National Park Service
U.S. Department of the Interior

Big Thicket National Preserve
Texas

General Management Plan / Environmental Impact Statement

Record of Decision

Approved:

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Date:

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UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

RECORD OF DECISION

GENERAL MANAGEMENT PLAN / ENVIRONMENTAL IMPACT STATEMENT

Big Thicket National Preserve

Texas

The Department of the Interior, National Park Service (NPS), has prepared this "Record of Decision" (ROD) on the *Final General Management Plan / Environmental Impact Statement* (FGMP/EIS) for Big Thicket National Preserve ("preserve"). This ROD includes a background description of the project, a statement of the decision made, a list of mitigative measures to minimize environmental harm, a synopsis of other alternatives considered, the basis for the decision, a determination of nonimpairment of preserve resources and values for the preferred alternative, a description of the environmentally preferable alternative, and an overview of public and agency involvement in the decision-making process.

BACKGROUND OF THE PROJECT

The purpose of the general management plan is to provide comprehensive direction for resource preservation and visitor use and a foundation for decision making for the preserve for the next 15 to 20 years. The plan describes the resource conditions and visitor experiences to be achieved and maintained in the preserve over time. Clarification of what must be achieved according to law and policy is based on review of the preserve's purpose, significance, and special mandates.

STATEMENT OF DECISION MADE (SELECTED ACTION)

With the selected action, labeled as the "NPS preferred alternative" in the FGMP/EIS, the preserve will emphasize a broad ecosystem perspective for protection of the historic "Big Thicket." This alternative recognizes the challenges associated with management of cross-boundary resource issues and recognizes the importance of encouraging partnerships to address and resolve resource problems. From this perspective, the National Park Service will proactively engage in regional planning and policy efforts for the benefit of resource protection, compatible visitor use, and other issues both within and outside the preserve boundaries. Elements of this alternative will support the resilience of the preserve with regard to expected impacts from climate change, such as saltwater intrusion in freshwater environments, advancing shorelines interfering with preserve ecosystems, changes in composition in flora and fauna, and more intense storm surges and flooding threats to cultural resources, all of which may affect cultural and natural resources, as well as visitor experience at Big Thicket National Preserve.

The National Park Service will emphasize the preserve's status as a globally important biological protection area. Initiatives that advance the long-term protection of the preserve's natural resources will receive the primary focus of management attention and funding. The preserve's important cultural resources will continue to be protected and preserved as required by law. Appropriate visitor uses and experiences will also be improved and expanded. As a means to achieve these objectives, the preserve staff will expand and encourage new partnership agreements with outside public and private organizations having similar overall objectives for resource protection, law enforcement, public education and interpretation, and other operational requirements. Preserve operations will incorporate strong environmental protection and sustainable development practices. A map of this alternative can be found on page 89 of the *Final General Management Plan / Environmental Impact Statement.*

Some key actions of the NPS preferred alternative are:

- **Natural Resources.** Continue to work with partners and coordinate with neighboring land management agencies, local universities, and nongovernmental organizations to develop regional approaches to ecosystem management. Use an ecosystem approach to resource management that emphasizes evaluation of landscape-scale restoration methods, habitat fragmentation, invasive species control, fire management strategies, and species interactions within ecological communities.
- **Cultural Resource Management.** Continue efforts to protect, preserve, and stabilize cultural resources as staffing and funding priorities allow. Based on appropriate treatment recommendations and guidance documentation, actively preserve, stabilize, and rehabilitate selected historic structures and cultural landscapes.
- **Motorized and Nonmotorized Boats.** Allow motorized boats in the Neches River (including Johns Lake, Tater Patch Lake, Lower Cypress area of the Beaumont unit Lake Bayou, associated canals) and Little Pine Island – Pine Island Bayou Corridor unit from Highway 326 to the confluence with the Neches River including Cooks Lake and Scatterman Lake. Motorized and nonmotorized uses allowed in Village Creek from the confluence with the Neches River upstream to the Highway 96 bridge. Nonmotorized use allowed at Village Creek upstream from the Highway 96 bridge.
- **Boat Ramps and Launches.** Design and locate new boat ramps and launches for minimal impact to resources. Build a small floating dock on the Neches River in the Canyonlands unit to provide access to hiking trails.
- **Horses.** Expand opportunities for horseback riding to include a multiuse trail in the Beech Creek unit (Magnolia Trail and Loblolly Loop) and the Oxbow area of the Beaumont Unit.
- **Bicycling.** Expand opportunities for bicycling to include a multiuse trail in the Beech Creek unit (Magnolia Trail and Loblolly Loop); another new trail for bicycling and hiking along Pine Island Bayou could be developed in cooperation with the City of Beaumont.
- **Roads and Trails.** Focus trail development on those that link areas of the preserve to existing trails inside and outside the preserve, as well as to other entities such as the City of Beaumont. An accessible hunting trail would be provided for use by wheelchairs and other power-driven mobility devices consistent with NPS policy. Additional hiking trails would be developed where appropriate, and abandoned roadbeds would be assessed for reuse as trails.
- **Designated Water Trails.** Provide designated water trails and develop a sign plan to help visitors navigate to day use areas and other destinations.
- **Camping.** Develop 20 dispersed backcountry sites along land and water trails.

- **Interpretation.** Provide a wide variety of additional visitor uses and interpretive activities, including self-guiding or ranger-led tours and interpretive wayside exhibits, displays, and demonstrations.
- **Education.** Expand curriculum-based presentations for interdisciplinary education programs to all the schools in the region.
- **Headquarters and Visitor Center Complex.** Undertake groundwork in the parking lot of the existing visitor center on FM420 to improve visitor safety in and around the headquarters complex and to address maintenance and drainage issues.
- **Visitor Contact Facility.** Establish a new visitor contact facility shared with various partner agencies and organizations.

MANAGEMENT ZONES

The primary building blocks for a general management plan are the management zones. All zones are developed within the scope of the park unit's purpose, significance, mandates, and legislation.

