



Miccosukee Tribe of Indians of Florida Osceola Camp Cure Plan Everglades National Park

Environmental Assessment

October 2023



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CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

The National Park Service (NPS) is proposing improvements to the Miccosukee Tribe of Indians of Florida Osceola Camp due to water levels in the area rising from the Central Everglades Planning Project (CEPP), a component of the Comprehensive Everglades Restoration Plan (CERP). The Osceola Camp (Camp) is located in Everglades National Park (Everglades NP or “the park”) along US-41/Tamiami Trail (Tamiami Trail) in Miami-Dade County, Florida. The Camp is located downstream of one of the CERP project flow ways and the Camp’s current ground surface elevation, select structures, roadways and driveways must be elevated in order to provide appropriate levels of flood protection to the Camp before the water levels can be raised as part of the CERP (**Figure 1**). The site plan to modify the site elevations to accommodate the CEPP is referred to the Cure Plan for the Camp. The NPS and the Miccosukee Tribe of Indians of Florida (Tribe) have worked together to develop a Cure Plan, or site plan, to allow for the progression of the CEPP while preserving the Camp facilities, functions and public health of the residents.

This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA); Council on Environmental Quality (CEQ) implementing regulations effective April 20, 2022, [40 Code of Federal Regulations (CFR) 1500-1508]; NPS Director’s Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision making* (NPS 2011) and NPS NEPA Handbook. Compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (54 USC 306108), and Section 7 of the Endangered Species Act (ESA) is being conducted concurrently with the NEPA process.

BACKGROUND

Everglades NP preserves the largest subtropical wilderness in the nation, a vast natural area in the southern Everglades and Florida Bay known throughout the world for its unparalleled ecological values, natural hydrological conditions, vibrant cultural heritage and unique recreational and educational opportunities. The park preserves archeological and historical resources spanning approximately 6,000 years of human history, revealing adaptation to and exploitation and alteration of its unique environment. The park includes natural and cultural resources that are part of the ancestral territory of American Indian Tribes of Florida (including the Miccosukee Tribe of Indians of Florida).

The Camp appears to have been constructed in a low area that was raised with fill material. The Camp was established by William and Alice McKinley Osceola in 1935. The Camp served as a family residence and gift shop and then later a site for air boat rides after the opening of Tamiami Trail brought tourists into the Everglades. In 1936, the Camp was home to 15 to 25 Tribal residents and contained a large store with groceries and goods made by Native Americans. None of the structures in the Camp are over 50 years old, nor do they meet the exemptions required for being considered for listing in the National Register of Historic Places (NRHP). Recently, fill material was placed by the present residents, descendants of William McKinley Osceola, to further expand and elevate the Camp and its buildings so they would not be flooded by rising water levels.

Under the Everglades NP Expansion Act of 1989 (P.L. 101-229), Congress authorized modifications to the Central and Southern Florida Flood Control Project to modify the delivery of water to Everglades NP to more historic and beneficial methods. The U.S. Army Corps of Engineers (USACE) 1992 General Design Memorandum and subsequent documents details the project results in elevated water levels in the vicinity of the Camp. Since the current residents have expressed a desire not to be relocated to another site, a Special Use Permit under Title 36 of the Code of Federal Regulations Section 2.61 (36 CFR 2.61) has been authorized by the NPS to the residents to continue to occupy the site.

The Miccosukee Tribe of Indians of Florida (Tribe) hold easements and leases from the State of Florida adjacent the site. Members of the Tribe have administration of four reservation areas, all located within the CEPP area: the Tamiami Trail (Forty-Mile-Bend) Miccosukee Tribe of Indians of Florida's Trail Reservation; the Alligator Alley Miccosukee Reservation; the Krome Avenue Miccosukee Reservation and the Dade Corners Reservation. Additionally, the Tribes have a perpetual lease from the state for nearly 190,000 acres outside of Everglades NP (CEPP 2014). The Tribe is authorized to use this land for purposes such as hunting, fishing, trapping and frogging. The Camp is currently not part of the Miccosukee Reservation Area.

The Camp is an approximate 9.4-acre residential village within Everglades NP. The Camp is located approximately 11.4 miles west of the intersection of Tamiami Trail and SR 997/Krome Avenue and 6.7 miles east of the Shark Valley Visitor Center (**Figure 2**). The Project Area consists of the manmade structures within the Camp as well as the associated wetlands within the limits of disturbance (**Figure 3**). The approximate central coordinates for the entrance to the Camp are 25° 45' 38.8" N.; 80° 39' 53.8" W. The structures/facilities at the Camp include eight housing structures; 25 chickee hut structures; 15 storage structures; four generators, pads and structures; three water supply systems, pads and structures; roadways and driveways and wastewater treatment systems. All of the aforementioned structures and facilities are within the Project Area and would be impacted, with the exception of the housing structures, 4 of the storage structures, and the generator and the water supply structures.

The park includes and protects a large remnant of an endangered, vast, interconnected and recovering ecosystem that has been impacted by, and still faces unprecedented pressure from its regional water management system. Restoration of this ecosystem, which is considered one of the most endangered in the national park system, is dependent on globally significant experiment in intergovernmental collaboration. A series of planning studies have been developed for the next generation of ecosystem restoration projects as part of the CERP. The USACE is leading these efforts in partnership with the South Florida Water Management District (SFWMD) (SFWMD 2023).

EVERGLADES ECOSYSTEM RESTORATION PROJECTS

Comprehensive Everglades Restoration Plan. In 2000, the CERP was authorized by Congress as a framework for restoring, protecting and preserving the greater Everglades ecosystem. The plan is a 50/50 partnership between the State of Florida and the federal government. The SFWMD is making significant infrastructure adaptation investments that are needed to successfully implement its mission of safeguarding and restoring South Florida's water resources and ecosystems, protecting communities from flooding, and ensuring an adequate water supply for all of South Florida's needs. The SFWMD is working to ensure that the region's water resources and ecosystems are resilient.

Tamiami Trail Modifications: Next Steps Project. The current elevation of the Camp is not sufficient to prevent flooding of this area with implementation of the CEPP, which relies upon the implementation of the Tamiami Trail Modifications: Next Steps Project (Next Steps Project) led by the Florida Department of Transportation (FDOT). As part of the effort to achieve additional deliveries of water to the park, the reconstruction of the eastern Tamiami Trail roadway, construction of six new bridges, and construction of seven improved culverts from east of the ValuJet 592 Memorial Structure (MP 13.85) to 1.5 miles west of Krome Avenue/east of structure S-334 (MP 24.42) is underway to accommodate the CEPP flows and design high water of 9.7 feet (ft.) National Geodetic Vertical Datum (NGVD) in the L-29 canal. The modifications to Tamiami Trail is anticipated to be completed in the winter of 2026 (FDOT 2023). The NPS' proposed improvements within the Camp is considered an expansion of the Next Steps Project and would be completed to align with the construction schedule of the Next Steps Project.

Central Everglades Planning Project. In 2014, an Environmental Impact Statement (EIS) was developed for the CEPP, which was intended to improve quantity, quality, timing and distribution of water flows to the Northern Estuaries, central Everglades and Florida Bay, while increasing water supply for municipal, industrial and agricultural users (USACE 2014). The CEPP focuses restoration on more natural flows into and through the central and southern Everglades by increasing storage and treatment south of Lake Okeechobee, improving conveyances to the central Everglades and removing barriers to flow to Everglades NP (USACE 2023). The recommended plan sought to achieve these benefits by reducing the large pulses of regulatory flood control releases sent from Lake Okeechobee by redirecting approximately 370,000 additional acre-feet of water.

