



EVERGLADES NATIONAL PARK

ENVIRONMENTAL ASSESSMENT – Fire Management Plan

October 2014



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ENVIRONMENTAL ASSESSMENT
Fire Management Plan
Everglades National Park
Florida
October 2014

SUMMARY

The fire management program of Everglades National Park, as guided by federal policy and the park's management objectives, serves to protect life, property, natural and cultural resources, and wilderness character, and maintain or improve the quality of the native fire-adapted vegetation communities that occur within Everglades National Park.

The fire management program at Everglades is currently based on a 1991 fire management plan (FMP) that underwent revisions in 1995. A FMP is needed to provide Everglades National Park with the flexibility to manage fire in accordance with the National Park Service (NPS) *Wildland Fire Management Strategic Plan 2014-2019*, the 1995 and 2001 Federal Fire Policy, the 2009 *Guidance for Implementation of Federal Wildland Fire Policy*, the related guidelines in NPS Director's Order #18: *Wildland Fire Management*, and NPS *Management Policies 2006*. These policies and directives require an approved FMP in order to use resource benefit as a primary consideration influencing the selection of fire management strategies. The decision-making process includes specifically managing wildland fire using best available science to restore, preserve, and maintain ecosystems and the use of resource information gained through inventory and monitoring to evaluate and improve program actions and decisions.

Two alternatives were considered, including the alternative of no action / continue current management (Alternative A). Under Alternative A, current fire management practices at the park would continue under the existing 1995 fire management plan, as supplemented and modified by the most recent Federal Wildland Fire and NPS policies. The NPS would continue to plan and approve prescribed fire treatments on an annual basis. Because the 1995 FMP and its Environmental Assessment (EA) are out-of-date, prescribed fire treatments since 2008 have been limited to those which can be authorized under categorical exclusions (CE's). Treatments would be planned for exotic plant management and hazardous fuel reduction objectives. Hazardous fuel reduction burns would be limited to areas outside of designated wilderness and a maximum of 4,500 acres annually until completion of a new FMP and EA, or until April 2015 when hazardous fuel burns will no longer be allowed under a CE. Exotic vegetation burns would occur in wilderness and non-wilderness areas. While there are no acreage limits for these burns, they are specifically designed to manage exotic plant species. Under current management, the NPS has treated 8,000 - 45,000 acres with prescribed fire annually between 2003 and 2013. These burns have generally been restricted to coastal prairies in southern areas of the park and habitats near park boundaries. Due to the limitations of burning under CE's, prescribed fire cannot be implemented in many fire dependent habitats, including some utilized by listed species. Under Alternative A, it is expected that the amount of acres treated would be the same or less, and the areas proposed for treatment would be similar or less, than those in 2003-2013.

In contrast, Alternative B (the NPS preferred alternative) would manage fire at the park under the terms of a new fire management plan. The new fire management plan for Everglades National Park would be a detailed, comprehensive program of action to implement fire management policy principles and goals, consistent with park management objectives.

Under Alternative B, implementation of a multi-year fuels treatment plan would allow prescribed fire treatments to be planned as part of a revolving five-year scope of work that would be reviewed and updated annually. The process would include the prioritization, selection, review, and update of fuels treatment projects. Prescribed fires would take place in wilderness and non-wilderness areas. Wilderness would be considered within the multi-year fuels treatment plan with an associated programmatic minimum requirements analysis. This environmental assessment would serve as the NEPA compliance document for the FMP and multi-year fuels treatment plan, removing the

constraints of burning under CE's. Under Alternative B, approximately 237,000 – 258,000 acres would be proposed for prescribed fires annually. The actual number of acres treated would likely be less than the number proposed. Alternative B is expected to result in a substantial increase in the amount of acres treated when compared to current management. In addition, prescribed burns would be carried out in fire dependent communities where burning is currently restricted.

Wildfire management remains unchanged between the two alternatives however the FMP under Alternative B would function at the programmatic level and accommodate changes in policy guidance and practices from ongoing improvements in the science of wildfire management.

Impact topics evaluated in detail included air quality, soils, hydrology and water quality, vegetation, wildlife and their habitats, special status species and their habitats, cultural resources, wilderness character, visitor use and experience, land use, and park operations. All impacts were determined to be of moderate or less intensity.

PUBLIC COMMENT

If you wish to comment on this environmental assessment, please go to <http://parkplanning.nps.gov/EVER>. The "Open for Comment" link on the left column provides access to the EA. Comments may also be submitted by mailing them to the address below. Comments must be submitted by November 25th, 2014. Comments cannot be received by email.

Brien Culhane
Compliance Office
Attn: Fire Management Plan EA
Everglades National park
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Homestead, FL 33034

Before including your address, telephone number, e-mail address, or other personal identifying information in your comments, you should be aware that your entire comment (including your personal identifying information) may be made publically available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

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Chapter 1: Purpose and Need for Action

INTRODUCTION

This fire management plan environmental assessment presents alternatives to implement National Park Service (NPS) and federal wildland fire policies in Everglades National Park, and assesses the impacts of those alternatives on the natural and human environment. Fire management is an integral part of the park's wilderness stewardship and natural and cultural resource management program, and it supports NPS objectives and goals for park resources. An update of the park's existing fire management plan is the subject of this environmental assessment.

Everglades National Park and its vicinity are shown in Figure 1 on page 4. The park includes over 1.5 million acres, more than 85 percent of which consists of a vast, wetland wilderness. Areas developed for human use are found near the park boundaries or are accessed along the main park road from the Ernest F. Coe Visitor Center near the east boundary to the Flamingo Visitor Center on the south end of the Florida peninsula. The park is adjacent to the Miami metropolitan area to the east, and is bounded on the north by Water Conservation Area 3, Big Cypress National Preserve, and the tribal lands within the Miccosukee Reserved Area. On the west and south, the park is bounded by the marine environments of the Gulf of Mexico and Florida Bay respectively.

EVERGLADES NATIONAL PARK MANAGEMENT

Everglades National Park is the largest subtropical wilderness in the United States. It is designated a World Heritage Site, an International Biosphere Reserve, and a Wetland of International Importance, significant to all people of the world.

Everglades National Park was established and dedicated in 1947. The intent of Congress for management of the park is included in the park's enabling legislation, which states:

The said area or areas shall be permanently reserved as a wilderness, and no development of the project or plan for the entertainment of visitors shall be undertaken which will interfere with the preservation intact of the unique flora and fauna and the essential primitive natural conditions now prevailing in this area.