Management zones prescribe a range of desired resource conditions and visitor experiences for the preserve and include statements about the appropriate kinds and levels of management, use, and development in each zone. The management zones provide primary guidance for subsequent decision making in the preserve. Six management zones have been defined for Big Thicket National Preserve. Land-based zones include developed or administrative, frontcountry, backcountry, and primitive zones. Water-based zones include mixed use and nonmotorized. For complete descriptions of the management zones, please reference the *Final General Management Plan / Environmental Impact Statement.*

MITIGATIVE MEASURES TO MINIMIZE ENVIRONMENTAL HARM

Congress has charged the National Park Service with managing the lands under its stewardship "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (NPS Organic Act, 16 *United States Code* [USC] 1). As a result, the National Park Service routinely evaluates and implements mitigation whenever conditions occur that could adversely affect the sustainability of national park system resources.

To ensure that implementation of the action alternatives protects unimpaired natural and cultural resources and the quality of the visitor experience, a consistent set of mitigative measures will be applied to actions proposed in this FGMP/EIS. The National Park Service will prepare appropriate environmental review (i.e., those required by the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and other relevant legislation) for these future actions. As part of the environmental review, the National Park Service will avoid, minimize, and mitigate adverse impacts when practicable. The implementation of a compliance-monitoring program could be considered to stay within the parameters of NEPA, NHPA, and ESA compliance documents, U.S. Army Corps of Engineers (USACE) section 404 permits, and other requirements. The compliance-monitoring program will oversee these mitigative measures and will include reporting protocols.

The following mitigative measures and best management practices will be applied to avoid or minimize potential adverse impacts from implementation of the general management plan.

CULTURAL RESOURCES

The National Park Service will preserve and protect, to the greatest extent possible, resources that reflect human occupation of Big Thicket National Preserve. Specific mitigative measures include the following:

- Preserve staff will continue to develop inventories for and oversee research regarding archeological, historic, and ethnographic resources to better understand and manage the resources, including cultural landscapes. The preserve staff will conduct any needed archeological or other resource-specific surveys and National Register of Historic Places evaluations and identify recommended treatments. The results of these efforts will be incorporated into comprehensive preserve-wide planning and resource assessments, as well as site-specific planning, mitigation, and environmental analysis.
- Museum collections will be acquired, accessioned and cataloged, preserved, protected, and made available for access and use according to NPS standards and guidelines.
- Known archeological sites will be routinely monitored to assess and document the effects of natural processes and human activities on the resources. Archeological resources will be left undisturbed and preserved in a stable condition to prevent degradation and loss of research values unless intervention could be justified based on compelling research, interpretation, site protection, or preserve development needs. Recovered archeological materials and associated records will be treated in accordance with NPS *Management Policies 2006*, NPS *Museum Handbook*, and 36 *Code of Federal Regulations* (CFR) Part 79.
- As appropriate, archeological surveys or monitoring will precede any ground disturbance. Significant archeological resources will be avoided to the greatest extent possible during construction. If such resources could not be avoided, an appropriate mitigation strategy (e.g., the excavation, recordation, and mapping of cultural remains prior to disturbance to ensure that important archeological data is recovered and documented) will be developed in consultation with the Texas state historic preservation office (SHPO) and, as necessary, associated American Indian tribes.
- If, during construction, previously unknown archeological resources are discovered, all work in the immediate vicinity of the discovery will be halted until the resources can be identified and documented. If the resources could not be preserved *in situ*, an appropriate mitigation strategy will be developed. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) will be followed. If non-Indian human remains are discovered, standard reporting procedures to notify the proper authorities will be followed, as will all applicable federal, state, and local laws.
- All projects with the potential for ground disturbance will undergo site-specific planning and compliance procedures. For archeological resources, construction projects and designed facilities will be in previously disturbed or existing developed areas. Wherever possible, adverse impacts to archeological resources will be avoided to the extent possible in accordance with the *Secretary of the Interior's Standards for Archeology and Historic Preservation*.
- To minimize visual and auditory intrusions on cultural resources from modern development, the National Park Service will use screening or sensitive designs that will be compatible with historic resources and cultural landscapes and not intrude on ethnographic resources. If adverse impacts cannot be avoided, impacts will be mitigated through a consultation process with all interested parties.

- Continue ongoing consultations with culturally associated American Indian tribes. Protect sensitive traditional use areas to the extent feasible by avoiding or mitigating impacts on ethnographic resources and continuing to provide access to traditional use and spiritual areas. Mitigation could include identification of and assistance in accessing alternative resource gathering areas and screening new development from traditional use areas.
- Encourage visitors through the preserve's interpretive programs to respect and leave undisturbed any inadvertently encountered archeological resources as well as to respect and leave undisturbed any offerings placed by American Indians.

NATURAL RESOURCES

Air Quality

- Implement a dust abatement program for construction projects. Standard dust abatement measures could include the following elements: water spraying or otherwise stabilizing soils, covering haul trucks, employing speed limits on unpaved roads, minimizing vegetation clearing, and revegetating after construction.

Nonnative Species

- Implement an invasive weed control program. Standard measures could include the following elements: ensure construction-related equipment arrives on-site free of mud or seed-bearing material, certify all seeds and straw material as weed-free, identify areas of invasive weeds preconstruction, treat invasive weeds or weed topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment), and revegetate with appropriate native species.

Soils

- Build any proposed facilities on soils suitable for development. Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion-control measures, such as erosion matting, silt fencing, and sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies. Once work is completed, revegetate construction areas with native plants in a timely manner.

Endangered and Threatened Species and Species of Concern

Mitigation actions will occur during normal preserve operations as well as before, during, and after construction to minimize immediate and long-term impacts on rare, threatened, and endangered species. These actions will vary by specific project and area of the preserve affected. Additional mitigation measures will be added depending on the specific action and location. Many of the measures listed below for vegetation and wildlife will also benefit rare, threatened, and endangered species by helping to preserve habitat. Mitigation actions specific to rare, threatened, and endangered species will include the following:

- Conduct surveys for rare, threatened, and endangered species as warranted.