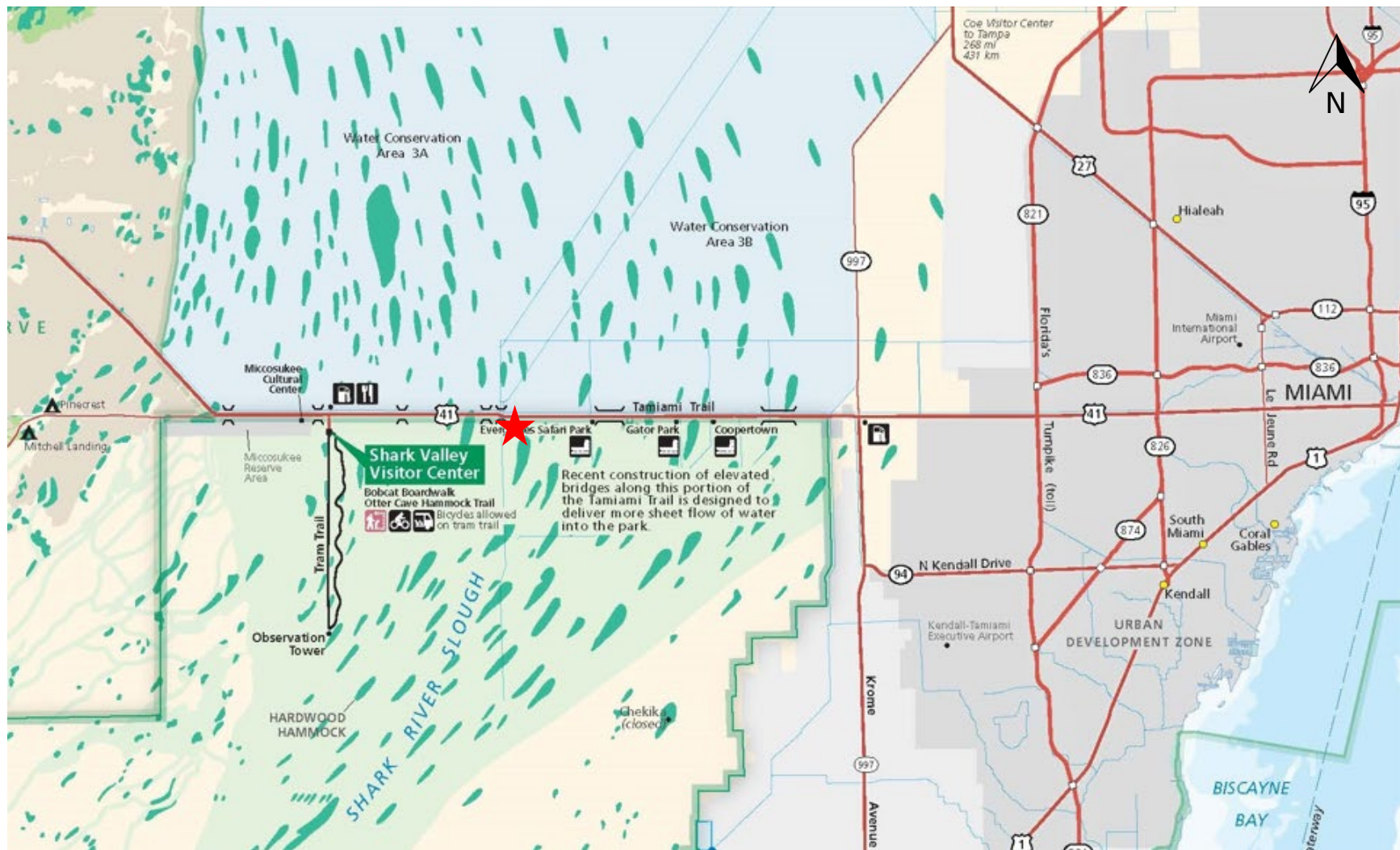


Figure 1. Project Vicinity Map

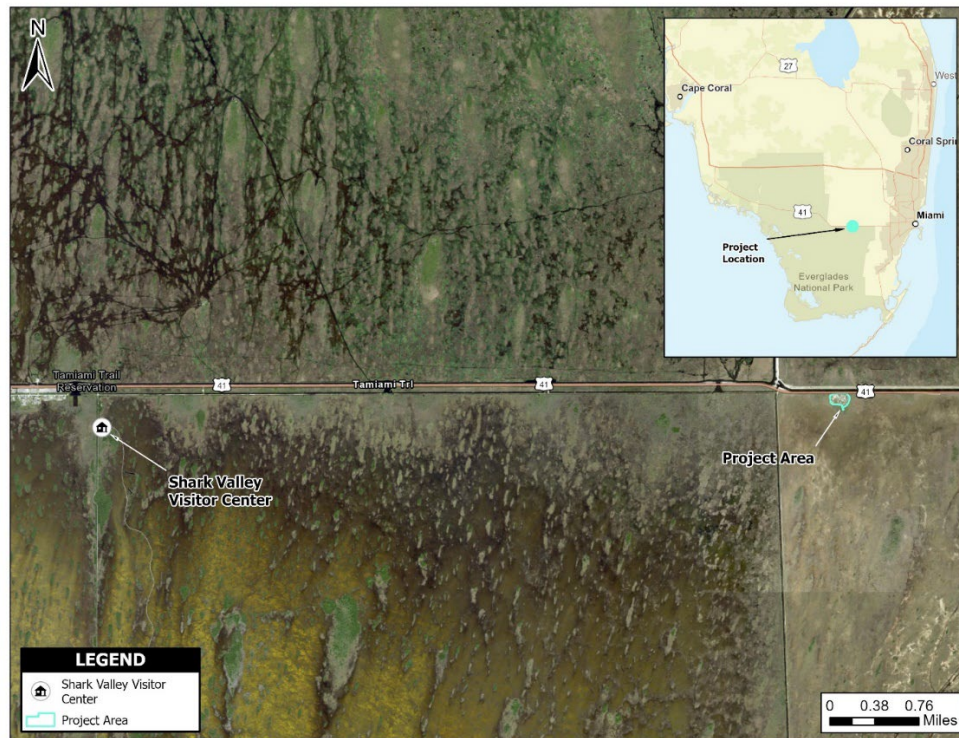


Figure 2. Project Location Map



Figure 3. Project Area

PURPOSE AND NEED FOR ACTION

The NPS proposes to preserve the existing facilities, functions and residences of the Camp to prevent the Camp from flooding as a result of the CEPP by elevating the Camp's ground surface elevations and select structures, as well as reestablishing roadways and driveways.

Action is needed because the existing elevations at the Camp need to be raised in order to avoid a safety hazard to the residents and allow continued residential and commercial use of the Camp as a result of the CEPP implementation.

Project Objectives

In addition to the purpose and need, the park identified objectives for the Project, which include the following:

- Provide for the continued existence of the Camp for its residents by elevating the Camp to a higher elevation than the 100-year floodplain minimum elevation of 10.0 ft. NGVD in anticipation of water levels rising.
- Implement the Project as identified in the CEPP.
- Align the NPS and FDOT's schedules to leverage construction resources.

ISSUES AND IMPACT TOPICS

The NPS identified specific issues and concerns related to implementing the alternatives considered. Those issues were retained for detailed analysis and are included in the impact topics that are discussed in Chapter 3 of this EA. NPS organizes the discussion of the affected environment and environmental consequences by "impact topics", which are headings that represent the affected resources associated with the issues discussed during NPS and stakeholder coordination. Issues and impact topics that were considered but not carried forward for detailed analysis can be found in **Appendix A**. Topics were dismissed from further detailed analysis if it was confirmed that 1) the potential environmental impacts to resources or values would not be substantial; 2) the impacts were not central to the decision; or 3) if a detailed analysis of these impacts was not necessary to make a reasoned choice between alternatives.

