

National Park Service
US Department of the Interior



Big Cypress National Preserve
Florida

Copeland Prairie Mitigation Plan/Environmental Assessment
Finding of No Significant Impact

August 2014

Based on the environmental analysis as documented in the attached Environmental Assessment (EA) and with the due consideration for the nature of public comments, the National Park Service (NPS) has determined that the selected alternative is not a major federal action significantly affecting the quality of the human environment. Possible adverse environmental impacts range from negligible to minor in intensity; long-term, beneficial impacts are also expected. There are no significant impacts on surface water flow, water quality, wetlands, soils, floodplains, vegetation, special status species, wildlife, visitor use and experience, and NPS management and operations. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. Implementation of the selected alternative will not violate any federal, state, or local environmental protection law.

Based on the foregoing information, the NPS has determined that an Environmental Impact Statement is not required for this project and thus will not be prepared.

Recommended:

A blue ink signature of Pedro Ramos, consisting of several overlapping loops and a long horizontal stroke.

Pedro Ramos, Superintendent

8/13/14
Date

Approved:

A blue ink signature of Stan Austin, featuring a stylized 'S' and 'A' followed by the name 'Austin'.

Stan Austin, Director, Southeast Region

8/24/14
Date

INTRODUCTION

The National Park Service (NPS) has prepared a *Copeland Prairie Mitigation Plan/Environmental Assessment* to enhance wetlands in a 325-acre portion of Copeland Prairie in Big Cypress National Preserve, Florida, that when implemented will reverse much of the adverse hydrologic and ecological impact caused by construction of road-related infrastructure in the last century. This project is required by state and federal permits as mitigation for wetland impacts from stabilization of off-road vehicle (ORV) trails elsewhere in the Preserve. The mitigation will be accomplished through the following objectives:

- Restoring freshwater flow into wetlands to more closely approximate the hydrologic regime prior to infrastructure construction;
- Decreasing the extent of saltwater intrusion into freshwater areas; and
- Restoring wetland habitat that existed prior to hydrologic alteration.

This plan is needed to restore natural sheet flow hydrology once prevalent in the Copeland Prairie wetlands. This area is part of a larger area of formerly uninterrupted wetlands now partitioned by roads, levees, and canals, which tend to diminish the prevalence and duration of surface water on the landscape. The primary purpose of this road-affiliated drainage infrastructure, which predates the 1974 establishment of the Preserve, was to dewater surrounding wetlands for eventual land development. Elevated roadbeds act as low-level dams that block regional sheet flow, and adjacent borrow canals channel that water away. The result is a net loss of fresh water to tide via the canals and shortening of water duration in adjacent wetlands and in the shallow aquifer, thereby increasing the area's susceptibility to drought, destructive wildfires, coastal saltwater intrusion, and invasive exotic vegetation. Since the 1980s the NPS has occasionally added retrofits to this road drainage infrastructure in attempts to lessen its overall drainage effects; however, these fixes have been mostly local-scale. Many problem areas in the Preserve, such as Copeland Prairie, still persist.

An EA was prepared to analyze the impacts on the human environment of two alternatives: the no-action alternative and the preferred alternative. The EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, regulations of the Council on Environmental Quality (CEQ, 40 CFR 1508.9), and NPS Director's Order Number 12 (DO-12) and Handbook.

SELECTED ALTERNATIVE

The NPS has selected alternative 2, as described in the EA, for implementation. This alternative will enhance a 325-acre area of disturbed wetlands in Copeland Prairie to satisfy permit mitigation requirements for wetland impacts resulting from stabilization of recreational ORV trails in the Preserve. The alternative will utilize a three-action hydrologic approach performed in concert with removal of invasive exotic vegetation and application of prescribed fire treatments.