- Locate and design facilities and actions to avoid adverse effects on rare, threatened, and endangered species. If avoidance is infeasible, minimize and compensate for adverse effects on rare, threatened, and endangered species as appropriate and in consultation with the appropriate resource agencies. Conduct work outside of critical periods for the specific species.
- Develop and implement restoration or monitoring plans as warranted. Plans should include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.
- Implement measures to reduce adverse effects of nonnative plants and wildlife on rare, threatened, and endangered species.

Vegetation

- Monitor areas used by visitors (e.g., trails) for signs of native vegetation disturbance. Use public education, revegetation of disturbed areas with native plants, erosion-control measures, and barriers to control potential impacts on plants from trail erosion or social trailing.
- Develop revegetation plans for the disturbed area and require the use of native species. Revegetation plans should specify seed or plant source, seed or plant mixes, soil preparation, and other details as needed. Salvage vegetation should be used to the extent possible.

Wildlife

- Implement visitor education programs, restrictions on visitor activities, and preserve ranger patrols as necessary to reduce impacts to wildlife.
- Implement a natural resource protection program. Standard measures will include construction scheduling, biological monitoring, erosion and sediment control, the use of fencing or other means to protect sensitive resources adjacent to construction, the removal of all food-related items or rubbish, topsoil salvage, and revegetation. This could include specific construction monitoring by resource specialists as well as treatment and reporting procedures.

Natural Soundscapes

- Implement standard noise abatement measures during construction. Standard noise abatement measures could include the following elements: a schedule that minimizes impacts on adjacent noise-sensitive uses and the use of the best available noise control techniques wherever feasible.
- Implement standard noise abatement measures during preserve operations using measures such as those listed above.
- Site and design facilities to minimize the intrusive frequencies, magnitudes, and durations of human-caused sound.
- Schedule interpretive programs to avoid times when noisy activities occur.
- Use quiet technology equipment wherever feasible.
- Use hydraulically or electrically powered impact tools when feasible.
- Place stationary noise sources as far from sensitive uses as possible.

- The idling of motors (power tools, equipment, and vehicles) will be minimized when not in use.

Scenic Resources

- Where appropriate, use facilities such as boardwalks and fences to route people away from sensitive natural and cultural resources, while still permitting access to important viewpoints.
- Design, site, and construct facilities to avoid or minimize adverse effects on natural and cultural resources and visual intrusion into the natural or cultural landscape.
- Provide vegetation screening, where appropriate.

SUSTAINABILTY AND AESTHETICS

- Projects will avoid or minimize adverse impacts on natural and cultural resources.
- Development projects (e.g., buildings, facilities, utilities, roads, bridges, trails, etc.) or reconstruction projects (e.g., road reconstruction, building rehabilitation, utility upgrade, etc.) will be designed to work in harmony with the surroundings to the greatest extent possible.
- Projects will reduce, minimize, or eliminate air and water nonpoint-source pollution.
- Projects will take into account the expected effects of climate change on preserve resources and will incorporate this information into project planning, design, and construction.
- Projects will be sustainable whenever practicable by recycling and reusing materials, by minimizing materials, by minimizing energy consumption during the project, and by minimizing energy consumption throughout the lifespan of the project.

USER CAPACITY

General management plans for national park system units are required by law to identify and address implementation commitments for user capacity, also known as carrying capacity. The National Park Service defines user capacity as the types and levels of visitor use that can be accommodated while sustaining the quality of preserve resources and visitor experiences consistent with the purposes of the preserve. Managing user capacity in national park units is inherently complex and depends not only on the number of visitors but also on where the visitors go, what they do, and the "footprints" they leave behind. In managing user capacity, NPS staff and partners employ a variety of management tools and strategies rather than relying solely on regulating the number of people in a preserve area. In addition, the ever-changing nature of visitor use in preserves requires an adaptive approach to user capacity management.

As part of the NPS commitment to implement user capacity, preserve staff will abide by these directives for guiding the types and levels of visitor use that will be accommodated while sustaining the quality of preserve resources and visitor experiences consistent with the preserve's purpose.

The FGMP/EIS includes indicators and standards for Big Thicket National Preserve. Indicators and standards are measurable features that will be monitored to track changes in resource conditions and visitor experiences. Indicators and standards help the National Park Service ensure that desired

conditions are being attained, supporting the fulfillment of the preserve's legislative and policy requirements. The plan also identifies the types of management actions that will be taken to achieve desired conditions and related legislative and policy requirements.

INDICATORS AND STANDARDS

Priority indicators for user capacity at Big Thicket National Preserve are

- number of new and existing dumping sites encountered and incidences recorded in areas currently patrolled
- number of illegal ORV instances (instances being new trails or continued use of existing illegal trails) per unit of the preserve
- presence of a noncompliant houseboat
- number of incidences of citations or encounters of obvious resource removal, as evidenced by shovel holes or other signs of activity
- *Escherichia coli (E. coli)* levels in areas where visitors participate in water-based primary contact recreation activities
- number of occurrences of vandalism that results in damage to NPS assets
- percent of any user group population (e.g., hunting, hiking, boating) that experiences conflicts either within or between user groups (can be reported or observed)
- number of vessel trips (canoes, kayaks, and tubes) per day on Village Creek south of FM 418 and north of US 96
- percent of additional requested hunting permits above previous hunting permit limits by unit

Standards that represent the minimum acceptable condition are shown in table 5 of the FGMP/EIS.