- Air Quality
- Nonnative or Exotic Species
- Species of Special Concern and Wildlife
- Cultural Resources
- Lightscapes
- Environmental Justice
- Soundscapes
- Visitor Use and Experience
- Water Quality and Quantity
- Climate Change and Greenhouse Gases

Impact Topics Analyzed for Detailed Analysis

As described in Chapter 3, this EA analyzes impact topics for the Project Area. Impact topics retained for detailed analysis are related to the following resources and values: floodplains, and wetlands and vegetation. Issues analyzed in detail in this EA were identified with support from an interdisciplinary team established for this Project.

Floodplains

The entire Project Area is considered to be within a floodplain. The floodplain captures excess water from surrounding areas and is particularly important during storm events. The proposed improvements are anticipated to enhance floodplain resiliency in the Project Area and minimize impacts to human health and safety. Due to these proposed improvements occurring within the floodplain, a draft Wetland and Floodplain Statement of Findings (WFSOF) was prepared for this EA (**Appendix B**).

Wetlands and Vegetation

Modification to the Camp would result in changes to ground elevations, which could affect wetland vegetation in the Project Area and in the project vicinity. Mixed wetland hardwoods make up the majority of the wetlands that currently exist on site that would be impacted by the proposed improvements. A mix of other vegetation (i.e., mowed grass, coconut palms and sabal palms) are scattered throughout the site. Elevating the Camp structures above groundwater levels would minimize the impacts of runoff from the Camp into surrounding wetlands. Approximately 1.4 acres of wetlands would be removed within the Camp; however, the wetlands within the Project Area are of low quality and provide little benefits compared to the wetlands in the project vicinity. Due to potential wetland vegetation impacts, a WFSOF was prepared for this EA (**Appendix B**).

A mix of vegetation occurs within the Project Area, along with mowed grass and coconut palms and sabal palms scattered throughout. The majority of wetlands in the Project Area were classified as mixed wetland hardwoods. Vegetation occurs within the area where construction would occur, and vegetation would be removed as part of the proposed improvements.

CHAPTER 2: ALTERNATIVES

This EA analyzes a no-action alternative and one action alternative (the proposed action/preferred alternative). During development of the alternatives, the NPS coordinated with the Tribes and other outside agencies. A Value Analysis Workshop (VA) was conducted on December 19, 2022 during the schematic design phase of the Project to evaluate alternatives for the entrance wall and Camp roads. Two alternatives are carried forward for analysis in this EA and are summarized below.

ALTERNATIVE A - NO-ACTION (NO IMPROVEMENTS)

Under the no-action alternative, or Alternative A, the NPS would not rehabilitate or improve the Camp. The current conditions would remain and continue unchanged. The Camp would flood as a result of CEPP implementation, rendering the Camp a safety hazard to the residents. The no-action alternative is used as a basis to compare and evaluate the action alternative.

ALTERNATIVE B - PROPOSED ACTION/PREFERRED ALTERNATIVE (IMPROVEMENTS)

The NPS proposed action and the preferred alternative, Alternative B, would increase the site elevations at the Camp to allow for the implementation of components of the CEPP while also preserving the Camp facilities, in addition to maintaining the functions and public health of the residents. The modifications would ensure that the Camp meets the higher elevation than the 100-year flood elevation of 10.0 ft. NGVD [8.5 ft. North American Vertical Datum (NAVD)]. The Camp facilities would be raised based on the USACE's required elevations as follows:

- 10.0 ft. NGVD (8.5 ft. NAVD) for ground surface elevations
- 11.0 ft. NGVD (9.5 ft. NAVD) for finished floor elevations of non-residential structures
- 11.1 ft. NGVD (9.6 ft. NAVD) for finished floor elevations of residential structures

The Project Area generally consists of filled areas of paved/unpaved gravel areas and green areas consisting of vegetation, grass and bare dirt. The general ground surface would be elevated by removing the top three inches of the organic surface materials prior to placing and compacting the fill. The fill from the demolition of Old Tamiami Trail from the Next Steps Project would be utilized for the site elevations (NPS 2018). The fill material would be transported to the Camp and used to raise the elevation of select structures by placing it on a new slab on top of that fill material. A total of 18,500 cubic yards of fill would be required for Project improvements. The fill has been tested for pollutants and is safe for human use. The fill is currently stockpiled approximately 0.75 miles away from the Camp and would be used as needed to fill the areas to be raised.

In addition, a total of 25 chickee hut structures (huts) would be demolished as they do not meet the required finish floor elevations. Once the structures are demolished, the debris would be removed and transported to the nearest landfill for those types of materials. The grade would be elevated at the sites for the new huts to meet the CERP guidelines of 11.0 ft. NGVD for non-residential structures and time allowed for the Tribes

to rebuild the huts prior to construction continuing. The huts would be reconstructed out of the traditional wood pole framing with a thatched roof. A total of 15 storage structures would be demolished, disposed offsite and rebuilt in new locations.

Approximately 17,000 square feet (sf.) of the gravel road, 1,700 sf. of asphalt pavement, and 4,000 sf. of asphalt walkway would be removed and disposed offsite. The new roadway would consist of 35,349 sf. of asphalt pavement and would meet the minimum elevation of 10.0 ft. NGVD. All residences would have concrete parking pads; approximately 21 total, would be constructed throughout the Project Area (three for each residential house).

Approximately 450 linear feet (LF) of the existing wood fence, including the gate and posts to enter the Camp, would be demolished and disposed of offsite, and replaced with 450 LF of 8 ft. concrete masonry unit (CMU) fence and new gates and posts. As a result of the site elevations, select trees would require relocation. However, many of the trees that require relocation are in poor condition and would need to be removed. Several coconut palms, Sabal palms, a loquat, Slash pines and lemon trees would be relocated on site and would be maintained.

The onsite utilities would be replaced. New water piping would be installed to the eight residences, the central washing station and the restroom facility. Due to the State of Florida Department of Health, Chapter 64E-6, Florida Administrative Code Standards for On-site Sewage Treatment and Disposal Systems, effective July 31, 2018, the septic system would be replaced with a new system to service the residences and restroom facility. The electrical power supply from offsite would remain as is. The telecommunications services would need to be raised. There is no utility work or connections proposed within the public right-of-way as the telecommunication service boxes would be remounted to existing on-site utility poles at higher elevations. With the exception of one residential housing structure that would be relocated to a new elevated location within the Project Area, no changes would be made to the residential structures as they currently meet the required USACE's criteria; however, the electrical connection, generator connection, water line and sewer connections would require relocation or elevation to prevent inundation. See **Figure 4** for a simplified site plan for Alternative B.



Figure 4. Alternative B – NPS Proposed Action and Preferred Alternative

Project Construction Schedule

Project construction would begin in summer 2024 in order to align with the completion of the Next Steps Project. Construction is expected to last three years and would be weather dependent during the wet season (June through September). Work is anticipated to be completed by spring 2026.

MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES

NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. The following mitigation measures and best management practices (BMPs) would be applied to avoid or minimize potential impacts from implementation of the proposed action, Alternative B.