In Action 1, a grid of 6.45 miles (12.15 acres) of abandoned, elevated farm roads will be scraped down to wetland grade, opening 325 acres of previously over-parched wetlands to sheet flow. The fill reclaimed from the roads will be disposed of in the Birdon and Diagonal canals as described in Action 3 below. The mitigation site will be opened to regional sheet flow from the north as a result of this action. The southernmost east-west road will remain in place to serve as a spreader feature for retaining and distributing water across the full east-west dimension of the mitigation site.

Action 2 will divert water into the mitigation site from Birdon Road by rehabilitating and re-engineering two existing, 24-inch-diameter, concrete culverts. The culverts will be cleared of sediment and re-engineered to achieve the desired flow direction, rate, and annual volume. Re-

engineering will be achieved by connecting the west side of the culvert openings to an existing shallow spreader swale that runs along the northern perimeter of the mitigation site and by constructing an earthen plug on the east side of the culvert pipe openings as described in Action 3 below. This action will deliver an estimated 6,000 acre-feet of supplemental water into the mitigation site from the east.

In Action 3, Birdon and Diagonal canals will be filled in three separate segments for a total estimated linear fill length of 2,800 feet. The first segment will be located in Birdon Canal, starting at the northern perimeter of the mitigation site and extending 1,000 feet to the south. Its primary purpose will be to hydraulically raise stage to send water at a sufficient rate and annual volume into the target mitigation site through the rehabilitated and re-engineered culverts in Action 2. The second segment will be located in Birdon Canal, starting at the canal's confluence with Diagonal Canal and extending 1,000 feet to the north. Its primary purpose will be to provide a barrier for stopping saltwater intrusion from entering Birdon Canal, thus preventing contamination of salt water within freshwater wetlands in and adjacent to the mitigation site, and underground in the underlying aquifer. The third segment will be located in Diagonal Canal, starting 50 feet west of Birdon Road and extending in a downstream direction for a distance of approximately 800 feet. The primary purpose of this segment will be to prevent saltwater intrusion in freshwater wetlands adjacent to Diagonal Canal. The exact length will depend on the total amount of fill generated during the road removal phase (Action 1) of the project. Action 3 will convert 2.5 acres of open canal channel to wetlands and eliminate 1.6 miles of saltwater intrusion via the Birdon and Diagonal canals. These measures are anticipated to return the affected area to a self-sustaining, saltwater-resistant, wet prairie habitat.

OTHER ALTERNATIVE CONSIDERED

In addition to the selected alternative, the no-action alternative was fully analyzed in the EA. Under this alternative, current management of infrastructure would continue. The abandoned farm roads would remain in place. Existing culverts and earthen canal plugs would remain, but minimal to no effort would be put towards modifying or maintaining them. Culvert maintenance would be done primarily by Collier County and would be limited to the minimum required to achieve hydraulic equalization and road surface integrity; i.e., sediment and nominal vegetation removal. This alternative would not construct any new infrastructure or remove any major impediments to sheet flow.

ALTERNATIVES CONSIDERED AND DISMISSED

No other alternatives were considered in the EA.

RATIONALE FOR THE SELECTED ALTERNATIVE

The National Park Service identified alternative 2 in the EA as its preferred alternative. In identifying the preferred alternative, the National Park Service considered a number of factors, including the extent to which alternatives meet plan objectives, the environmental consequences of implementing each of the alternatives, anticipated effort associated with implementation, degree of management flexibility, and costs.

Therefore, upon approval of this Finding of No Significant Impact, alternative 2 will be implemented as the selected alternative. This alternative fulfills the project purpose and need and meets all of the project objectives to a greater degree than the no-action alternative. This alternative fully complies with all applicable federal, state, and local laws and regulations, including the Preserve's enabling legislation. The selected alternative will put into place a relatively simple fix to a significant

hydrologic and ecological problem and will satisfy state and federal mitigation permitting requirements.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

Based on the analysis of potential impacts included in the EA, the NPS has identified the selected alternative as the environmentally preferable alternative. This alternative will remove or modify much of the infrastructure in the Copeland Prairie area that has caused major changes in hydrology and ecology since the mid-twentieth century.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT IMPACT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR 1508.27, significance is determined by examining the following criteria:

1. *Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts which require analysis in an Environmental Impact Statement.*

Whether taken individually or as a whole, impacts of the selected alternative as described in the EA do not reach the level of significance that would require analysis in an Environmental Impact Statement.