LONG-TERM MONITORING

- NPS staff will continue monitoring use levels and patterns throughout Big Thicket National Preserve. In addition, NPS staff will monitor these user capacity indicators. The rigor of monitoring the indicators, such as the frequency of monitoring cycles and the geographic area monitored, might vary considerably, depending on how close existing conditions are to the standards. If the existing conditions are well below the standard, the rigor of monitoring might be less than if the existing conditions are close to or trending toward the standard.
- Initial monitoring of the indicators will determine if the indicators are accurately measuring the conditions of concern and if the standards truly represent the minimally acceptable condition of the indicator. NPS staff might decide to modify the indicators or standards and revise the monitoring program if better ways are found to measure changes caused by visitor use. Most of these types of changes should be made within the first several years of initiating monitoring. After this initial testing period, adjustments will be less likely.
- If use levels and patterns change appreciably, NPS staff might need to identify new indicators to ensure that desired conditions are achieved and maintained. This iterative learning and refining process, a form of adaptive management, is a strength of the NPS user capacity management program.

OTHER ALTERNATIVES CONSIDERED

Other alternatives were considered during the planning process. The paragraphs below describe the concept and key features of these alternatives. More detailed information on these alternatives can be found in the FGMP/EIS.

ALTERNATIVE 1: CONTINUATION OF CURRENT MANAGEMENT (NO-ACTION ALTERNATIVE)

Under this alternative, the current management approach for the preserve would continue into the future. The management direction would be in accordance with the 1980 general management plan (GMP), previous NPS practices and approved actions, and all applicable laws, regulations, and policies. Lands acquired after the 1980 general management plan (including the Big Sandy Creek corridor unit, Village Creek corridor unit, and Canyonlands unit) would be managed in a manner compatible with existing units. New or expanded uses would not be anticipated.

ALTERNATIVE 3: LEADERSHIP IN BIODIVERSITY AND SUSTAINABILITY

Alternative 3 would emphasize natural resource preservation and research while providing self-reliant recreational opportunities. This alternative would provide the highest emphasis on protection, restoration, and maintenance of native biodiversity in the preserve. Restoration and active management would restore native vegetation communities, species assemblages, and ecological functions. The National Park Service would engage communities in neighborhood partnership programs and citizen science activities with the goals of increasing volunteerism and developing local stakeholder interest in the preserve and its natural resources. Preserve operations would feature strong environmental protection and sustainable development and practices. In addition, the National Park Service would increase patrols and improve signage to increase the visibility of preserve-managed lands and waters to the public.

ALTERNATIVE 4: CONNECTING PEOPLE TO THE PRESERVE

The purpose of this alternative is to increase the relevancy of Big Thicket National Preserve and the National Park Service to the people in the communities of southeast Texas and to visitors from all over the world. Nature, history, and recreational opportunities would encourage people to connect to and support the preserve's mission. In this alternative, management would emphasize personal connections to the preserve through family and cultural history, recreational opportunities, and personal experiences. Opportunities to visit the preserve using technology would be considered. This alternative recognizes that the cultural history of the preserve is also a history of the surrounding communities and the region. This history includes the history of the tribes, early settlers through today's inhabitants. Visitors would continue to have the opportunity to enjoy a range of recreational activities consistent with the purpose of the preserve. There would be improved access in some areas (e.g., Lance Rosier and Canyonlands units) as well as enhanced recreational and interpretive opportunities. Resource management efforts would support and maintain the biodiversity of the preserve and appropriate visitor experiences, as well as a landscape that reflects the historic native ecosystems. Preserve operations would feature strong environmental protection and sustainable development and practices.

BASIS FOR DECISION

This record of decision has been developed in accordance with the policies and purposes of the National Environmental Policy Act of 1969, as amended (42 USC 4371 et seq.), which requires relevant environmental documents, comments, and responses be part of the record in making decisions. Furthermore, the act requires that the alternatives considered by the decision maker are encompassed by the range of alternatives discussed in the relevant environmental documents and that the decision maker consider the alternatives described in the environmental impact statement.

As described earlier, a full range of alternatives was developed as part of the environmental impact statement. Alternative visions for managing the preserve were developed by identifying different ways to address the planning issues, in context with the preserve's purpose and significance. In developing this range of alternatives, the National Park Service adhered to the requirements of the National Environmental Policy Act, while giving careful consideration to the preserve's enabling legislation. Oftentimes, this requires balancing natural and cultural resource protection with visitor services, facilities, and recreational opportunities. The following major decision points were used to help develop these alternative concepts:

How can the National Park Service best

- manage natural resources to minimize the effects of habitat fragmentation; protect, maintain, and improve water systems; and protect, maintain, and restore native biodiversity and ecosystem health?
- provide appropriate recreational opportunities for visitors and access to these opportunities?
- protect natural and cultural resources from inadvertent visitor and illegal activities?
- increase National Park Service presence in the surrounding communities?
- manage operations efficiently and sustainably?

While aiming to address the above decision points, the National Park Service identified alternative 2 as the agency's preferred alternative. This alternative provides the best combination of strategies to protect the preserve's unique natural and cultural resources and visitor experience, while improving the preserve's operational effectiveness and sustainability. It also provides other advantages to the preserve, regional communities, partners, and stakeholders.

The identification of the preferred alternative is also based on extensive NPS analysis of the beneficial and adverse impacts of all alternatives. The results of this analysis, found in chapter 4 of the FGMP/EIS, demonstrate that the preferred alternative has the greatest beneficial effect across a range of preserve resources and values, including natural and cultural resources, visitor use and experience, socioeconomics, and preserve operations and facilities.

The National Park Service also considered public comments on the draft GMP/EIS that were received from individuals, organizations, tribes, and agencies. There was no controversy generated by these comments.

The preferred alternative included in the FGMP/EIS meets the preserve's enabling legislative requirements to preserve, conserve, and protect natural and cultural resources while providing for public enjoyment. Also, the selected alternative best balances the NPS need to provide high-quality visitor experiences and protect resources. The selected alternative also addresses public comments

and concerns received, as summarized in the section entitled, "Public and Agency Involvement" in this Record of Decision.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

As defined in CEQ "Forty Most Asked Questions," (Q6a) the environmentally preferable alternative is defined as "...the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources." It should be noted that there is no requirement that the environmentally preferred alternative and the NPS preferred alternative be the same.