General Resource Management

- All resource protection measures would be clearly stated in the construction specifications, and workers would be instructed to avoid conducting activities outside the Project Area. Areas of natural or cultural resource concern would be clearly indicated on construction drawings.
- A preconstruction meeting would be held to inform contractors about sensitive areas and resources and provide procedures for identifying and addressing any unanticipated discoveries.
- Staging and storage areas for construction vehicles, equipment, materials, and soils would be sited in previously disturbed or paved areas approved by the park and tribes. These areas would be clearly identified in advance of construction.
- Any light fixtures that would be replaced would be dark-sky-friendly, and a lighting plan would be submitted should any night-time construction occur.
- Construction would only occur during daylight hours to reduce light pollution and to avoid night-time noise disruption.
- Standard noise abatement measures would be followed during construction and include a schedule that minimizes impacts on adjacent noise-sensitive resources, the use of best available noise control techniques wherever feasible, and the use of hydraulically or electrically powered tools when feasible.
- All permits would be acquired from the regulatory agencies prior to commencement of work.

Cultural Resources

- If cultural resources are discovered during project implementation all work in that area must stop and the Superintendent, Chief of Cultural Resources, and/or Park Archeologist must be notified immediately in accordance with the 2008 National Park Service Programmatic Agreement Section VI.
- All activity must cease in the area of discovery and immediate notice made to the Superintendent and Chief of Cultural Resources if items protected by the Native American Graves Protection and Repatriation Act (NAGPRA) are discovered during project implementation. The Superintendent or Chief of Cultural Resources will notify the appropriate federally recognized Indian Tribes/Organizations and State Historic Preservation Officer (SHPO).

- A cultural resources monitor and/or fencing may be required for any work near archeological and prehistoric/historic resources.

Floodplains

- Redevelopment activities would incorporate methods for minimizing storm damage in compliance with the National Flood Insurance Program's Floodplain Management Criteria for Flood Prone Areas (44 CFR 60.3) and Executive Order 11988, "Floodplain Management," and Director's Order #77-2, "Floodplain Management" identified in the WFSOF in Appendix B.
- Any proposed future development within the Camp would adhere to the ground elevations recommend by the USACE.
- Any proposed future development within the Camp would incorporate methods for minimizing flood damage, as contained in the National Flood Insurance Program Floodplain Management Criteria for Flood-Prone Areas (CFR 44, 60.3), and in accordance with any state or county requirements for flood-prone areas.

Wetlands

- Mitigation for unavoidable wetland impacts within the Camp would be offset through a compensatory mitigation plan which would be developed in accordance with FDEP's Section 404 permit process and Director's Order (D.O.) #77-1: Wetland Protection identified in the WFSOF in Appendix A.
- Pre-and post-construction erosion control BMPs would be implemented for drainage, erosion and sediment control to prevent or reduce runoff from entering the water column.
- Silt fencing or floating turbidity barriers would be installed around wetlands prior to construction to minimize impacts on wetland soils and vegetation from heavy equipment.
- Erosion and sediment control BMPs would be inspected and maintained on a regular basis and after each measurable rainfall to ensure they are functioning properly.
- Appropriate measures would be employed to prevent or control spills of fuels, lubricants, or other contaminants. Actions would be consistent with state water quality standards and Clean Water Act, Section 401 certification requirements.
- Heavy equipment hydraulic fluid lines would be filled with biodegradable hydraulic oil alternatives.

Vegetation

- Disturbed areas would be allowed to recover naturally to avoid or minimize the introduction or spread of non-native, invasive plant and animal species. If necessary, and in coordination with the park Biologist, any fill, mulch, reseeding, and sod material brought into the park must be free of non-native, invasive plants and animals, and noxious weeds.
- Special attention would be devoted to preventing the spread of invasive nonnative plants. Standard measures would include the following elements: ensure that construction related equipment arrives on site free of mud or seed-bearing material; certify all seeds and straw material as weed-free; identify areas of invasive nonnative plants before construction; treat nonnative plants or infested

topsoil before construction (i.e., topsoil segregation, storage, herbicide treatment); and revegetate with appropriate native species.

- All construction base, fill, and finish materials sourced from outside of the park would be acquired from a certified seed and weed free source.

Species of Special Concern and Wildlife

- Implement the USFWS *Standard Protection Measures for the Eastern Indigo Snake* during project construction.
- Conduct a Limited Roost Survey for the Florida bonneted bat and tricolored bat in the Project Area prior to construction to include a thorough inspection of the buildings that would be impacted by the proposed consolidation of those facilities. Document survey results and provide report to USFWS. If the Florida bonneted bat or tricolored bat is found to be roosting in structures identified for demolition, work would stop and consultation with USFWS would be reinitiated to determine next steps.
- Conduct any additional species-specific surveys required by the consultation with the USFWS.
- If listed species are present or observed at a proposed work location during construction, work would be postponed until individuals leave the area. Park Biologists and appropriate representatives from the Biological Resources Branch would be notified immediately of the time and location of the sighting(s) to determine if further mitigations are necessary.
- All work would only be conducted during daylight hours to minimize disturbance to wildlife.
- Staging and storage areas for construction vehicles, equipment, materials, and soils would be sited in previously disturbed or paved areas approved by the park and Tribes. These areas would be clearly identified in advance of construction.
- Adhere to all BMPs resulting from required regulatory permits.
- No living, injured, or dead listed species would be handled or removed from the site.
- BMPs, as listed in the USFWS *Florida Bonneted Bat Consultation Guidelines (2019)* would be implemented as determined through Section 7 consultation.

Water Quality and Quantity

- An Erosion and Sediment Control and Stormwater Pollution Prevention Plan (SWPPP) would be developed to comply with the current FDEP National Pollutant Discharge Elimination System (NPDES) requirements and a FDEP NPDES Construction General Permit coverage would be obtained. The SWPPP would be developed to address all stormwater management Best Management Practices (BMPs).
- Appropriate measures would be employed to prevent or control spills of fuels, lubricants, or other contaminants from wetlands. Actions would be consistent with state water quality standards and Clean Water Act, Section 401 certification requirements.
- The developed area would use techniques such as backsloping to allow percolation and filtration of runoff through the soils to avoid potential pollution of other surface waters by stormwater runoff contaminated by oil and other petroleum products.
- Pre-and post-construction erosion control BMPs for drainage, erosion and sediment control would be implemented to prevent or reduce runoff from entering the water column.

- Inspect and maintain erosion and sediment control BMPs on a regular basis and after each measurable rainfall to ensure they are functioning properly.
- Adhere to all BMPs resulting from required regulatory permits.

Human Health and Safety

- Residents would be informed in advance of construction activities through information provided by the NPS.
- Temporary short-term full closure of areas may be necessary on limited occasions. Such full closures would be for the minimal time required to complete the work activity.
- Construction fencing and closure signage would be placed around construction areas, as needed, to discourage residents from entering active construction areas.
- To mitigate potential risk to human health and safety, a flood response plan would be developed. The NPS will coordinate with the Tribe for completing a flood response plan as part of the Special Use Permit for occupation of the site.

ALTERNATIVE CONSIDERED BUT DISMISSED

The park considered an alternative to relocate the residents of the Camp to a new site. However, this alternative was dismissed due to residents of the Camp not having a desire to relocate to a new site in order to retain their cultural heritage. Additionally, relocating the residents of the Camp did not meet the purpose and need for the project.

CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes both the affected environment (the existing conditions of the resources) and environmental consequences (impacts of Alternatives A and B) on each resource. The analysis of impacts follows CEQ implementing regulations (40 CFR 1500-1508), Director's Order 12 procedures (NPS 2011), NPS *NEPA Handbook*, and NPS *NEPA Handbook Supplemental Guidance: Preparing Focused and Concise EAs* (NPS 2015c).