The park is currently managed under the *Everglades National Park Master Plan* (NPS 1979). Objectives for general management, resource management, and visitor use are provided in Appendix A of that document. Of particular relevance is the resource management objective to "Manage the use of fire and other natural forces in resource management programs to perpetuate a viable and dynamic native ecosystem." Some of the other objectives that relate to fire management involve:

- Minimizing adverse effects on water flow and natural environmental quality;
- Establishing and maintaining cooperative efforts with outside agencies for maximum benefit to the park;
- Using research and other means to secure information that facilitates preservation of the park's resources;
- Controlling exotic plants and animals to prevent disruption of native communities;
- Identifying, evaluating, protecting, and preserving the park's cultural resources and outstanding natural values, and promoting the recovery of endangered or threatened species;
- Providing visitors with information essential for the safe and enjoyable use of the park's resources and visitor facilities; and

- Through education and interpretation, helping visitors and residents of nearby counties to understand the complex nature of the ecosystem and the changes that occurred in south Florida as a result of human activities.

Current fire management planning activities conform to these and all other objectives identified in the park's master plan.

The National Park Service is currently developing a new general management plan that will guide park management for the next 20 years or more. However, that plan will not be finalized until after a new fire management plan has been approved and implemented. Consultations are occurring between the general management plan team and the park's fire management staff to ensure consistency between both park planning efforts. If necessary, the fire management plan would be modified to conform with the general management plan after it is approved.

FIRE MANAGEMENT IN EVERGLADES NATIONAL PARK

Fire is an important ecological process in many North American ecosystems. Fire is probably the most influential agent of change in the continent's temperate grasslands and forests (Mutch and Cook 1996). As plant communities within the Everglades adapted to their environment, they did so with the presence of fire and humans, so natural fires were augmented by human-caused ignitions, both accidental and deliberate.

All major plant communities in Everglades National Park have adaptations to the influence of periodic fires. Many plants developed responses to a regime of frequent fire, and some depend on fire for successful reproduction. Some cultural resources also benefit from fire, which can be used to protect cultural sites from potentially threatening overgrowth or to maintain cultural landscapes.

Much research has been done regarding the role of fire in the Everglades. Seminal studies on this subject include the work of Dr. Bill Robertson. The study titled *A Survey of the Effects of Fire in Everglades National Park* (Robertson 1953) was the first extensive examination of the role of fire in the Everglades ecosystem.

In this landmark work, Robertson described the natural role of frequent, small fires in maintaining the pinelands of the park. As a result, the first prescribed fire (planned ignitions) in NPS history was conducted in the pinelands area of Everglades National Park in 1958. (In this document, the terms "prescribed fire" and "planned ignition" are used interchangeably.)

The first Everglades National Park fire control plan was approved in 1956. The fire control plan, which was revised periodically, defined areas to be protected, and gave specifics on how to accomplish the task. However, in contrast to the then-current NPS policy and based on the proven success of prescribed fires in the park, human-caused fires in Everglades National Park were allowed to burn if they met defined prescriptions (Taylor 1981).

Everglades National Park was one of the first parks to implement a fire management plan that replaced the park's fire control plan in 1973 (Taylor 1981). The shift from fire *control* to *management* was brought about by an inability to control fire with heavy equipment, an inability to reach some mangrove zone fires, the work by Robertson (1953) that established the need for prescribed fire, and a changed NPS philosophy (Kilgore 1976).

While the National Park Service appreciates the importance of fire as a natural process, it also recognizes that visitors, park neighbors, infrastructure, and historic properties must be protected from wildfire when such fires may threaten public safety, park resources and values, and neighboring interests. Managing the role of fire in the park is one of the highest resource management priorities in Everglades National Park as identified in the *Everglades National Park Master Plan* (NPS 1979).

Within the mosaic of park environments and adjoining land uses, fire management is complex and a range of management options must be applied. Under a fire management plan, Everglades National Park staff implements fire management strategies and treatments to accomplish land and resource

condition objectives and to reduce risk to health and safety, private property, natural and cultural resources, and economic interests. Implementation strategies are based on knowledge gained from fire and fuels research, resource monitoring, and decades of experience in the Everglades ecosystem.

This environmental assessment analyzes the potential impacts from two alternative fire management plans for Everglades National Park. Fire management plans are strategic documents which guide fire management activities as directed by policy. These plans are required by NPS Director's Order #18 (NPS 2008a), which states, "Each park area with burnable vegetation must have an approved Fire Management Plan." The *Review and Update of the 1995 Federal Wildland Fire Management Policy* (U.S. Department of the Interior *et al.* 2001) (referred to throughout this document as the 2001 Federal Fire Policy) states, "Federal Fire Policy requires Fire Management Plans for all areas with burnable vegetation."

Everglades National Park
Florida

National Park Service
U.S. Department of the Interior



Everglades National Park and Vicinity



ENP Fire and Aviation Management
2011

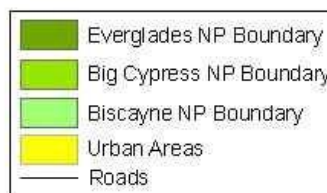


Figure 1: Everglades National Park and Vicinity

This fire management plan environmental assessment was prepared in accordance with:

- *Managing the Impact of Wildfires on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000*, commonly called the National Fire Plan (U.S. Department of the Interior and U.S. Department of Agriculture 2000) and its most recent implementation strategy (Wildland Fire Leadership Council 2006);
- The National Environmental Policy Act;
- The Council on Environmental Quality (1978) regulations for implementing the National Environmental Policy Act;
- *Director's Order #12* (NPS 2011a) and the *Director's Order #12 Handbook* (NPS 2001a) for implementing the National Environmental Policy Act in national park units; and
- The National Historic Preservation Act.

The National Environmental Policy Act (NEPA) compliance process will be complete when the NPS regional director signs a NEPA decision document identifying a selected alternative for fire management at Everglades National Park. The park will then implement a fire management plan that corresponds to the selected alternative. This approved fire management plan will be the working document guiding fire management actions in Everglades National Park.

PURPOSE OF THE ACTION

The purpose of the action is to develop and implement an up-to-date fire management plan that complies with all applicable legal and policy requirements and enables the Everglades fire management program to meet wildland fire goals and objectives for the park.

NEED FOR THE ACTION

Current fire management at Everglades National park is based on the existing 1995 fire management plan, as supplemented by direction and guidance from recent federal wildfire and National Park Service policies. (The details of current management practices are described in chapter 2.) The proposed action is needed because the current fire management plan does not reflect changes in fire management policy that have come into effect since the plan was completed in 1991 and updated in 1995. The park needs an approved plan that implements all currently applicable requirements for managing fire in NPS units.

