long-term because employees would be centralized thereby increasing productivity and reducing operational costs; the facility addition would meet current health and safety standards and have a reasonable level of comfort in employee work areas; and a security system in the expanded facility would improve employee security. This alternative also has a minor adverse effect to park operations by removing employees from Beaumont who are near to local officials with whom they meet. Typical construction impacts including noise, dust, and emissions would temporarily adversely effect park operations. Cumulatively, in the short-term this alternative would have a minor adverse effect from numerous construction activities in the Preserve which would add to employee workloads, and would also have, in the long-term, a moderate beneficial effect to park operations from the efficiencies gained through the centralization of employees in an improved facility that can weather major storm events.

CONSULTATION AND COORDINATION

Internal Scoping

Internal scoping was conducted by an interdisciplinary team of professionals from Big Thicket National Preserve and the Intermountain Support Office. Interdisciplinary team members met on April 11, 2006 to discuss the purpose and need for the project; various alternatives; potential environmental impacts; past, present, and reasonably foreseeable projects that may have cumulative effects; and possible mitigation measures. The team also gathered background information and discussed public outreach for the project. Over the course of the project, team members have conducted individual site visits to view and evaluate the proposed location. The results of the April 2006 meeting are documented in this Environmental Assessment.

External Scoping

External scoping was initiated with the distribution of a scoping letter to inform the public of the proposal to reestablish the administration facility, and to generate input on the preparation of this Environmental Assessment. The scoping letter dated March 17, 2006 was mailed to over 370 Preserve neighbors and stakeholders in the surrounding area including Beaumont, Sour Lake, Port Arthur, Orange, Nederland, Austin, San Antonio, Diboll, Tyler, Woodville, Liberty, Lumberton, Kountze, Palestine, College Station, Jasper and Zavalla, Dallas, Mauriceville, Port Neches, Livingston, and Saratoga, and also the one affiliated Native American tribe. Scoping information was posted on the National Park Service Planning, Environment, and Public Comment website (<http://parkplanning.nps.gov/>). In addition, press releases were distributed to local media on March 22, 2006 and the following newspapers covered the story; the *Beaumont Enterprise*, *Tyler County Booster*, the *Silsbee Bee*, and *Hardin County News*. Some television stations covered the story including NBC on KBTv4, CBS on-line news at KFDM, and ABC on KBMT. On March 22, 2006, the latter television station aired an interview with Pete Hart, the Acting Superintendent at the time.

The scoping period was from March 17, 2006 until April 21, 2006, and during this time, a total of seventeen public comments were received; eleven from individuals, and the remainder from entities including the City of Sour Lake, the Alabama-Coushatta Tribe of Texas, the Sierra Club, the Angelina and Neches River Authority, Kountze Chamber of Commerce, and Hardin County Commissioner. The majority of comments received supported the proposed action to locate the administration facility near the visitor center. A few commenters supported moving the administration facility to the existing research station in Saratoga, while still others supported moving the administration facility to Sour Lake. The alternative of moving the facility to somewhere outside the visitor center complex was considered, and ultimately dismissed as explained in the chapter on *Alternatives*.

Another commenter stated that the NEPA process should be used to determine the best alternative, by which, this document will serve that purpose. This commenter also stated that socioeconomic impacts should be considered in terms of employee commuting times and costs, and socioeconomic considerations are addressed in the *Purpose and Need*. The tribe requested to review the Environmental Assessment upon completion, and that request will be honored. No other comments were received during the scoping period for the project.

Agency Consultation

As of May 2006 when this document was released for public review, consultation with agencies was ongoing. The National Park Service is awaiting responses for the following consultations:

- Consultation under Section 106 of the National Historic Preservation Act was initiated through a letter sent to the Texas Historical Commission in May 2006. The letter explained that a cultural resources

survey had been conducted in the past with negative survey results, and the National Park Service determined that this project would result in “no historic properties affected”. In a letter dated May 11, 2006, SHPO concurred with this determination of effect.

- Consultation with the Endangered Species Act was initiated through a letter sent to U.S. Fish and Wildlife Service in May 2006. The letter listed the federally-recognized special status species that have the potential to occur at the Preserve, and concluded with a determination of “no effect” because none of the species are present in the project area.
- Consultation for state-listed special status species was initiated with Texas Parks and Wildlife Department through a letter in May 2006. The letter listed the state-recognized special status species that have the potential to occur at the Preserve, and concluded with a determination of “no effect” because none of the species are present in the project area.