The analysis considers short and long-term effects, adverse and beneficial effects. The intensity of the impacts is assessed in the context of the park's purpose and significance and any resource-specific context that may be applicable. 'Short-term' is used for impacts lasting only for the project duration or during the construction period for an action. 'Long-term' impacts occur beyond the date the project is considered fully implemented and are not readily mitigatable. 'Beneficial' is a positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition. 'Adverse' is a change that declines, degrades, and/or moves the resource away from a desired condition or detracts from its appearance or condition.

This EA also considers cumulative impacts, 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 nonfederal) or person undertakes such other actions" [40 CFR 1508.1(g)]. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. To determine potential cumulative impacts, past, present and foreseeable future actions were identified in or near the Project Area. Cumulative impacts are considered for the no-action alternative and the proposed action, by considering the contribution of impacts of the alternative to past, present and reasonably foreseeable future actions and are presented at the end of each impact topic discussion.

The methods used to assess impacts vary depending on the resource being considered, but generally are based on a review of pertinent literature and park studies, information provided by on-site experts and other agencies, professional judgment, and park staff knowledge and insight.

FLOODPLAINS

Area of Analysis

The area of analysis for floodplains includes the area directly affected by the proposed improvements as well as the project vicinity which also occurs in a floodplain.

Affected Environment

The Project Area falls within the Everglades sub-basin which is within hydrologic unit code (HUC) 8 #03090202 as defined by the United State Geological Survey (USGS; Figure 7; USGS 2020). A desktop review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) indicates that the entirety of the Project Area is within special flood hazard area, Zone A (Figure 8; FEMA 2009). Zone A floodplains are defined as areas with a 1 percent annual chance of flooding (i.e., located within the 100-year floodplain). The proposed action is considered a Class I Action per NPS Procedural Manual 77-2: Floodplain Management.

The floodplain currently functions to capture excess water from surrounding areas. This function is especially important during storm events and hurricanes. Historically, natural water movement within the floodplain has been diminished due to development within the Everglades, more specifically the Camp and the Tamiami Trail roadway. Structures within the Project Area that are currently impacting the floodplain include: 8 residential housing structures; 25 huts; 15 storage structures; 4 generator pads; and 3 potable water-well systems as well as an 8-ft-tall wooden fence at the entrance of the Camp. There are also paved roadways within the Project Area including parking pads and driveways. In addition to impacts from manmade structures, the floodplain is anticipated to be impacted by climate change and rising sea levels. Further impacts from the structures within the Project Area would be minimized through the implementation of the preferred alternative action. This would in turn enhance floodplain resiliency and thus minimize the potential impacts to human safety.

Environmental Trends

Everglades NP experience intense periods of rain referred to as the “wet season” starting in mid-May and continuing through November where water levels from month-to-month may drastically change (NPS 2015b). This already naturally fluctuating hydrology within the Everglades has been severely altered over the past 150 years due to construction of roadways and drainage structures to allow for development within the Everglades. These activities have altered flow regimes within Everglades NP, particularly south of Tamiami Trail, where the Project Area is located. The Camp can experience minor flooding and standing water in low-lying areas during high rain events. In some areas, fill has been brought in to mitigate flooding. The CERP, which will restore historic flow patterns within the Everglades, will also increase the amount of water currently being delivered to Everglades NP and the Camp. This will introduce more strain on the floodplain. However, the floodplain would be restored to natural flow patterns and historic functions. This return to natural flow pattern will be beneficial to Everglades NP ecosystem as a whole but will increase flooding potential to the Camp. Furthermore, when the effects of climate change is taken into account, water levels within Everglades NP are anticipated to rise in addition to actions associated with the CERP. When both effects of climate change and the CERP are considered, the floodplain within Everglades NP is anticipated to retain more water than it currently does for an overall beneficial effect.

Environmental Consequences

Alternative A (No-Action Alternative)

Under the no-action alternative, structures within the Camp would not be elevated, and thus, floodplains would be negatively impacted as a result of future CEPP implementation. Residents of the Camp would

continue to reside at the Camp under the no-action alternative, and the Camp would be at risk of being completely lost due to flooding. The floodplain would be adversely affected by both decreasing the floodplain's water capacity as well as leaving manmade structures within the floodplain. The no-action alternative would not preserve existing facilities or functions of the Camp and does not meet the purpose and need of the Project.

Cumulative Impacts

When considering all planned and future actions with the No Action Alternative, there would be an overall long-term beneficial impact associated with restoration of natural flow patterns. However, there would also be adverse long-term impacts with continued occupation of the Camp being left in the floodplain. When the incremental impact of the No Action Alternative is added to past, present and foreseeable future actions, there would be both long-term beneficial and adverse impacts to floodplains. Beneficial impacts would occur from the restoration of natural flow through the Tamiami Trail. However, adverse impacts would occur from the Camp remaining within the floodplain at its existing elevation. There are currently no other planned projects that could adversely impact the floodplain within the vicinity of the Project at this time.

Impacts of Alternative B

Alternative B has the potential to result in both short and long-term adverse impacts as well as long-term beneficial impacts to the floodplain. Short-term adverse impacts could be observed due to soil disruptions associated with construction activities. However, these impacts would be minimized through erosion and sediment control measures. Long-term adverse impacts would result from a decrease in floodplain water capacity due to raising structures out of the floodplain. However, the capacity of the floodplain has already been decreased with the initial construction of the Camp; therefore, the floodplain is already being negatively impacted by the Camp. Furthermore, the negative impact to floodplain storage would not be exacerbated under Alternative B, and it would only be maintained in its current overall level of impact. In addition, when considering the overall capacity of the floodplain, the amount of volume lost due to the Camp is negligible. Under Alternative B, long-term beneficial impacts to the floodplain would be observed due to removal of manmade structures from the floodplain and establishment of a more natural flow pattern. See **Appendix B** for the WFSOF for more details.

Cumulative Impacts

When considering the Next Steps Project in conjunction with Alternative B, there is the potential for both beneficial and adverse impacts. However, overall, there would be net beneficial impacts. Adverse impacts would arise from construction activities in both projects (short-term) as well as a decrease in floodplain capacity (long-term). Long-term beneficial impacts to the floodplain would include the removal of manmade structures from the floodplain, restoration of natural water flow, and an increase in floodplain capacity from the Next Steps Project. These beneficial impacts would become even greater when considering the future effects of climate change and sea level rise. Through the restoration of natural processes, the floodplain would be better able to store excess water in Everglades NP expected from sea level rise. When the incremental impact of Alternative B is added to past, present and foreseeable future actions, there would be overall beneficial impacts to the floodplain. This can be attributed to the restoration of a natural flow pattern within Everglades NP as well as removal of structures within the Camp out of the floodplain.

WETLANDS AND VEGETATION

Area of Analysis

The area of analysis for wetlands and vegetation includes the areas directly affected by the proposed improvements as well as the adjacent natural habitat that may be impacted by the Project.

Affected Environment

To gain a better understanding of current conditions of wetlands and waterways within the Project Area, a desktop review of the National Wetland Inventory (NWI) database and the National Hydrology Dataset (NHD) was performed (USFWS 2023, USGS 2023). These resources report two jurisdictional wetlands (totaling 9.1 acres) and no waterbodies within the Project Area. One wetland is classified as a freshwater emergent wetland and comprises 5.8 acres within the Project Area. The other wetland is classified as a freshwater forested/shrub wetland and comprises 3.3 acres within the Project Area.