Studies over the past two decades by the National Park Service, U.S. Department of Agriculture, other agencies, and universities established that fire is a natural ecologic process necessary for the preservation, conservation, and restoration of the Everglades and many other ecosystems. The fire management plan currently in effect at Everglades National Park was written in 1990 and 1991 and was approved in September 1991. The plan states it will be reviewed annually, with any required changes distributed as an appendix, and that it will be updated every five years. The plan further provides that updates will be made in response to changes in NPS management policies, interagency fire management guidelines, resource management direction, changing conditions in the park, and a growing knowledge of the effects and the ecological role of fire in plant communities. However, since its initial approval, the plan has only been formally updated once, in 1995. The update modified 31 pages of the 1991 document by page removal and replacement, and was approved in April 1995. Current NPS policy requires that fire management plans be reviewed annually. Plans are to be updated as determined by the results of the annual review.

In 2008, park managers decided that prescribed fire would no longer be approved and implemented under the outdated Environmental Assessment for the 1995 FMP. This decision was deemed necessary due to the age of these documents and changes in environmental conditions and policies. Until a new FMP and EA are completed, prescribed burns would be planned and approved annually under the available Categorical Exclusions (CE's) in the NPS Director's Order 12 Handbook for implementing the National Environmental Policy Act (NPS 2001a). Hazardous fuel reduction prescribed fire treatments are currently approved under the Healthy Forest Initiative Categorical Exclusion 3.4 G (1) and prescribed fire treatments for exotic plant management are approved under Categorical Exclusion 3.4 E (2).

While the use of these CE's has provided for continued prescribed fire treatments in the park, there are limits to what can be accomplished under them. Prescribed fires approved under 3.4 G (1) are limited to areas outside of designated wilderness and an annual acreage limit of 4,500 acres for all burns approved under this CE. As of April 2015, the NPS will no longer base management actions on the Hazardous Fuels CE which would halt the use of prescribed fire for hazardous fuels reduction until completion of a new FMP and EA. Exotic vegetation prescribed fire treatments occur in wilderness and non-wilderness areas but are limited to burns specifically designed to manage exotic plant species. A new FMP and EA are needed to allow the fire management program to fully achieve park goals and objectives for resource protection and fire management through the use of prescribed fire in a manner consistent with current fire management policy and guidelines.

OBJECTIVE IN TAKING ACTION

NEPA requires that any decision made with respect to the proposed action be based on analysis of a reasonable range of alternatives that are likely to meet project objectives. Objectives, in turn, are “what must be achieved to a large degree for the action to be considered a success” (NPS 2001a DO-12 Handbook). All alternatives selected for detailed analysis must meet these objectives to a large degree, as well as fulfill the project purpose and need for action. Objectives for the proposed action must be grounded in the park’s enabling legislation, as well as its purpose, significance, and mission goals. The objectives must also be compatible with direction and guidance provided by the park’s master plan.

The objective in taking this action is to develop and implement a fire management plan that allows the Everglades fire management program to:

- Conduct all fire management activities in a manner that maintains the safety of firefighters and the public.
- Protect human life and property both within and adjacent to park areas.
- Protect natural and cultural resources from adverse effects of fire and fire management activities.
- Maintain or improve the quality of the native fire adapted vegetation communities that occur within Everglades National Park.
- Maintain a framework of adaptive management to ensure a responsive, efficient, safe, and accountable fire management organization.
- Allow natural processes to continue by managing fires through monitoring with little or no suppression action to the maximum extent feasible to achieve resource benefits.
- Use planned ignitions to supplement the natural role of fire as an ecosystem process, achieve resource management objectives, reduce hazardous fuel accumulations, reduce threats to WUI from wildfires, protect park resources, maintain fire adapted ecosystems, treat exotic plants, and to secure the park boundary.
- Use science based fire management to maintain a healthy and sustainable ecosystem. To the degree possible, achieve a healthy range of variation in the fire return interval, fire size, fire behavior, fire effects, and other characteristics of the fire regime using the best available science.
- Use science based fire management to maintain and enhance the wilderness character of the Marjory Stoneman Douglas Wilderness and any lands found eligible for wilderness designation.

The foregoing objectives are consistent with federal wildfire policies and are guided by the park master plan (NPS 1979). The fire management plan should also meet fire management objectives specific to the various fire management units (FMU) differentiated in the park. These objectives are included in the description of the alternatives in chapter 2.

LAWS, REGULATIONS, AND POLICIES

Numerous laws, regulations, and policies at the federal, state, and local levels guide decisions and actions regarding the Everglades National Park fire management plan. The general management plan for Everglades National Park, currently being prepared, will include a comprehensive discussion of laws, regulations, and NPS policies as they affect the full range of park management activities. The primary legal and regulatory requirements that relate to fire management planning in the park include the following.

NATIONAL PARK SERVICE LEGISLATION AND GUIDANCE

Prohibition against Impairment in the Organic Act of 1916

The most important statutory directive for the National Park Service is provided by the National Park Service Organic Act of 1916 (Title 16, U.S. Code, Section 1). The key statement that guides the National Park Service in park management is as follows (with italics added):

[The National Park Service] shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified ... by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same *in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.*

Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that the National Park Service must ensure that “activities ... shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress” (16 U.S. Code, section 1 a-1).

This prohibition against impairment (in italics) is the cornerstone of the Organic Act and establishes the primary responsibility of the National Park Service (NPS 2006a). All activities and planning of the National Park Service tier from this statement.

Within this mandate, the Organic Act and its amendments afford the National Park Service latitude when making resource decisions that balance visitor recreation and resource preservation. By these acts, Congress “empowered [the National Park Service] with the authority to determine what uses of park resources are proper and what proportion of the park resources are available for each use” (*Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1453 [9th Circuit 1996]).

NPS Management Policies 2006

NPS Management Policies 2006 (NPS 2006a) establishes service-wide policies for the preservation, management, and use of park resources and facilities. These policies provide guidelines and direction for management of resources in the park. The alternatives considered in this environmental assessment would incorporate and comply with the provisions of these mandates and policies.