In analyzing the impacts to natural and cultural resources, as described in chapter 4 of the FGMP/EIS, none of the alternatives would result in more than moderate adverse impacts—most adverse impacts would be negligible to minor in intensity. Indeed, most of the preserve's natural resources would not be affected by the action alternatives. Compared to alternative 1, alternatives 2, 3, and 4 would have similar adverse impacts on resources in the preserve. Some localized minor impacts could occur as a result of the limited construction projects and the maintenance of facilities in the action alternatives. However, all the action alternatives would better protect the preserve's natural resources through increased monitoring, increased volunteer and outreach efforts (which would increase visitors' awareness of the preserve's natural resources), increased native vegetation restoration efforts, better designation of existing trails, increased cooperation with neighbors and development of partnerships, and the application of user capacity indicators and standards. Alternatives 2 and 4 would also better protect the preserve's cultural resources through increased monitoring of archeological resources, historic structures and cultural landscapes, and increased outreach and education efforts, which in turn would increase visitor awareness and community stewardship of these resources.

Although the beneficial and adverse impacts of the three action alternatives are similar, alternative 3 has the least amount of road, trail, and visitor infrastructure development (e.g., boat ramps and launches) and the greatest focus on protection of biodiversity and natural resources within the preserve. For this reason, alternative 3 is the environmentally preferable alternative.

PUBLIC AND AGENCY INVOLVEMENT

The *Big Thicket National Preserve Final General Management Plan / Environmental Impact Statement* represents the input of the National Park Service, other agencies, American Indian tribes traditionally associated with the preserve, and the public, as appropriate. Consultation and coordination among these groups were vitally important throughout the planning process.

The public had three primary avenues through which to participate during the development of the general management plan. These included participating in public meetings, responding to newsletters, and submitting comments on the NPS planning website.

PUBLIC MEETINGS AND NEWSLETTERS

Public meetings and two newsletters were used to keep the public informed and involved in the planning process for Big Thicket National Preserve. A mailing list was compiled that consisted of members of government agencies, nongovernment groups, businesses, legislators, local governments, and interested citizens.

The notice of intent to prepare an environmental impact statement was published in the *Federal Register* on January 15, 2009.

The first newsletter (June 2009) received 384 comments in 32 correspondences and the second newsletter (October 2010) received 214 comments in 42 correspondences. In July 2009, four open house events were held so the public could learn more about the general management planning process. These open house events were held at Wheat Elementary School in Woodville, Texas; the Silsbee Community Center in Silsbee, Texas; the Rogers Park Community Center in Beaumont, Texas; and the Forest Building in Houston, Texas. In November 2010, four open house events were held so the public could learn about the draft alternatives. These open house events were held at the Silsbee Community Center in Silsbee, Texas; the Community Resource Center in Houston, Texas; Wheat Elementary School in Woodville, Texas; and the Rogers Park Community Center in Beaumont, Texas. In total, 124 people attended these open houses.

Through these various venues, a variety of points of view about future visions for the preserve and preserve management issues were offered from neighbors, American Indian tribes traditionally associated with the preserve, community leaders, government agencies, conservation groups, local citizens, and other interested groups. Although each commenter may have had a different vision of the preserve, everyone had a common interest in protecting its valuable resources.

Public comments received during the planning process covered a wide range of views, with few consistent themes:

- Most commenters value the biodiversity, natural resources, and wildlife in the preserve, as well as the scenery, quiet, and recreation activities and opportunities.
- The most frequently mentioned topic of concern to be addressed as part of the general management plan included incompatible uses or development on lands adjacent to the preserve and prior land uses including logging and oil and gas exploration and extraction activities.
- In regard to facilities within the preserve, many respondents stated the need to accommodate different user groups and recreational uses as well as to provide greater public access, while others want the preserve to be kept as wild and natural as possible.
- There was substantial support for the development of more hiking trails, canoe trails, bicycle trails, or trails that connect with existing bike trails.
- Respondents expressed the importance of the relationship between the preserve and the community and would like to have more educational and interpretive opportunities. Respondents supported increased outreach to schools, urban areas, and communities to promote environmental awareness and public support.
- Respondents supported the preservation, conservation, and restoration of natural resources and biodiversity and supported keeping the preserve as natural as possible. Interest was expressed for expanding scientific research.

- The majority of respondents were in support of significant increase in the size of the preserve in order to decrease habitat fragmentation, increase connectivity and public access, and provide buffering of sensitive areas. Potential boundary adjustments and designations were suggested to be reviewed as part of the general management plan.

RELEASE OF THE DRAFT GENERAL MANAGEMENT PLAN / ENVIRONMENTAL IMPACT STATEMENT

On May 3, 2013, Big Thicket National Preserve released the *Draft General Management Plan / Environmental Impact Statement* for public review and comment. The *Draft General Management Plan / Environmental Impact Statement* was available locally at the preserve and on the NPS planning website (http:/ /parkplanning.nps.gov/bith). The public was invited to submit comments on the *Draft General Management Plan / Environmental Impact Statement* through July 1, 2013.

In May 2013, three open house events were held so the public could learn more about the *Draft General Management Plan / Environmental Impact Statement.* These open house events were held at the Big Thicket National Preserve Visitor Center in Kountze, Texas; the Wheat Elementary School in Woodville, Texas; and the Rogers Park Community Center in Beaumont, Texas. In total, 12 people attended these meetings.

During the public comment period, 16 pieces of correspondence were entered into the NPS Planning, Environment, and Public Comment (PEPC) system, either through direct entry by commenter or uploading hard copy letters or electronic correspondence. While private individuals submitted most of the correspondences, three conservation organizations, one business, and two federal government agencies also submitted correspondence.

A comment summary titled "Agency and Public Comment Response" is included in the appendixes of the *Final General Management Plan / Environmental Impact Statement.* The comment summary summarizes the substantive comments received during this draft review period and provides NPS responses to the various categories of concerns that were raised.