An in-situ delineation of wetlands within the Project Area was completed in 2007 by the NPS. The GIS data from the 2007 delineation provides a baseline of the historical wetlands in proximity to the Project Area. During the preparation of the Cure Plan in 2021, an updated wetland delineation was performed. After this delineation occurred, it was discovered that previous filling of wetlands had occurred within the Project Area to elevate the Camp and its buildings to combat rising water levels. This resulted in a net loss of wetlands that were not immediately evaluated. The report identified 1.3 acres of wetland adjacent to the Camp that would be impacted due to filling to preserve the Camp. However, because the previous filling was not immediately accounted for, this number cannot be considered accurate. In 2023, updated field surveys of the Project Area were performed. These field surveys compared the wetland boundary identified in 2007 with the current limit of disturbance boundary. The goal of these field surveys was to further characterize the areas of previous fill, as well as the areas of proposed fill in accordance with the Cure Plan to more accurately determine overall impacts to the existing wetlands. Field teams confirmed two wetlands within the Project Area comprising 4.1 acres, as documented during the 2021 field surveys. When comparing the 2007 wetland delineation with the 2023 wetland delineation, it was found that 2.6 acres of wetlands within the Project Area had been filled between 2007 and 2023. In addition, there is a 0.1-acre strip of land south of the Project Area that has also been filled. This strip of land is not included in the current Project Area; however, this land is taken into consideration when calculating compensatory mitigation to comply with NPS Director's Order 77-1 and CWA requirements. Therefore, the total area of wetlands that were filled between 2007 and 2023 is 2.7 acres.

During 2023 field surveys, wetland function and values were assessed via the Uniform Mitigation Assessment Method (UMAM). This method was established to fulfill the mandate of subsection 373.414(18), F.S., which requires the establishment of a uniform mitigation assessment method to evaluate proposed wetland impacts and determine the appropriate amount of mitigation needed to offset adverse impacts to wetlands and other surface waters and their loss of function. The majority of wetlands in the Project Area were classified as mixed wetland hardwoods. This mitigation evaluation method was also used to calculate the appropriate number of and to award and deduct mitigation bank credits (FDEP 2022). Of the two wetland features delineated during field surveys, the Tamiami Trail roadside ditch wetland received

and overall UMAM score of 0.3 which equates to a “low” functional quality rating. The other wetland, Everglades perimeter wetland, received a 0.7 overall UMAM score which equates to a “medium” functional quality rating.

Vegetation within and adjacent to the Project Area was also evaluated during 2023 field surveys. Within the Project Area, vegetation consists mostly of mowed grass with sporadic trees such as coconut palms (*Cocos nucifera*) and sabal palms (*Sabal palmetto*). In the wetlands adjacent to the Project Area, vegetation observed include pond apple, Carolina willow, swamp bay, dahoon holly, wax myrtle, myrsine, giant leather fern, strangler fig, salt bush and cocoplum. During field surveys the condition of vegetation within the Project Area was also evaluated. Determinations were made as to what vegetation would be removed, relocated, or remain in their current location in response to the Cure Plan. It was determined that over 50 plant specimens would be removed within the Project Area. These specimens were generally given a fair or poor condition rating during field evaluations. In addition, over a dozen specimens were selected for relocation. These specimens were generally determined to be in good condition but are located in sub-optimal locations.

Environmental Trends

Due to development within the Everglades over the past 200 years, wetlands and vegetation have also drastically changed. It is estimated that at least 50% of historic wetlands in South Florida, including Everglades NP, no longer exist (NPS 2015a). In addition to loss from development activities, wetlands are also susceptible to annual changes in precipitation. As previously described, the Everglades experience intense periods of rain referred to as the “wet season” starting in mid-May and continuing through November where water levels from month-to-month may drastically change (NPS 2015b). Furthermore, during the dry season less water cycles through the Everglades which results in seasonal drying of wetlands in some areas. Climate change and sea level rise have also affected wetlands in the Everglades. More frequent heavy rain and storm events as well as an increase in temperatures has intensified the fluctuations of water levels within the Everglades.

Vegetation within Everglades NP have a documented change identified through historic records. The introduction of non-native plant species such as melaleuca (*Melaleuca quinquenervia*), Brazilian pepper (*Schinus terebinthifolia*), and Australian pine (*Casuarina equisetifolia*) have overtaken native plants in some areas (NPS 2015a). One study found that the vegetation landscape of the Everglades changed by 20% over a decade (Richards and Gann 2015). Furthermore, climate change and sea level rise have also changed vegetative communities with Everglades NP. Encroaching saltwater into freshwater wetlands has changed the vegetative species composition in some areas of the Everglades (Fuller and Wang 2014, Pearlstine et al. 2010). An increase in water levels and warmer temperatures can also be attributed to changes in plant species compositions. In addition to the changes listed above, fluctuations in rain within Everglades NP, CERP activities and climate change are expected to further alter existing hydrology in the region impacting existing wetlands and vegetation.

Environmental Consequences

Alternative A (No-Action Alternative)

Under the No Action Alternative, wetlands and vegetation in and around the Camp would experience long-term adverse impacts. Groundwater levels would be expected to rise due to activities associated with the CEPP, likely causing portions of the Camp to flood. Over-flooding of the existing wetlands would lower their ability to perform typical ecological functions. Since the Camp is surrounded by wetlands on three sides and the Everglades NP wetlands system is highly connected, adverse impacts could extend beyond the immediate Project Area. In addition, the flooding associated with structures within the Camp have the potential to impact surrounding wetlands if no actions were taken. This potential contamination would in turn adversely affect surrounding vegetation. Vegetation also has the potential to be adversely impacted from rising groundwater levels. This would prove especially harmful to vegetation classified as upland plants (i.e., coconut palms), because they could become inundated with water. Furthermore, the no-action alternative does not involve the removal of trees deemed to be in poor condition or the relocation of trees in good condition to more optimal locations. The no-action alternative would not preserve existing facilities or functions of the Camp and does not meet the purpose and need of the Project.

Cumulative Impacts

When the incremental impact of the No Action Alternative is added to past, present, and foreseeable future actions, there would be overall adverse impacts to wetlands and vegetation within the Camp. Short-term adverse impacts would occur due to construction activities associated with the Next Steps Project in the vicinity of the Camp. Runoff from construction activities has the potential to adversely impact wetlands and vegetation. Long-term adverse impacts would be associated with changes in groundwater levels associated with the CEPP as well as climate change. Wetlands would be more susceptible to runoff from the Camp with the rise in groundwater levels, and vegetation within the Camp has the potential to become inundated with water and die-off. There are currently no other planned projects that could adversely impact wetland and vegetation within the vicinity of the Project at this time.

Impacts of Alternative B

Alternative B would involve improvements within the Camp to combat elevated groundwater levels associated with CEPP implementation. This would involve demolishing and reconstruction of huts within the Camp and the fence at the entrance of the Camp, creation of new concrete parking pads at all residences, and replacement of utilities within the Camp. These structures would be raised above groundwater levels which would prevent them from directly interacting with surrounding wetlands. This would in turn provide long-term beneficial impacts to wetlands and vegetation. However, to preserve the integrity of the Camp, it is also proposed that 1.4 acres of wetlands within the Project Area be filled to prevent anticipated flooding associated with CEPP implementation. Since impacts to wetlands are expected to be greater than 0.1 acres, wetland compensation would be required (NPS 2016). The NPS would mitigate for all wetland impacts associated with this alternative such that the Project would result in the NPS' goal of "no net loss of wetlands" at the Hole-in-the-Donut Mitigation Bank. The NPS anticipates that mitigation for wetland impacts from Alternative B would be offset through the purchase of wetland mitigation credits from the Hole-in-the-Donut Mitigation Bank, located in the southeast portion of the Everglades. See **Appendix B** for the WFSOF for more details.