Section 4.5 of *NPS Management Policies 2006* addresses fire management. It reiterates that each park with vegetation capable of burning must prepare a fire management plan, and identifies the contents of that plan. Systematic decision-making regarding the application of appropriate strategic and tactical management options is required, and must be supported by monitoring programs for fire behavior, smoke behavior, fire decisions, and fire effects. Prescribed fire is identified as the preferred and most widely used NPS tool for managing the accumulation of hazardous fuels, but strategies can also incorporate manual, mechanical, biological, and very limited application of chemical treatments using integrated pest management principles. Fire management in wilderness will be consistent with the Wilderness Act’s section 4(c) mandate to employ only the “minimum requirements for the administration of the area.”

Section 5.3.1.2 addresses fire detection, suppression, and post-fire rehabilitation and protection with regard to cultural resources. Wildfire and activities for fire suppression and rehabilitation are recognized as being among the actions that can adversely affect cultural resources. At parks like Everglades that have both fire risk and cultural resources, park fire personnel must receive cultural resource protection training, and cultural resource management specialists must receive fire prevention and emergency response training.

Section 6.3.9 covers wilderness preservation and management with regard to fire management. All fire management activities conducted in wilderness areas will conform to the basic purposes of wilderness and, in most cases, must use the minimum requirements concept.

Director's Order #12 and Handbook: Conservation Planning, Environmental Impact Analysis, and Decision-Making

Director's Order #12 (NPS 2011a) and its associated handbook (NPS 2001a) establish how the National Park Service complies with the National Environmental Policy Act. The handbook provides step-by-step guidance for understanding the NEPA process and for preparing categorical exclusions, environmental impact statements, environmental assessments, and decision documents.

Director's Order #18: Wildland Fire Management and Reference Manual 18

Director's Order #18 (NPS 2008a) states the basic principles and strategic guidelines governing the management of wildfire by the National Park Service. It is supported by *Wildland Fire Management, Reference Manual 18* (NPS 2008b), which provides comprehensive guidance on implementing NPS-wide wildfire management policy. Procedures for complying with the National Environmental Policy Act are included in Reference Manual 18.

Director's Order #28 and NPS-28 Guideline: Cultural Resources Management

Director's Order #28 sets forth the guidelines for NPS management of cultural resources, including cultural landscapes, archeological resources, historic and prehistoric structures, museum objects, and ethnographic resources. This order calls for NPS to protect and manage cultural resources in its jurisdiction through effective research, planning, and stewardship in accordance with the policies and principles contained in *NPS Management Policies 2006*.

Director's Order #41 and Reference Manual 41: Wilderness Stewardship

Director's Order #41 establishes specific instructions and requirements concerning the management of all NPS wilderness areas. It provides accountability, consistency, and continuity with respect to the NPS wilderness program, and guides NPS-wide efforts in meeting the letter and spirit of the Wilderness Act of 1964.

PARK-SPECIFIC LEGISLATION AFFECTING FIRE MANAGEMENT PLANNING

Everglades National Park Enabling Legislation

On May 30, 1934 Congress passed an act authorizing a park within an area of approximately 2,000 square miles in Dade, Monroe, and Collier Counties, Florida. Everglades National Park was to be "... permanently reserved as a wilderness, and no development of the project or plan for the entertainment of visitors shall be undertaken which will interfere with the preservation intact of the unique flora and fauna and the essential primitive natural conditions now prevailing in this area." In 1947, Everglades National Park was formally established.

Designation of Everglades Wilderness

In 1978, Congress designated more than 85 percent of Everglades National Park as the "Everglades Wilderness," in accordance with the Wilderness Act of 1964. The area was renamed in 1997 in honor of the Everglades activist Marjory Stoneman Douglas (Public Law 105-82). The wilderness area contains 1,296,500 acres of the park's total 1,509,000 acres and is the largest designated wilderness area east of the Rocky Mountains.

From a fire management perspective, wilderness designation is important both for National Environmental Policy Act compliance and because management actions need to comply with the minimum requirements provision in section 4(c) of the Wilderness Act. This provision states (with italics added) that “... except as necessary to meet *minimum requirements* for the administration of the area ... there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.”

Everglades National Park Protection and Expansion Act of 1989

In 1989, Congress passed legislation that authorized expansion of the park by approximately 107,600 acres to incorporate lands known as the “East Everglades” area. (Today the expansion area encompasses 109,667 acres.) The legislation did not directly address fire management, but included the following direction relative to resources that would affect, or be affected by, the use of fire as a management tool in the park.

- Congress determined there are significant adverse effects to the resources of the park from external sources and that the ecosystem should be restored.
- Congress directed the Secretary of the Army to construct modifications to existing water projects “... to improve water deliveries into the park and shall, to the extent practicable, take steps to restore the natural hydrological conditions within the park.”

OTHER FEDERAL LAWS AND EXECUTIVE ORDERS

National Environmental Policy Act of 1969, and Its Implementing Regulations and Guidance

Section 102 of the National Environmental Policy Act requires all federal agencies, for major federal actions, to prepare a detailed statement that describes the environmental impact of the proposed action and alternatives to the proposed action. This requirement is implemented through regulations from the Council on Environmental Quality (1978) published in Title 40 *Code of Federal Regulations*, Parts 1500-1508. The National Park Service procedures to comply with the act and regulations are in *Director’s Order #12: Conservation Planning, Environmental Impact Analysis, and Decision Making* (NPS 2011a) and the *Director’s Order #12 Handbook* (NPS 2001a).

National Historic Preservation Act of 1966

Section 106 of this act requires federal agencies to consider the effects of their undertakings on properties listed or eligible for listing in the National Register of Historic Places. All fire management actions that potentially could affect the park’s cultural resources must comply with this legislation.

Endangered Species Act of 1973

The Endangered Species Act of 1973 recognizes that the numbers of some species of animals and plants are so depleted that they are in danger of or threatened with extinction. It established the policy of Congress that all federal departments and agencies would seek to conserve endangered and threatened species and provided a means through which these species and the habitats on which they depend would be conserved. Section 7 requires federal agencies to use their authorities to conserve listed species and to consult on actions that may affect these species. This section also prohibits federal agencies from authorizing, funding, or carrying out any action that would likely jeopardize a listed species or destroy or modify its critical habitat.

The endangered Cape Sable seaside sparrow is of primary concern from a fire management perspective. As described in more detail in chapter 3, habitat suitability for this species is driven by a combination of hydroperiod and periodic fires (USFWS 1999d). The fire management strategy for

this habitat is determined annually by NPS, the U.S. Fish and Wildlife Service (USFWS), and other appropriate partners. In addition, several other threatened and endangered plants and animals may be affected by fire management activities, and all fire management actions that may affect listed species require consultation under section 7 of the Endangered Species Act.