AGENCY AND AMERICAN INDIAN CONSULTATION AND COORDINATION

U.S. FISH AND WILDLIFE SERVICE, SECTION 7 CONSULTATION

The Endangered Species Act of 1973, as amended, requires in section 7(a)(2) that each federal agency, in consultation with the Secretary of the Interior, ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. During the preparation of this general management plan, NPS staff coordinated informally with the U.S. Fish and Wildlife Service's Ecological Services. A letter was sent to the U.S. Fish and Wildlife Service on January 2009, informing the agency of the planning effort and requesting information on federally listed threatened and endangered species and designated critical habitats in the preserve and its vicinity (a copy of this letter is included in appendix C of the FGMP/EIS.) The National Park Service did not receive a written response to this letter from the U.S. Fish and Wildlife Service. A list of

threatened and endangered species for Tyler, Hardin, Liberty, Polk, Jasper, Jefferson, and Orange counties was compiled using the U.S. Fish and Wildlife Service's website that can be accessed at http://www.fws.gov/endangered/.

In accordance with the Endangered Species Act and relevant regulations at 50 CFR Part 402, the National Park Service determined that this general management plan is not likely to adversely affect any threatened or endangered species, and sent a copy of the general management plan to the U.S. Fish and Wildlife Service with a request for written concurrence with that determination.

In addition, the National Park Service has committed to consult on future actions conducted under the framework described in the management plan to ensure that future actions are not likely to adversely affect threatened or endangered species. If a future NPS action in the preserve might potentially impact the red-cockaded woodpecker, Sprague's pipit, Louisiana black bear, Texas trailing phlox, Navasota ladies' -tresses, Neches River rose-mallow, Louisiana pine snake, or their habitat, then consultation with the U.S. Fish and Wildlife Service would be initiated.

In an e-mail dated September 3, 2014, Charrish Stevens of the U.S. Fish and Wildlife Service provided a copy of a form letter with generic comments on implementation of the Endangered Species Act. No additional comments were provided.

Communication with the U.S. Environmental Protection Agency

Region 6 of the U.S. Environmental Protection Agency commented on the *Draft General Management Plan / Environmental Impact Statement* on June 28, 2013. In accordance with their responsibilities under section 309 of the Clean Air Act, the National Environmental Policy Act, and the Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act, they commented that the U.S. Environmental Protection Agency has "environmental concerns and requests additional information" in the *Final General Management Plan / Environmental Impact Statement.* The agency stated that the *Draft General Management Plan / Environmental Impact Statement* "does not contain sufficient information to fully assess the impact of the action and additional information is requested," such as more detailed information or responses from NPS consultation with other agencies. Consistent with NPS policy as contained in Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* and accompanying handbook, the *Draft General Management Plan / Environmental Impact Statement* is a programmatic document and the level of detail and analysis is appropriate. Similarly, the *Draft General Management Plan / Environmental Impact Statement* is the mechanism for consultation with traditionally associated American Indian tribes and state and federal agencies. For this reason, comments from these entities did not appear in the draft document and are incorporated into the *Final General Management Plan / Environmental Impact Statement.*

The EPA comments on the *Draft General Management Plan / Environmental Impact Statement* and NPS responses to those comments can be found in appendix G of the *Final General Management Plan / Environmental Impact Statement.*

A copy of this correspondence is presented in appendix C of the *Final General Management Plan / Environmental Impact Statement.*

SECTION 106 CONSULTATION

Agencies that have direct or indirect jurisdiction over historic properties are required by section 106 of the National Historic Preservation Act to take into account the effect of any undertaking on properties eligible for listing or listed in the National Register of Historic Places. To meet the requirements of 36 CFR 800, the National Park Service sent a letter to the Texas SHPO on January 15, 2009, inviting their participation in the general management planning process for the preserve. The Texas SHPO did not send a response letter. The Texas SHPO was sent the two scoping newsletters as well. The preserve staff provided the Texas SHPO with a copy of the *Draft General Management Plan / Environmental Impact Statement* for their review. In an e-mail dated September 4, 2013, Marie Archambeault of the Texas state historic preservation office had no comment on the draft general management plan but looked forward to continued site-specific consultation regarding cultural resources in Big Thicket National Preserve.

The preserve also notified the Advisory Council on Historic Preservation (letter dated May 25, 2010) about the general management plan and invited their participation. No response from the Council was received.

Before implementing any actions in the general management plan that have the potential to affect historic properties and cultural resources, Big Thicket National Preserve would notify and continue to consult as appropriate with the Texas SHPO, associated tribes, and other interested parties. Undertakings that may require section 106 consultation include ground-disturbing construction activities that could affect archeological and ethnographic resources and proposed preservation and rehabilitation of selected historic structures and cultural landscapes.

Consultations with Traditionally Associated American Indian Tribes

The preserve staff consults on a government-to-government basis with the Alabama-Coushatta Tribe of Texas regarding a full range of issues and activities. Preserve staff aim for effective communication and the sharing of information and knowledge about mutual interests in the preserve, including concerns about preserve planning, operations, and the management of cultural and natural resources.

In a letter dated May 25, 2010, the National Park Service notified the Alabama-Coushatta Tribe of Texas about the general management plan and invited the tribe's participation in the planning process. The National Park Service subsequently sent copies of the alternatives newsletter to the tribe. The National Park Service did not receive responses from the tribe regarding the notification letter or newsletter.

The preserve staff provided the Alabama-Coushatta Tribe of Texas with a copy of the *Draft General Management Plan / Environmental Impact Statement* for their review. On July 25, 2013, the tribal historic preservation officer from the Alabama-Coushatta Tribe of Texas provided comment on the draft plan and preferred alternative. The Tribal Historic Preservation Office (THPO) inquired regarding implementation of a cultural resource management plan, assessment of and information about cultural and archeological sites, and expressed an interest in continued partnership with the preserve.

The Alabama-Coushatta Tribe of Texas's comments on the *Draft General Management Plan / Environmental Impact Statement* and NPS responses to those comments can be found in appendix G of the *Final General Management Plan / Environmental Impact Statement.*

A copy of this correspondence is presented in appendix C of the *Final General Management Plan / Environmental Impact Statement.*

CONCLUSION

The selected action for Big Thicket National Preserve provides the most comprehensive, long-term, effective strategy among the alternatives considered in the *Final General Management Plan / Environmental Impact Statement* for meeting NPS purposes, goals, and criteria for managing the preserve and for meeting national environmental policy goals.