Although portions of wetlands within the Camp would be filled and permanently lost under Alternative B, this would create long-term beneficial impacts to surrounding wetlands. These beneficial impacts would occur since the quality of surrounding wetlands would not diminish due to activities from the Camp. Elevating the entirety of Camp structures above groundwater levels would minimize the impacts of runoff from the Camp into surrounding wetlands. Therefore, the adverse impact of removing 1.4 acres of wetlands within the Camp would be offset by the long-term benefits provided to the surrounding wetlands. Furthermore, the wetlands within the Project Area are of low quality and provide little environmental benefits compared to the surrounding wetlands.

Alternative B also has the potential to have short-term adverse and long-term beneficial impacts on vegetation in and around the Project Area. Short-term adverse impacts would arise from construction activities such as filling of selected wetland areas, relocation of select trees, and removal of trees in poor condition. However, once construction activities are completed, long-term beneficial impacts would occur. Structures within the Camp would be raised above groundwater levels which would prevent groundwater from becoming contaminated, thus benefiting surrounding vegetation. Trees in poor condition within the Project Area would be removed which would allow for higher quality vegetation to flourish. Select trees also would be relocated within the Project Area to more suitable locations which would allow them to thrive under more ideal conditions. Trees identified for relocation are in good condition, but in suboptimal locations. Moving these trees to areas with more optimal soil and sunlight conditions would also allow them to grow faster than if they were left in their current location.

Cumulative Impacts

Alternative B would ensure that structures within the Camp are above groundwater level which would benefit adjacent wetlands and vegetation as opposed to performing no action and allowing structures within the Camp to adversely impact adjacent wetlands and vegetation. Furthermore, preserving wetland function would assist in combating future climate change impacts because optimally performing wetlands would be more resilient and better able to handle increased water levels and storm events. Although a portion of wetlands within the Project Area would be filled and permanently lost, the remaining wetlands would be beneficially impacted due to restoration of natural flow from the Next Steps Project and CEPP as well as raising the Camp structures above groundwater levels. Alternative B would also provide beneficial impacts to vegetation through the removal of poor-quality trees along with the relocation of trees in good condition that are located in subprime locations.

Actions associated with the Next Steps Project have the potential to introduce short-term adverse and long-term beneficial impacts to wetlands and vegetation. Short-term adverse impacts would be associated with construction activities, when completed, would provide long-term beneficial impacts to wetlands and vegetation. These beneficial impacts would be associated with the restoration of natural flow patterns within Everglades NP. Adverse impacts have the potential to occur with construction activities from the Next Steps Project (short-term) and filling of wetlands (long-term). However, long-term beneficial impacts would be observed with restoration of natural water flow patterns, preservation of the Camp, and removal/relocation of select vegetation within the Camp. The effects of climate change have the potential to be mitigated through Alternative B since wetlands would be functioning more optimally as opposed to the No Action Alternative. When the incremental impact of Alternative B is added to past, present, and foreseeable future actions, there would be overall beneficial impacts to wetlands and vegetation.

CHAPTER 4: CONSULTATION AND COORDINATION

The NPS places a high priority on public involvement in the NEPA process and on giving the public an opportunity to review the proposed action. Consultation and coordination with federal, state, and local agencies, as well as Native American tribes, was conducted to identify issues and concerns related to natural and cultural resources within the park. This chapter describes the public involvement and agency and tribal consultation used during the preparation of the EA.

PUBLIC INVOLVEMENT

Civic Engagement

The USACE conducted civic engagement activities during the planning phase and EIS development for the CEPP. Information on these activities can be found on the USACE's website, at <https://www.saj.usace.army.mil/Missions/Environmental/Ecosystem-Restoration/Central-Everglades-Planning-Project/>.

Environmental Assessment Review

The EA will be available for a 30-day public comment period. The public comment period will be announced by press release, posts on the NPS Planning, Environment, and Public Comment Public (PEPC) website, and by electronic mail sent to the park mailing list. Agencies and tribes also will be notified by letter. Hardcopies of the EA will be available for review at Everglades NP headquarters. During this time, the public can provide feedback and questions online at <https://parkplanning.gov/osceolacamp> or mail comments to Superintendent, Attn: Miccosukee Tribe of Indians of Florida Osceola Camp Cure Plan, Everglades National Park Headquarters, 40001 State Road 9336, Homestead, Florida 33034. After the close of the public comment period, all public comments will be reviewed and analyzed prior to the release of a NPS decision document.

AGENCY AND TRIBAL CONSULTATION

NPS initiated consultation with relevant agencies and Tribes during the preparation of the EA. During the preparation of the draft EA, the NPS provided the draft version to the Miccosukee Tribe of Indians of Florida (Camp members) in July 2023 for their review and input. Consultation efforts, as described in the following section, with the USFWS, SHPO, the Miccosukee Tribe of Indians of Florida and Seminole Tribe of Florida, began during the NEPA process. Agencies and Tribes will be provided with a copy of the EA for review and comment.

Endangered Species Act Section 7 Consultation

Section 7 of the Endangered Species Act requires federal agencies to ensure that the actions they authorize, fund, or carry out do not jeopardize the continued existence of listed species nor destroy or adversely affect critical habitat. The Section 7 consultation process is being conducted separately from, but concurrently with, the NEPA process. The NPS is consulting with the USFWS on this Project. A Biological Assessment

is being prepared and will be reviewed by USFWS. The NPS will complete ESA Section 7 consultation prior to finalizing the NPS decision document for this Project.

National Historic Preservation Act Section 106 Consultation

The NPS is consulting with the State Historic Preservation Office and affiliated tribes.

As required by NHPA Section 106, the NPS is consulting with the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida. The Section 106 consultation process is being conducted separately from, but concurrently with, the NEPA process. Consultation under Section 106 is ongoing, and the park will continue consultation as appropriate during project implementation. The park has sought tribal input to help inform the analysis of the proposed action. The Project was discussed with the tribes during meetings.

CHAPTER 5: PREPARERS AND PLANNING TEAM

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APPENDIX A – ISSUES DISMISSED FROM DETAILED ANALYSIS

The following issues were considered by the National Park Service (NPS) during the planning phase, but were not retained for further detailed analysis because they do not meet the following criteria from the NPS NEPA Handbook (2015): (1) the environmental impacts associated with the issue are not central to the proposal or of critical importance, (2) a detailed analysis of environmental impacts related to the issue is not necessary to make a reasoned choice between alternatives, (3) the environmental impacts associated with the issue are not contentious among the public or other agencies, (4) there is no potential for significant impacts to resources associated with the issue. Additional topics dismissed included geological, paleontological, socioeconomics, viewsheds, marine and estuarine resources and wilderness. These topics were assessed by the NPS interdisciplinary team and were dismissed from analysis in the EA because they did not meet the criteria described above.

Air Quality

The federal Clean Air Act (CAA) defines the United States Environmental Protection Agency (USEPA) responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer. Furthermore, per the 2006 NPS Management Policies, the NPS provides additional support for air quality protection, aiming to "perpetuate the best possible air quality in parks" (NPS 2006). Everglades NP is located within a designated attainment area under the CAA. The site plan would have minimal effects on air quality compared to regional emissions. The proposed action would result in the temporary discharge of greenhouse gas (GHG) emissions and dust into the atmosphere as a result of construction activities for the action alternative. As a result, there would be short-term, temporary impacts during the construction period from the use of construction equipment. The air emissions from construction activities, while quantifiable at a site-specific level, would not be appreciable, and only occur while construction equipment is in use. Therefore, air quality is dismissed from further analysis.