Executive Order 11990 - Protection of Wetlands

This executive order directs federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. They also are ordered “to preserve and enhance the natural and beneficial values of wetlands” and to consider “maintenance of natural systems, including conservation and long-term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, [and] wildlife ...” See also NPS Director’s Order 77-1 and Procedural Manual 77-1 (DO 77-1 and PM 77-1) (NPS 2002b, 2011d).

Executive Order 13112 – Invasive Species

This executive order requires federal agencies to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species may cause. In Everglades National Park, fire is a critical tool for managing many invasive species, but it can also facilitate the spread of fire-adapted invasive species such as melaleuca and cogongrass (Stocker and Hupp 2008).

FIRE MANAGEMENT GUIDANCE

This plan will conform to, and help achieve the resource management goals defined in, the following guidance documents:

- *Departmental Manual*, Part 620 DM, Chapter 1, Wildland Fire Management: General Policy and Procedures (USDI 1998);
- *Wildland and Prescribed Fire Management Policy: Implementation Procedures and Reference Guide* (Zimmerman and Bunnell 1998);
- *Managing the Impact of Wildfires on Communities and the Environment, A Report to the President in Response to the Wildfires of 2000* (National Fire Plan) (USDI and USDA 2000);
- *Protecting People and Sustaining Resources in Fire-Adapted Ecosystems – A Cohesive Strategy* (USFS 2000);
- *Review and Update of the 1995 Federal Wildland Fire Management Policy* (Federal Fire Policy) (USDI et al. 2014);
- *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Implementation Strategy* (Wildland Fire Leadership Council 2006);
- *Wildland Fire Management, Reference Manual 18* (NPS 2008b);
- *Interagency Standards for Fire and Fire Aviation Operations (Red Book 2014)* (National Interagency Fire Center 2014)
- *Guidance for Implementation of Federal Wildland Fire Management Policy* (USDI and USDA 2009)

RELATIONSHIP TO OTHER PLANS AND POLICIES

This section identifies the connected and similar actions that would be directly or indirectly related to the alternatives. It also identifies actions that could have an additive impact on environmental resources, regardless of who takes the actions or whether they occurred in the past, are current, or will occur in the reasonably foreseeable future.

Connected and similar actions are defined in section 1508.25 of the Council on Environmental Quality (1978) regulations for implementing the National Environmental Policy Act. To meet the intent of these regulations, this environmental assessment considers not only actions, but also other plans that could affect or be affected by the Everglades National Park fire management plan.

Sections 1508.7 and 1508.25 (a) (2) of the Council on Environmental Quality (1978) regulations require assessment of cumulative effects in the decision-making process for federal actions. Cumulative effects 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” (Title 40, *Code of Federal Regulations*, Part 1508.7).

CONNECTED AND SIMILAR ACTIONS OF THE NATIONAL PARK SERVICE

Everglades National Park Master Plan

The park currently is managed under the *Everglades National Park Master Plan* (NPS 1979). This document emphasizes the importance of the water supply to the Everglades and its role in fire ecology. It also recognizes fire as an important management tool and includes an objective to use fire as a tool to perpetuate a viable and dynamic native ecosystem.

Everglades National Park General Management Plan/East Everglades Wilderness Study

The National Park Service is in the process of developing a Final General Management Plan and an East Everglades Wilderness Study with supporting environmental impact statement for Everglades National Park. The general management plan will provide a conceptual framework to guide decisions for the next 20 years or more for park management, resource protection, appropriate types and levels of visitor activities, and appropriate facility development. The use of fire as a management tool will affect, and be affected by, decisions in all of these areas.

South Florida and Caribbean Parks Exotic Plant Management Plan and Environmental Impact Statement (2010)

The National Park Service prepared an exotic vegetation management plan to control non-native plant species in nine south Florida and Caribbean park units (NPS 2006b). In addition to the plan’s provisions for all nine parks, Appendix E of the plan specifically addresses Everglades National Park, and it identifies the use of fire as an initial or retreatment method in many of the park’s exotic vegetation treatment areas.

Restore Hole-in-the-Donut Wetlands

The Hole-in-the-Donut project near the main entrance to the park is restoring about 6,000 acres of former agricultural land infested with the exotic invasive Brazilian pepper (*Schinus terebinthifolius*). The land is being restored to wetlands by mechanically removing woody vegetation and scraping away disturbed soils to bedrock. Wildlife and plants will then return on their own within a few years. The objectives of the project are: (1) restoration of wetlands habitat; (2) removal and control of invasive exotic plants, especially Brazilian pepper; and (3) restoration of a wetlands vegetation

community that resembles natural Everglades wetlands in species composition and dynamics. Restoration work, begun in 1996, is proceeding. Removal of exotic species, especially Brazilian pepper, will affect fire management within this area.

Florida Power and Light Company Land Acquisition Project

The Omnibus Public Lands Act of 2009 authorizes, but does not require, the Secretary of the Interior to exchange a corridor of Florida Power and Light (FPL)-owned land in the middle of the East Everglades Addition with park lands on the eastern boundary of the park. The NPS is currently preparing an environmental impact statement to evaluate this and other alternatives for acquiring the FPL property. The park's 1991 land protection plan identified the need to acquire all private lands within the East Everglades Addition, including the Florida Power and Light property, to fulfill the park's mission. The FPL property, which is currently undeveloped, is needed to facilitate the restoration and enhancement of ecological processes in the park, including fire regime.

CONNECTED AND SIMILAR ACTIONS OF OTHERS

Development of the Central & South Florida Project

This project was first authorized by Congress in 1948. Its intent was to provide the following: flood control; water supply for municipal, industrial, and agricultural uses; prevention of saltwater intrusion; water supply for Everglades National Park; and protection of fish and wildlife resources. The primary system includes about 1,000 miles of levees, 720 miles of canals, and almost 200 water control structures (Comprehensive Everglades Restoration Plan 2009c). It is among the most elaborate and effective water management system in the world, but it continues to negatively affect the Everglades and south Florida ecosystem by capturing freshwater that otherwise would flow into the Everglades and diverting it into the Atlantic Ocean or Gulf of Mexico (Comprehensive Everglades Restoration Plan 2009d). The U.S. Army Corps of Engineers and South Florida Water Management District are continuously evaluating the project, making modifications to the system and the operations of the system in order to meet the purposes of the project.