As described in the "Mitigative Measures Common to All Action Alternatives" section of the *Final General Management Plan / Environmental Impact Statement,* all practical means to avoid or minimize environmental harm from the selected action have been adopted. Implementing the selected action for Big Thicket National Preserve will protect the long-term ecological health of the preserve by proactively engaging in regional planning and policy efforts for the benefit of resource protection, compatible visitor use, and other issues both within and outside the preserve boundaries. Initiatives that advance the long-term protection of the preserve's natural resources will receive the primary focus of management attention and funding. The preserve's important cultural resources will continue to be protected and preserved as required by law. Appropriate visitor uses and experiences will be improved and expanded. These actions will allow the National Park Service to balance protection of the preserve's natural and cultural resources with the enjoyment of preserve resources by all visitors. All aspects of the selected action will be undertaken and monitored under the direction of the superintendent, Big Thicket National Preserve, beginning as soon as practicable.

ATTACHMENT: DETERMINATION OF NONIMPAIRMENT FOR PRESERVE RESOURCES AND VALUES

A determination of nonimpairment is made for each of the resource impact topics carried forward and analyzed in chapter 4 of the FGMP/EIS for the NPS preferred alternative. The description of preserve significance in chapter 1 was used as a basis for determining if a resource is

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the preserve, or
- key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or
- identified in the preserve's general management plan or other relevant NPS planning documents as being of significance.

Nonimpairment determinations are not necessary for visitor use and experience, socioeconomics, and preserve operations and facilities because impairment findings relate back to preserve resources and values. These impact areas are not generally considered to be preserve resources or values according to the Organic Act, and they cannot be impaired the same way that an action can impair preserve resources and values. The impact topics described below (and whether they are fundamental or other important resources and values of the preserve) are

- Soils. Soils are an important component of the biodiversity and structural diversity fundamental resources and values.
- Water Quality. Water quality is an important component of the free-flowing water and dependent systems fundamental resource and value.
- Vegetation. Vegetation is an important component of the biodiversity fundamental resource and value.
- Wetlands. Wetlands are an important component of the free-flowing water and dependent systems fundamental resource and value.
- Fish and Wildlife. Fish and wildlife are important components of the biodiversity fundamental resource and value.
- Endangered and Threatened Species and Species of Concern. Endangered and threatened species and species of concern are important components of the biodiversity fundamental resource and value.
- Archeological Resources. Archeological resources are an important component of the cultural resources other important resource and value.
- Historic Structures, Sites, and Cultural Landscapes. Historic structures, sites, and cultural landscapes are an important component of the cultural resources other important resource and value.
- Ethnographic Resources. Ethnographic resources are an important component of the cultural resources other important resource and value.

NATURAL RESOURCE TOPICS

Nonimpairment determinations were made for soils, water quality, vegetation, wetlands, fish and wildlife, and endangered and threatened species and species of concern.

Soils

The protection of soil resources in the preserve is important for sustaining the natural systems of the area. Actions in the preferred alternative will have both beneficial and adverse impacts on soil resources. The primary beneficial effects of the NPS preferred alternative relate to the implementation of mitigation measures associated with user capacity indicators and standards to guide visitor use management in the preserve and increased monitoring of certain visitor activities.

Under the NPS preferred alternative, there will be additional impacts to soils by visitor use (e.g., compaction). The promotion of low-impact activities could lead to greater visitation with relatively small adverse effects on soils. To accommodate this increase in visitors, construction of signs and wayside exhibits will also increase, causing long-term, but localized and relatively small soil disturbance.

Overall, the NPS preferred alternative will result in some small, long-term adverse impacts on the preserve's soil due to increased visitor use, the development of new facilities and trails to support visitor use, and new motor boating activities in localized areas. However, the adverse effects will be relatively small and/or localized to recreation and developed areas. In addition, implementation of mitigation measures will minimize these adverse impacts. Therefore, the preferred alternative will not result in impairment of soils.

Water Quality

Actions in the preferred alternative will have both beneficial and adverse impacts on the area's water quality. The primary beneficial effects of the NPS preferred alternative relate to the implementation of user capacity indicators and standards to guide visitor use management in the preserve and increased monitoring of certain visitor activities. The primary adverse effects will result from the expansion of visitor access and use throughout the preserve under the NPS preferred alternative, potentially resulting in some increase in erosion along trails and at primary visitor use areas that could have impacts on water quality such as White Sands Beach. The impact will be due to increased sedimentation and water turbidity in localized areas. However, the adverse effects will not be substantial and/or will be localized to recreation areas. In addition, implementation of mitigation measures will minimize these adverse impacts. Therefore, the preferred alternative will not result in impairment of water quality.

Vegetation

Actions in the preferred alternative will have both beneficial and adverse impacts on vegetation. The primary beneficial effects of the NPS preferred alternative relate to the expanded fire management activities, the implementation of user capacity indicators and standards to guide visitor use management in the preserve, and increased monitoring of certain visitor activities. Most of the adverse effects will result from disturbance to vegetation from site-specific minimal facility development and the development of additional trails and backcountry campsites. However, the

adverse effects will not be substantial and will be localized to recreation areas and areas where new facilities are developed. In addition, implementation of mitigation measures will minimize these adverse impacts. Therefore, the preferred alternative will not result in impairment of vegetation.

Wetlands

Actions in the preferred alternative will have both beneficial and adverse impacts on wetlands. The primary beneficial effects of the NPS preferred alternative relate to the implementation of user capacity indicators and standards to guide visitor use management in the preserve and increased monitoring of certain visitor activities. The primary adverse effects will result from disturbance to wetlands due to people walking through wetlands and trampling vegetation or from minimal new facility construction (to be developed outside the preserve and wetlands areas to the extent possible). However, the adverse effects will not be substantial and/or will be localized to recreation areas and areas where new facilities are developed. In addition, implementation of mitigation measures will minimize these adverse impacts. Therefore, the preferred alternative will not result in impairment of wetlands.