- Impacts to surface water flow will be beneficial, long term, and moderate,
 - Impacts to water quality will be adverse, short and long term, and negligible to minor,
 - Impacts to wetlands will be beneficial, long term, and moderate,
 - Impacts to soils will be adverse, long term, and negligible to minor,
 - Impacts to floodplains will be beneficial, long term, and minor to moderate,
 - Impacts to vegetation will be beneficial, short and long term, and moderate,
 - Impacts to wildlife other than special status species will be adverse and beneficial, short and long term, and negligible to minor,
 - Impacts to visitor use and experience will be adverse, short and long term, and minor,
 - Impacts to NPS management and operations will be adverse, long term, and minor, and
 - Impacts to the nine federally listed wildlife species known to occur in the Preserve (Florida panther, wood stork, eastern indigo snake, West Indian manatee, Everglade snail kite, Cape Sable seaside sparrow, red-cockaded woodpecker, American crocodile, and Florida bonneted bat) will range from no effect to adverse and minor in the short term. Impacts in the long term will range from no effect to beneficial, except for the eastern indigo snake, which will be adverse and minor.
2. *The degree to which public health and safety are affected.*

Implementation of the selected alternative will pose no public health or safety risks.
 3. *Any unique characteristics of the area (proximity to historic or cultural resources, wild and scenic rivers, prime farmlands, ecologically critical areas, wetlands or floodplains, or ecologically critical areas).*

No historic, cultural, or ethnographic resources will be impacted by the selected alternative.

There are no wild and scenic rivers or ecologically critical areas in the Preserve.

Impacts to the Copeland Prairie wetlands will be beneficial, long term, and moderate due to improved hydrology and control of invasive exotic vegetation.

Impacts to floodplains will be beneficial, long term, and minor to moderate as a result of increased surface water flows and improvement of overall floodwater conveyance at the mitigation site.

4. *The degree to which impacts are likely to be highly controversial.*

None of the public comments received expressed disagreement with any of the impact determinations.

5. *The degree to which the potential impacts are highly uncertain or involve unique or unknown risks.*

Impacts were assessed by NPS staff based on best available science and previous hydrologic restoration projects in the region. The impact assessments therefore are not highly uncertain and do not involve unique or unknown risks.

6. *Whether the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

Implementation of the selected alternative will neither establish an NPS precedent for future actions with significant effects nor will it represent a decision in principle about a future consideration. Future actions will be assessed on their own merits.

7. *Whether the action is related to other actions that may have individual insignificant impacts but cumulatively significant effects. Significance cannot be avoided by terming an action temporary or breaking it down into small component parts.*

Cumulative impacts were fully analyzed in the EA. A full list of the projects and actions considered in the cumulative impact analysis can be found in chapter 4 of the EA, and potential impacts are discussed under each of the respective impact topics throughout chapter 4. Based on this analysis, when the likely effects of implementing the selected alternative are added to the effects of other past, present, and reasonably foreseeable future actions, the cumulative impacts range from minor to moderate and do not rise to the level of significant for any of the impact topics.

8. *The degree to which the action may adversely affect properties in or eligible for listing in the National Register of Historic Places, or other significant scientific, archeological, or cultural resources.*

No historic, cultural, or ethnographic resources will be impacted by the selected alternative.

The State Historic Preservation Office (SHPO) reviewed the EA for possible impacts to historic properties listed, or eligible for listing, in the National Register of Historic Places. The review was conducted in accordance with Section 106 of the National Historic Preservation Act of 1966. On April 7, 2014, the SHPO stated by letter that they concurred with the National Park Service's determination of no effect to historic properties on or eligible for the National Register.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat.*

Implementation of the selected alternative will result in an Endangered Species Act Section 7 determination of “*not likely to adversely affect*” with regard to the Florida panther, wood stork, eastern indigo snake, and Florida bonneted bat, and “*no effect*” to the West Indian manatee, Everglade snail kite, Cape Sable seaside sparrow, red-cockaded woodpecker, and American crocodile.