Everglades Restoration Plans

Plans to restore the Florida Everglades, discussed below, are independent of and complementary to this fire management plan and other Everglades planning. Such restoration plans are critical to the health and ecological integrity of Everglades National Park resources. Everglades restoration plans address restoration throughout the greater Everglades region, from Orlando through the Chain of Lakes, the Kissimmee Valley, Lake Okeechobee, and the remaining Everglades to the waters of Florida Bay and its adjacent coral reefs. The ecosystem encompasses 18,000 square miles within 16 counties. There is a long-standing, cooperative effort among federal, state, and local government agencies, tribes, environmental organizations, universities, businesses, and local citizens to preserve and restore the greater Everglades ecosystem through more than 200 restoration projects. Listed below are the projects that would have the most influence on fire management at Everglades National Park.

Modified Water Deliveries Project

This project was initiated by Congress as part of the 1989 Everglades Expansion and Protection Act, which authorized the park to acquire approximately 107,600 acres in the East Everglades, including Northeast Shark River Slough. The act also directed the U.S. Army Corps of Engineers to modify the Central and Southern Florida Project to help restore natural hydrology by providing a way for additional water to flow from Water Conservation Area 3, north of the Tamiami Trail, into the park. Project features should allow for improved quantity, quality, timing, and distribution of water flows into Northeast Shark River Slough. Some project features have been completed, and other components are scheduled for implementation over the next several years. Construction of the 1-

mile Tamiami Trail Bridge, as well as strengthening and raising the remainder of the 10.7-mile highway corridor, was completed in 2013. This project created the capacity to allow for increased water flow under the Tamiami Trail into Everglades National Park. Two components of the Modified Water Deliveries project have not been initiated: the conveyance features to improve flows from Water Conservation Area 3 to Northeast Shark River Slough, and the combined operational plan.

Although the Modified Water Deliveries project will improve ecological conditions in Everglades National Park, it was never intended to address regional environmental degradation. The Comprehensive Everglades Restoration Plan (CERP) was authorized to accomplish restoration of the Greater Everglades ecosystem.

Comprehensive Everglades Restoration Plan

The Comprehensive Everglades Restoration Plan is a framework and guide to restore, protect, and preserve the water resources of central and south Florida. It provides a framework for restoration of the Everglades while providing for other water-related needs of the region, including water supply and flood protection. The Comprehensive Everglades Restoration Plan includes more than 60 elements designed to capture, store, and redistribute fresh water previously lost to tides, and to regulate the quality, quantity, timing, and distribution of flows. Implementation of this restoration plan could take more than 30 years to complete and cost at least \$11 billion. Due to the complexity of project planning and implementation, and project costs, many CERP projects have been delayed. There are a number of CERP projects that are intended to provide improvements to flows in and around Everglades National Park, with the projects listed below having the most direct relationship to Everglades National park and the fire management plan.

- ***Water Conservation Area 3 (WCA 3) Decompartmentalization*** — WCA 3 is immediately north of Everglades National Park, with WCA 3A and 3B separated by the L-67A and L-67C levees and canals. Construction of the Central and Southern Florida Project resulted in a number of environmentally detrimental effects, including compartmentalization and constriction of historically broad wetlands, alteration of hydroperiods, reduction of wildlife, and degradation of water quality. This project would reduce barriers to sheet flow such as canals and levees to the extent practicable. The goal is to restore historical sheet flow distributions, depth patterns, hydroperiods, and hydrologic connectivity in the various landscapes within Water Conservation Area 3 and in the Northeast Shark River Slough within Everglades National Park. In 2013, a 2-year field test on a portion of the L-67 A and L-67C levees and canals with three treatment options was initiated in order to better understand ecological, water flow and water management responses and uncertainties prior to advancing a larger scale decompartmentalization effort.
- ***Everglades National Park Seepage Management*** — The goal of this project is to reduce eastward water seepage from the Everglades system for the benefit of wetland communities within Everglades National Park. The project would likely include a suite of detention ponds, in-ground seepage barriers, and modifications to adjacent canal water level management to maintain surface and groundwater in the national park. Because of the effects of existing canals, pump stations, and other water control structures providing flood control and water supply, it has long been recognized that controlling fresh water seepage out of natural system areas is necessary to restore ecological function to the park.
- ***C-111 Spreader Canal Project*** — This project is designed to rehydrate southeastern coastal marshes by restoring more natural overland sheet flow, restoring natural flows to Florida Bay via Taylor Slough, and returning coastal zone salinities in eastern Florida Bay to, as close as possible, pre-drainage conditions. This project, started in 2010, is intended to provide a more natural hydropattern in Taylor Slough by reducing eastward groundwater losses to the C-111

canal system, including features that extend the existing seepage management aspects of the Modified Water Deliveries project southward, with additional detention areas and the use of a canal that runs along the park boundary intended to also minimize damage to Barnes Sound/Manatee Bay, and provide flood protection to adjacent agricultural lands. Loss of freshwater from the park into the canal system is frequently observed, and in the wet season water that would normally flow through Taylor Slough bypasses the park. This project would alleviate the problem of significant diversion of water from Taylor Slough. The project Record of Decision was signed in June 2012 and testing of the project's water management features has been initiated to better understand the ecological and water management responses prior to operating the project on a broader scale.

- ***CERP Master Recreation Plan*** — The Master Recreation Plan focuses on opportunities to provide recreational features as CERP projects are designed, planned, and implemented. The plan provides guidance for identifying, evaluating, and addressing the impacts of CERP implementation on existing recreational use in the south Florida ecosystem and identifying and evaluating potential new recreation, public use, and public educational opportunities.

Tamiami Trail Modifications: Next Steps

The Tamiami Trail Modifications: Next Steps project was approved in February 2011 and authorized by Congress later that year. The Next Steps project builds on the 1-mile bridge and Tamiami Trail road improvements discussed under the Modified Waters Deliveries project. The selected alternative for this project includes an additional 5.5 miles of bridging within the 10.7 section of Tamiami Trail adjacent to the Northeast Shark River Slough. A 2.6-mile western bridge is currently in pre-design. The State of Florida has committed up to \$90 million to support construction of the bridge. The President's Fiscal Year 2014 budget proposal includes \$30 million for this bridge; however Congressional appropriation (or other alternative funding) is needed to fully fund the balance of the project.

Everglades Restoration Transition Plan

The Everglades Restoration Transition Plan (ERTP), led by the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, is a project to evaluate and potentially modify the Interim Operational Plan. The Interim Operational Plan dictates water management in and around Everglades National Park by prescribing structural operations for inflow structures, border canals, and adjacent detention ponds. ERTP alternatives focus on improving conditions for three federally listed threatened and endangered species — the wood stork, the Cape Sable seaside sparrow, and the Everglade snail kite in Everglades National Park — and the Water Conservation Areas to the north. The ERTP Draft Environmental Impact Statement went through public review in 2011, and was approved and implemented as a water operations plan in late 2012.