Fish and Wildlife

Actions in the preferred alternative will have both beneficial and adverse impacts on fish and wildlife. The primary beneficial effects of the NPS preferred alternative relate to expanded fire management activities and the implementation of user capacity indicators and standards to guide visitor use management in the preserve and increased monitoring of certain visitor activities. The primary adverse effects will result from visitor use and minimal new facility construction (to be developed outside the preserve and sited in areas that have already been altered by human activities). However, the adverse effects will not be substantial and/or will be localized to recreation areas and areas where new facilities are developed. In addition, implementation of mitigation measures will minimize these adverse impacts. Therefore, the preferred alternative will not result in impairment of fish and wildlife.

Endangered and Threatened Species and Species of Concern

Actions in the preferred alternative will have both beneficial and adverse impacts on endangered and threatened species and species of concern. Overall, beneficial impacts to the red-cockaded woodpecker and Texas trailing phlox are anticipated due to new fire management actions and the implementation of user capacity indicators and standards to guide visitor use management in the preserve and increased monitoring of certain visitor activities. They will experience some adverse effects resulting from visitor use and minimal new facility construction (to be developed outside the preserve and carefully sited in areas outside of habitat critical to or known to be used by federal and state listed species). However, these effects will be minimized by potential mitigation measures associated with visitor use monitoring and management. The preferred alternative will have little to no impact on the other state- and federal- listed species. This will equate to a "may affect but not likely to adversely affect" determination for the red-cockaded woodpecker and Texas trailing phlox, and a "no effect" determination on the other state and federal listed species. Therefore, the preferred alternative will not result in impairment of endangered and threatened species and species of concern.

CULTURAL RESOURCE TOPICS

Impairment determinations were made for archeological resources, historic structures, sites, and cultural landscapes, and ethnographic resources.

Archeological Resources

Under the NPS preferred alternative, potential adverse impacts to archeological resources could occur by continuing and proposed ground-disturbing actions (e.g., oil and gas operations; fire management; maintenance of existing roads, trails, utilities, structures, and other facilities), or by limited new construction (e.g., additional development in the headquarters area, new backcountry camping areas, additional trails and parking areas). However, all proposed project areas will be archeologically surveyed and assessed to ensure that archeological resources, if identified in these areas, are avoided or adequately mitigated if avoidance cannot be achieved. Mitigation measures will be used to minimize any adverse effects. To the extent feasible, new facilities will be placed outside the preserve boundaries, in previously disturbed areas, or in areas with little potential for intact archeological resources. Beneficial effects are anticipated from expanded educational outreach and partnerships with outside groups and agencies to assist and expand NPS efforts to conduct surveys and monitor site conditions. These efforts will allow for better protection of the resources. Thus, implementation of the preferred alternative will not result in impairment to archeological resources.

Historic Structures, Sites, and Cultural Landscapes

Under the NPS preferred alternative, all ongoing actions that could potentially affect the integrity of historic structures and cultural landscapes (e.g., oil and gas operations, fire management, trail development, and routine maintenance) will be assessed to ensure that character-defining features and architectural elements are avoided or adequately mitigated. Proposed new development (e.g., construction of trails and trailheads, parking areas, backcountry camping sites, boat ramps, or launches) will minimally affect the scale and visual relationships among potential cultural landscape features. Patterns of native vegetation, land use, topography, and other cultural landscape elements will remain largely unaltered. To the extent feasible, new facilities will be located outside the preserve boundaries, which will assist efforts to minimize the potential impacts of new construction on historic viewsheds, historic structures, and cultural landscapes.

Without ongoing preservation maintenance and stabilization, the few remaining historic structures in the preserve (e.g., tram roads, remnants of homestead structures) and associated cultural landscape elements may be obscured or face deterioration by vegetation growth, erosion or weathering, and visitor-related impacts. All undertakings will be carried out in accordance with the Secretary's Standards and appropriate mitigation measures will be implemented as necessary. Beneficial effects are also anticipated from expanded educational outreach and partnerships with outside groups and agencies to assist and expand NPS efforts to conduct surveys and monitor site conditions. These efforts will allow for better protection of the resources. Thus, implementation of the preferred alternative will not result in impairment to historic structures, sites, and cultural landscapes.

Ethnographic Resources

Under the NPS preferred alternative, all continuing and proposed actions that potentially entail ground disturbance (e.g., oil and gas operations; fire management; maintenance of existing roads, trails, utilities, structures, and other facilities), or limited new construction (e.g., additional development in the headquarters area, additional trails and parking areas) will be assessed to ensure that ethnographic resources, if identified in project areas, are avoided or adequately mitigated in accordance with section 106 requirements. Should human remains, sacred objects, or objects of cultural patrimony be discovered, these will be repatriated to culturally affiliated tribal groups in accordance with the Native American Graves Protection and Repatriation Act. To the extent feasible, new facilities will be positioned outside the preserve boundaries in previously disturbed areas or in areas with little potential for intact ethnographic resources. NPS staff will also continue to consult on a government-to-government basis with the Alabama-Coushatta Tribe of Texas and other culturally associated tribes, as appropriate, to assist the identification and protection of ethnographic resources. Those with traditional ties to the area will continue to have access to culturally important places and resources. As part of expanded educational outreach, NPS staff will inform visitors of the importance of protecting ethnographic resources. As appropriate, partnerships with outside groups and agencies will assist and expand NPS efforts to conduct surveys and monitor site conditions. Through all of these actions, increased protection of ethnographic resources is expected.

Although ground-disturbing construction will occur as part of the NPS preferred alternative, the measures described above will be implemented to avoid or minimize disturbance of identified ethnographic resources. Thus, implementation of the preferred alternative will not result in impairment of the preserve's ethnographic resources.