The US Fish and Wildlife Service was informally consulted on the proposal and by memorandum dated July 24, 2014, concurred the NPS Section 7 determinations.

10. *Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.*

The selected alternative will not violate any federal, state, or local environmental protection laws.

Summary

On consideration of the criteria above, the National Park Service has determined that there are no major adverse or beneficial impacts that will require further analysis in an Environmental Impact Statement.

IMPAIRMENT OF PRESERVE RESOURCES OR VALUES

The National Park Service has determined that implementation of the selected alternative will not constitute an impairment to the Preserve’s resources and values. See the attached Non-impairment Analysis for additional information.

PUBLIC INVOLVEMENT AND AGENCY CONSULTATION

The National Park Service conducted a public scoping comment period during November 7–December 7, 2013, and a draft EA public comment period from March 6–April 5, 2014. No comments were received during scoping, and two comments were received on the draft EA.

Additionally, during each public comment period, the National Park Service sent letters to the following agencies, providing information about the plan and the opportunity to comment:

- Florida Department of Environmental Protection, Florida State Clearinghouse
- US Fish and Wildlife Service
- Florida SHPO
- Miccosukee Tribe of Indians of Florida
- Seminole Tribe of Florida
- Seminole Nation of Oklahoma

During the review of the comments received, comments were classified as substantive or non-substantive. A substantive comment is defined as one that does one or more of the following (DO-12 Handbook, Section 4.6A):

- Question, with a reasonable basis, the accuracy of information in the EA;
- Question, with a reasonable basis, the adequacy of the environmental analysis;
- Present reasonable alternatives other than those presented in the EA; and/or
- Cause changes or revisions in the proposal.

If a comment met one or more of the above criteria, it was categorized as substantive. As further stated in DO-12, substantive comments “raise, debate, or question a point of fact or policy.” Comments in favor of or against the proposed action or alternatives, or comments that only agree or disagree with NPS policy, are not considered substantive.

Neither of the public comments on the draft EA were substantive. One commenter supported the preferred alternative, and the other supported it except for the road removal.

The Florida State Clearinghouse responded on March 18, 2014, that at the current stage, the proposal was consistent with the Florida Coastal Management Program, but that their final concurrence would be determined upon conclusion of the state’s environmental permitting process, in accordance with Section 373.428 of the *Florida Statutes*. The state issued its environmental resource permit for the project on June 16, 2014.

The Florida Fish and Wildlife Conservation Commission stated that it supported the EA preferred alternative in a letter dated March 25, 2014.

The US Fish and Wildlife Service stated that it supported selection of the preferred alternative but recommended that other options for accomplishing the required mitigation be discussed and analyzed.

ATTACHMENT A NON-IMPAIRMENT ANALYSIS

NPS *Management Policies 2006* provide an explanation of impairment:

Impairment is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

The National Park Service has determined that implementation of the selected alternative will not constitute an impairment to the Preserve's resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the EA and the professional judgment of the decision maker guided by the direction in NPS management policies. Project implementation will not result in major, adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation, (2) key to the natural or cultural integrity of the Preserve or to opportunities for enjoyment of the Preserve; or (3) identified as a goal in the Preserve's *General Management Plan* or other relevant NPS planning document.

A non-impairment analysis was prepared for the selected alternative described in this Finding of No Significant Impact and chapter 2 of the EA. A non-impairment determination was made for all resource impact topics analyzed for the selected alternative. A non-impairment determination was not made for visitor use and experience and NPS management and operations because non-impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act.