List of Recipients and Public Review

The Environmental Assessment will be released for public review in May 2006. To inform the public of the availability of the Environmental Assessment, the National Park Service will publish and distribute a letter or press release to various agencies, and members of the public on the National Preserve’s mailing list. Copies of the Environmental Assessment will be provided to interested individuals and stakeholders, upon request. Copies of the document will also be available for review at the Preserve’s visitor center and on the internet at the National Park Service Planning, Environment, and Public Comment website (<http://parkplanning.nps.gov>).

The Environmental Assessment is subject to a 30-day public comment period. During this time, the public is encouraged to submit their written comments to the National Park Service. Following the close of the comment period, all public comments will be reviewed and analyzed, prior to the release of a decision document. The National Park Service will issue responses to substantive comments received during the public comment period, and will make appropriate changes to the Environmental Assessment, as needed.

List of Preparers

Preparers (developed EA content):

- Cheryl Eckhardt, NEPA/106 Specialist, National Park Service, Intermountain Region Support Office, Denver, Colorado

Consultants (provided information/expertise):

- Todd Brindle, Superintendent, National Park Service, Big Thicket National Preserve, Kountze, Texas
- Rick Cronenberger, Historical Architect, National Park Service, Intermountain Region Support Office, Denver, Colorado
- Matt Fagan, Chief of Interpretation, Big Thicket National Preserve, Kountze, Texas
- Pete Hart, Former Acting Superintendent (through May 1, 2006), National Park Service, Big Thicket National Preserve, Kountze, Texas
- Curtis Hoagland, Chief Resource Management, Big Thicket National Preserve, Kountze, Texas
- Chuck Hunt, Management Assistant, Big Thicket National Preserve, Kountze, Texas
- Fulton Jeansonne, FMO, Big Thicket National Preserve, Kountze, Texas

- Lee LeJeune, Chief Admin Services, Big Thicket National Preserve, Kountze, Texas
- Nellie Martinez, Human Resources Specialist, Big Thicket National Preserve, Kountze, Texas
- Ray Martinez, Facility Manager, Big Thicket National Preserve, Kountze, Texas
- Pollard Mobley, Contract Specialist, Big Thicket National Preserve, Kountze, Texas
- Leta Parker, Program Assistant, Big Thicket National Preserve, Kountze, Texas
- Haigler Dusty Pate, Biologist, Big Thicket National Preserve, Kountze, Texas
- Chris Peapenburg, Executive Assistant, Big Thicket National Preserve, Kountze, Texas
- Mark Peapenburg, Chief Ranger, Big Thicket National Preserve, Kountze, Texas
- Esther Scypion, Administrative Tech, Big Thicket National Preserve, Kountze, Texas
- Susan Speakman, Space Management Specialist, National Park Service, Intermountain Region Support Office, Denver, Colorado
- Gayle Wilson, Budget Analyst, Big Thicket National Preserve, Kountze, Texas
- Eric Worsham, Gulf Coast Exotic Plant Manager, Big Thicket National Preserve, Kountze, Texas

REFERENCES

- NPS 1980 *General Management Plan*, National Park Service, Big Thicket National Preserve, September 1980
- NPS 2004a Director's Order #28A: *Archeology*, National Park Service, October 12, 2004
- NPS 2004b Director's Order #24: *Museum Collections Management*, National Park Service, reissued August 21, 2004
- NPS 2002 Director's Order #77-1: *Wetland Protection*, National Park Service, October 30, 2002
- NPS 2003 Director's Order #77-2: *Floodplain Management*, National Park Service, November 8, 2003
- NPS 1991a *Environmental Assessment to Construct a Visitor Center and Administrative Headquarters*, National Park Service, Big Thicket National Preserve, November 1991
- NPS 1991b *Archeological Survey of a Proposed Visitor Center/Headquarters Facility Area, Big Thicket National Preserve, Hardin County, Texas*, Division of Anthropology, Southwest Cultural Resources Center, National Park Service, Southwest Region, Santa Fe, New Mexico, December 31, 1991
- NPS 2000a *National Park Service Management Policies 2001*, U.S. Department of the Interior
- NPS 2000b Director's Order #47: *Sound Preservation and Noise Management*, National Park Service, December 1, 2000
- NPS 1999 Director's Order #41: *Wilderness Preservation and Management*, National Park Service, August 2, 1999
- NPS 1998 Director's Order #28: *Cultural Resource Management*, National Park Service, June 11, 1998