Central Everglades Planning Project

The Central Everglades Planning Project (CEPP) was initiated in 2011 for the purpose of expediting the delivery of increased clean water to the Central Everglades and Everglades National Park, including Florida Bay. CEPP would outline a suite of projects that would reduce excessive water discharges to the Atlantic and Gulf of Mexico estuaries, restore Everglades habitats, and deliver additional freshwater to the Central Everglades and Everglades National Park.

CEPP is attempting to integrate several components of CERP that were identified to benefit Everglades National Park on a faster timeline than initially described with CERP. It is expected that a final report will be completed in 2014. The project will still require congressional authorization, and subsequent appropriations.

IMPACT TOPICS (INCLUDING BOTH TOPICS CONSIDERED AND DISMISSED)

This section identifies the resources and other values (impact topics) that could be affected by the alternatives. Candidate impact topics for this project were identified from internal and public scoping; from NPS knowledge of federal laws, regulations, and orders; from NPS guidance, such as *NPS Management Policies 2006* (NPS 2006a); and from NPS knowledge of park resources.

Justifications are provided regarding why there was no need to examine some impact topics in detail. Other impact topics were carried forward for further analysis in chapter 3 of this environmental assessment. Effects on these impact topics were evaluated based on the issues identified during scoping, which are also presented in chapter 3.

RETAINED IMPACT TOPICS

The 12 impact topics retained for detailed analysis in Chapter 3: Affected Environment and Environmental Consequences, include:

- Air quality;
- Soils;
- Hydrology and water quality;
- Vegetation;
- Wildlife and their habitats;
- Special status species and their habitats;
- Cultural resources;
- Wilderness;
- Visitor use and experience
- Land use;
- Park operations;

IMPACT TOPICS DISMISSED FROM DETAILED CONSIDERATION

This section provides an explanation regarding why some impact topics were not evaluated in more detail. Impact topics were dismissed from further evaluation either because the resource does not occur in the park or because they would not be affected by fire or fire management actions, or impacts of intensity greater than minor would not reasonably be expected. Negligible or minor effects would include the following:

- An effect would be negligible if the resource would not be affected or if the effect would be so small that it would not be detectable or measurable.
- A minor effect would be detectable or measurable, but would be of little importance.

Because there would be negligible or minor effects on the dismissed impact topics, an alternative's contribution toward cumulative effects for dismissed topics would be low or absent.

Geology

No significant or unique geologic features are located in or near the national park; therefore, there is no potential for fire management actions to affect geologic resources, and this impact topic was dismissed from further analysis.

Ecologically Critical Areas, Wild and Scenic Rivers, or Other Unique Natural Resources

Everglades National Park does not contain any designated ecologically critical areas, wild and scenic rivers, or other unique natural resources, as referenced in title 40, *Code of Federal Regulations*, section 1508.27. Therefore, this impact topic was dismissed from further analysis.

Floodplains

Executive Order 11988 instructs federal agencies to avoid to the extent possible the long- and short-term, adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct or indirect support of development in floodplains wherever there is a practicable alternative. Requirements of Executive Order 11988 are applied to NPS facilities in Director's Order # 77-2 (NPS 2003a) and the supporting *Procedural Manual 77-2: Floodplain Management* (NPS 2004a).

Although the Federal Emergency Management Agency does not delineate floodplains on public lands, most of this park would be considered a floodplain because seasonal flooding is characteristic of the Everglades. However, neither fire management alternative would result in any development in floodplains or other areas. As a result, floodplains were not retained for further analysis.

Wetlands

NPS policy (Director's Order #77-1) (NPS 2002b) states that activities with the potential to adversely impact wetlands are subject to the procedures of Executive Order 11990. These are activities with the potential to degrade any of the natural and beneficial ecological, social/cultural, and other functions and values of wetlands. Examples of activities with the potential to adversely impact wetlands include drainage, water diversion, pumping, flooding, dredging, channelizing, filling, nutrient enrichment, diking, impounding, placing of structures or other facilities, livestock grazing, and other activities that degrade natural wetland processes, functions, or values. Neither alternative for the proposed fire management plan proposes any of these activities.

Additionally, neither alternative for the proposed fire management plan would impact wetlands regulated by the following: Rivers and Harbors Act, Section 10; Executive Order 11990, Protection of Wetlands; NPS Director's Order #77-1, Wetland Protection and its accompanying Procedural Manual 77-1 (DO 77-1 and PM 77-1), Clean Water Act, Section 404; and the no net loss goal outlined by the White House office on Environmental Policy in 1993.

The following topics related to wetlands are covered elsewhere as described:

- Plant species composition of wetlands, including abundance and species richness of invasive non-native plant species, are covered in the "Vegetation" section;
- Hydrologic features that maintain the wetland are covered in the "Hydrology" section; and
- Wetland soils are covered in the "Soils" section.

Non-Native and Invasive Species

Non-native, invasive, and exotic species are addressed under the vegetation and wildlife sections retained for further analysis. Therefore, this impact topic was dismissed from further analysis.

Prime and unique agricultural lands

This impact topic is based on section 1508.27 of the Council on Environmental Quality (1978) regulations. Implementing guidelines for prime and unique farmlands from the Natural Resources Conservation Service are published in title 7 *Code of Federal Regulations* part 657. Prime farmland has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. Unique agricultural land is land other than prime farmland used for production of specific high-value food and fiber crops. Both categories require that the land be available for farming uses. Lands within Everglades National Park are not available for farming and do not meet the definitions. Therefore, this impact topic was dismissed from further analysis.

Transportation

None of the management actions would substantively affect road, railroad, water-based, or aerial transportation in and around the park. One exception to this general rule would be the temporary closure of nearby roads during fire suppression activities or from smoke emanating from wildland fire (planned or unplanned). Over the long term, such closures would not significantly impinge local traffic since they would be both infrequent, and, in the case of prescribed fire, of short duration (on the magnitude of 1-2 hours).

Furthermore, the park does not have an internal public transportation system and the proposed alternatives would not require or include any transportation services. The proposed alternatives would not affect transportation; accordingly, such transportation is dismissed from further analysis. Impacts to transportation associated with fire smoke are discussed under the ‘Land Use’ section.