Surface Water Flow

Removal of abandoned roads, rehabilitating and re-engineering culverts, and constructing an earthen plug in the Birdon Canal, as proposed in the selected alternative, will reintroduce water into the mitigation site. This will not result in impairment to surface water flow because flow will actually be enhanced by the removal of sheet flow barriers and the addition of new water into the area.

Water Quality

Implementation of the selected alternative will have short- and long-term adverse impacts on water quality. In the short term, turbidity will increase as a result of construction activities, and in the long term, water quality may decrease as a result of increased flow of contaminated water from outside the Preserve. However, impairment to water quality will not result because any impacts will either be minor in the short term or negligible to minor in the long term.

Wetlands

Wetlands will benefit from implementing the mitigation plan. Improvements in hydrology and application of prescribed fire will help return the area to the predominant wet prairie habitat that once prevailed, and installation of canal plugs will halt saltwater intrusion and preserve the freshwater conditions present. Because wetland impacts will be beneficial, impairment to wetlands will not result.

Soils

Impacts to soils from implementing the selected alternative will be adverse, long term, and negligible to minor. These impacts will result primarily from construction activities, including road removal, hauling, and culvert rehabilitation. There will be some beneficial impact from exposing the native soils under the removed roads and thus making the soils available for native plant growth. Because these impacts to soils will collectively be negligible to minor, impairment will not result.

Floodplains

Implementation of the plan will not impair floodplains, because surface flows will be increased to the mitigation site, thereby increasing floodwater conveyance. Impacts will be beneficial, long term, and minor to moderate.

Vegetation

Implementing the selected alternative will have beneficial, moderate impacts on vegetation due to changes in hydrology, application of prescribed fire, and removal of invasive exotics. Because the impacts will be beneficial, there will be no impairment to vegetation.

Special Status Species

Special status species that may be impacted by the selected alternative are the Florida panther, wood stork, eastern indigo snake, and Florida bonneted bat. These impacts will be adverse and negligible to minor in the short term due to construction disturbance. In the long term, all of these species except the eastern indigo snake will be impacted beneficially due to habitat improvement as a result of improved hydrology, prescribed fire, and removal of exotic vegetation. Impacts to the eastern indigo snake will be adverse, short- and long-term, and minor. For each species, the Endangered Species Act Section 7 determination is *not likely to adversely affect*. An additional five listed species, the West Indian manatee, Everglade snail kite, Cape Sable seaside sparrow, red-cockaded woodpecker, and American crocodile, will not be affected. Because impacts will be mostly beneficial, there will be no impairment to special status species from implementation of the selected alternative.

Other Wildlife

Wildlife other than special status species will receive negligible to minor, adverse impacts from implementation of the selected alternative due to disruptions from construction activity related to road removal, hauling, and canal plug installation. In the long term, wildlife habitat will be improved through improved hydrology, application of prescribed fire, and exotic vegetation removal, and thus impacts will be beneficial. Because habitat quality will be improved, there will be no impairment to wildlife from implementation of the selected alternative.

ATTACHMENT B ERRATA

These errata should be attached to the original environmental assessment (EA) to form the complete record of the environmental impact analysis and conservation planning completed for the project. The combination of the EA and these errata, prepared in response to public comment on the EA, form the complete and final record of the FONSI.

Corrections and revisions to the draft EA are listed below. Revisions were made to correct or clarify the text or provide additional information that had unintentionally been omitted from the EA prior to it being published. These revisions have not resulted in substantial modification of the selected alternative. It has been determined that the revisions do not require additional environmental analysis. The page numbers referenced are from the EA.

- Page 16, 4th bullet. Insert after this bullet a bullet stating, "Any contracts for mitigation construction shall incorporate the "Standard Protection Measures for the Eastern Indigo Snake" available at

http://www.fws.gov/worbench/Reptiles/PDFs/20130812_EIS%20Standard%20Protection%20Measures_final.pdf

- Page 51, 5th full paragraph. Second sentence should read, "The determination of effect under Section 7 of ESA would be *not likely to adversely affect*."