Public Health and Safety

National Environmental Policy Act regulations at 40 CFR 1508.27 require potential impact intensity be evaluated for public health and safety. To avoid redundancy, public health and safety was not addressed under its own affected environment and environmental consequences sections. Instead, potential impacts of fire management on public health and safety are addressed under the “Air Quality” section, those impacts related to surrounding communities, property owners, inholders, and transportation are addressed under the “Land Use” section, and potential impacts to visitor safety are addressed under the “Visitor Use and Experience” section. Therefore, public health and safety was dismissed from further analysis as a separate impact topic.

Operational guidance directs all fire management activities to be conducted to enhance and provide resource benefit and mitigate risk from unwanted wildfire while providing for firefighter and public safety. All actions will conform to safety policies defined in, but not limited to: Interagency Standards for Fire and Fire Aviation Operations guide (Red Book), Director’s Order #18, and the Standards for Operations and Safety chapter in the NPS Reference Manual 18 (NPS 2008b).

Firefighter safety is of primary concern and its procedures are dictated by laws, regulations, policies, and guidelines. National fire policy states that firefighter safety is the first priority in fire management activities. Director’s Order #18 makes similar commitments. Firefighter safety is common to all alternatives and will not differ in any alternative. In addition, firefighter safety procedures are updated frequently and will be followed regardless of the alternative implemented.

Socioeconomics

The National Environmental Policy Act requires analysis of impacts to the “human environment,” which includes economic, social, and demographic elements in the affected area. Fire management activities under either alternative may bring a short-term need for additional personnel in the park, but this addition would be minimal and would not affect the neighboring community’s overall population, income, and employment base. Management actions proposed would not have a

measurable impact on the local or regional economy. Therefore, this impact topic is dismissed from further analysis.

Soundscapes

Noise is defined as unwanted sound. Fuels reduction, prescribed fires, and fire operations can all involve the use of noise-generating mechanical tools and devices with engines, such as chain saws, trucks, and tractors. Use of this equipment would be infrequent (on the order of hours, days, or at most weeks per year). This is not frequent or widespread enough to substantially interfere with wildlife behavior or with human activities in the area. Nor would such infrequent bursts of noise chronically impact the solitude and tranquility associated with the park. Noise impacts to Wilderness character are addressed under the Wilderness section retained for further analysis. Therefore, this impact was dismissed from further analysis.

Energy Requirements and Conservation Potential

This impact topic is based on section 1502.16 of the Council on Environmental Quality (1978) regulations. Increasing concern is reflected by recent executive orders, including EO 13423, Strengthening Federal Environmental, Energy, and Transportation Management (2007) and EO 13514, Federal Leadership in Environmental, Energy, and Economic Performance (2009).

Fire management activities in Everglades National Park generally are not highly energy-intensive. Regardless of the alternative, they primarily would involve the consumption of fuel as personnel travel to and from target sites. Implementation of either alternative would not measurably change the volume of vehicle fuel consumed annually in Everglades National Park.

The park's fire management equipment includes one Type 3 Helicopter. This is the smallest fire management helicopter class, with a maximum gross takeoff/landing weight of less than 3 tons and a water-carrying capability of 160 gallons (Interagency Aviation Management Council 2006). Aircraft in this class, which include the Bell 206B and the MD-500 series, consume about 25 to 30 gallons of fuel per operating hour. This is equivalent to the amount of fuel used by a large recreational vehicle in making a single round-trip between the park's Ernest F. Coe and Gulf Coast Visitor Centers. As a result, fuel consumption by this aircraft is not measurable compared to the volume of fuel annually used in the park. Implementation of either alternative would not substantially change the operating time for this aircraft or its annual fuel consumption.

Under either alternative, the use of additional helicopter or fixed-wing aircraft may be needed for drops on a major wildfire that was threatening park infrastructure or has the potential to cross the park boundary into developed areas. While these aircraft can consume large amounts of fuel, their use is often short-lived, and could occur under either alternative.

As with all of its actions, the National Park Service would strive to reduce energy costs, eliminate waste, and conserve energy resources by using energy-efficient and cost-effective technology. Energy efficiency and the use of renewable energy sources would be emphasized in the decision-making process. Because the alternatives would not vary substantially in their use of energy or potential for conservation, this impact topic was 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/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. Guidelines for implementing this executive order under the National Environmental Policy Act are provided by the Council on Environmental Quality (1997). According to the U.S. Environmental Protection Agency (1998), environmental justice is:

The fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

The goal of this “fair treatment” is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

There are minority and low-income populations in the vicinity of Everglades National Park; however, based on the initial environmental screening process for the project, environmental justice is dismissed as an impact topic for the following reasons:

- NPS staff actively solicited public participation as part of the planning process and gave equal consideration to input from all persons, regardless of age, race, income status, or other socioeconomic or demographic factors.
- Impacts associated with implementation of each alternative, including the preferred alternative, would not disproportionately affect any minority or low-income population or community.
- Implementation of each alternative, including the preferred alternative, would not result in any identified effects specific to any minority or low-income community.

The NPS staff does not anticipate that any adverse impacts on public health and/or the socioeconomic environment would appreciably alter the physical and social structure of the nearby minority or low-income populations or communities.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts on Indian trust resources from a proposed project or action by Department of the 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.

None of the actions that might be implemented as a result of the plan alternatives would change any existing conditions or practices concerning American Indian treaty or statutory rights or cultural interests that the tribes traditionally associated with the park maintain in relation to the park. However, such recognition does not translate into the creation of a trust resource because these actions take place in the context of preserving and managing the resources for the benefit of all Americans as required by the Organic Act and subsequent legislation. There are no Indian Trust resources as defined in the order in the park. Therefore, this topic was dismissed from further consideration.

Sacred Sites

Executive Order 13007 requires all federal land management agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and to avoid adversely affecting the physical integrity of such sacred sites. The ethnographic practices of Native Americans in south Florida evolved in an ecosystem that included fire as a recurring, natural component. Fire management alternatives in Everglades National Park would neither alter the ability of Native

Americans to access and use sacred sites, nor is it expected that fire would change the physical characteristics of sacred sites in the fire-adapted environment. Therefore, sacred sites were dismissed from further analysis.

Natural or Depletable Resource Requirements and Conservation Potential

This impact topic is based on the same regulations and executive orders cited for energy requirements and conservation potential. It addresses the quality, recycling, or conservation of petroleum products and other natural resources. The use of fuels and other energy sources, including petroleum products, was discussed above under energy requirements and conservation potential. Because neither alternative would involve any construction or other activities in the park that would require the commitment of other natural or depletable resources, differences between the alternatives for this impact topic would be negligible, therefore this impact topic was dismissed from further analysis.

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