Nonnative or Exotic Species

The NPS defines non-native species as those living in areas where they do not naturally exist (NPS 2006). There is the potential for the importation and promotion of nonnative or exotic species as a result of construction activities, including the new fill required to be brought to the site for the proposed elevations. The proposed improvements include the removal of nonnative and exotic species in order to raise the ground elevations, the new facilities and install landscaping. Restrictions on construction equipment and methods would minimize the potential introduction and/or spread of nonnative and exotic species and are discussed under "Mitigation Measures and Best Management Practices" in Chapter 2 of this EA. The action alternative would not be expected to increase the likelihood of introduction of non-native or invasive species and would not be expected to further spread any existing non-native or invasive plant species within the Project Area. Therefore, because the potential to introduce nonnative or exotic species to the Project Area is minimal, this topic has been dismissed from further analysis.

Species of Special Concern and Wildlife

Species of special concern include federally listed species which are designated as threatened or endangered by the United States Fish and Wildlife Service (USFWS) under the ESA. The park supports a variety of flora and wildlife such as mammals, birds, reptiles, amphibians, and invertebrates. Improvements to the Camp would have the potential to impact listed species and wildlife. These impacts would occur from construction-related disturbances. The park-specific species list identified listed species in this area of the park. Species of special concern and wildlife known to occur or that may occur within the Project Area are described below. A Biological Assessment is being prepared and consultation with USFWS is anticipated for this EA for federally listed species. Because adverse impacts are not expected, species of special concern and wildlife were dismissed from further analysis in the EA.

American alligator (Alligator mississippiensis) - This species is listed as “threatened due to similarity of appearance” to the American crocodile (*Crocodylus acutus*). However, the alligator can be distinguished from the crocodile by coloration and head shape. Alligators are dark grey in color with a wide jaw. This species is a keystone species of Everglades NP and is known to occur within the Project Area and surrounding wetland habitat. No mortality or injury of individuals is anticipated as this species is highly mobile and could avoid the Project Area during construction by moving into nearby habitat within the Everglades ecosystem. Therefore, under Section 7 of ESA, no adverse impacts to this species would occur and this species was not carried forward for detailed analysis in the EA.

American crocodile (Crocodylus acutus) - Within Everglades NP, crocodiles are common along the mainland shoreline of Florida Bay and mangrove habitat in Key Largo. There are also known occurrences of this species within Shark Valley, west of the Project Area. While the Project Area lacks suitable nesting habitat, and no nesting has been documented within the Project Area, this species could utilize surrounding wetland habitat or migrate through the Project Area. During construction, minor disturbances including avoidance of the Project Area by this species may occur. However, should this species be encountered during construction, all work would cease until the individual leaves the active construction area to avoid unintentional injury or mortality of individuals. Any temporary, short-term avoidance disturbances would not be expected to result in adverse changes to American crocodile behaviors. Therefore, under Section 7 of ESA, the project *may affect, but is not likely to adversely affect* the American crocodile and was not carried forward into detailed analysis in the EA.

Eastern indigo snake (Drymarchon corais couperi) - The eastern indigo snake prefers drier upland habitat but will utilize a variety of habitats including pine flatwoods, scrubby flatwoods, dry prairie, hardwood hammocks, agricultural fields, disturbed uplands, and edges of freshwater marshes. The Project Area lacks dry upland soil suitable for the gopher tortoise, which the eastern indigo snake utilizes their burrows for refugia. Additionally, there are no known occurrences of this species within the Project Area or within nearby Everglades NP habitat. However, this species may still utilize the hardwood wetlands habitat within the Project Area. Ground disturbing activities associated with construction may cause temporary disturbances or displacement of this species, or temporarily alter this species behavior. To minimize the potential for direct impacts to individuals, including unintentional mortality or injury caused by construction equipment, the park would implement and adhere to the USFWS *Standard Protection Measures for the Eastern Indigo Snake* (2017). Therefore, under Section 7 of ESA, the project *may affect, but is not likely to adversely affect* the eastern indigo snake and was not carried forward into detailed analysis in the EA.

Cape sable seaside sparrow (CSSCSSS) (Ammodrums maritimus mirabilis) - This species, a subspecies of seaside sparrow, has a limited distribution to the southern Everglades. The CSSS utilizes short-hydroperiod marl prairie habitat consisting of moderately dense muhly grass (*Muhlenbergia capillaris*) (Post and Greenlaw 1994). Shorter hydroperiods (60 to 270 days) support the full variety of vegetation for this species (Ross et al. 2006), while longer hydroperiods create wetland areas with tall dense sawgrass-marsh communities which this species typically avoids. This habitat provides open space for movement and nesting. The Project Area does not include suitable habitat for this species as wetland habitat in the area of analysis is limited to mixed wetland hardwoods that lack open ground cover suitable for this species and a channelized ditch not suitable for nesting due to vulnerability of flooding. Additionally, the CSSS is not known to nest or inhabit this area of Everglades NP. Based on the lack of suitable habitat, these species are not anticipated to occur within or utilize the Project Area and no impacts to this species would be anticipated. Therefore, under Section 7 of ESA, the project would have *no effect* on the CSSS and was not carried forward into detailed analysis in the EA.

Eastern black rail (Laterallus jamaicensis jamaicensis) - This subspecies of black rail is a small marsh bird that inhabits salt, brackish and freshwater wetlands. This species prefers habitat typically composed of fine-stemmed emergent plants (e.g., rushes, grasses and sedges) with high stem density and a dense canopy cover (Flores and Edelman 1995). While this species has been documented within Everglades NP, these occurrences were along Main Park Road, approximately 22 miles south of the Project Area. The Project Area is limited to mixed wetland hardwoods, consisting of dense woody vegetation and channelized ditch wetlands in a man-made waterway and lacks suitable emergent wetland and upland-wetland transition habitat suitable for this species. Therefore, under Section 7 of ESA, the project would have *no effect* on the eastern black rail and was not carried forward into detailed analysis in the EA.

Everglade snail kite (Rostrhamus sociabilis plumbeus) - The Everglade snail kite is a medium-sized raptor that inhabits lowland freshwater marshes, lakes and shorelines with low density vegetation but may use any wetland in South Florida with certain conditions (USFWS 1999). Nesting occurs in small trees such as willows, cypress and pond apples. Nesting sites are almost always over water (USFWS 1999) and with enough coverage to provide protection. The Project Area lacks shallow open water bodies preferred for foraging and nesting. However, this species is known to occur within Everglades NP and there are documented occurrences of this species in nearby wetland habitat. Since the Project Area lacks open water bodies suitable for foraging and nesting, the proposed wetland impacts would not occur within suitable habitat for the Everglade snail kite. However, there are documented occurrences of this species within the larger surrounding Everglades ecosystem and the snail kite may migrate through or occur within the Project Area. The increase in human activity and use of heavy equipment associated with construction may cause avoidance of, and a decrease in foraging in, the surrounding Everglades habitat. However, these impacts would be short-term, and long-term adverse impacts to nesting, foraging or breeding behaviors would not be anticipated. Therefore, under Section 7 of ESA, the project *may affect, but is not likely to adversely affect* the Everglade snail kite and was not carried forward into detailed analysis in the EA.

Wood stork (Mycteria americana) - The Project Area falls within the Core Foraging Area (CFA) of known wood stork rookeries. This species will utilize marshes, swamps, ponds, and tidal creeks for foraging and will nest in large rookeries, primarily in cypress and mangrove swamps located in or near standing water. As man-made levees, canals and floodgates have altered the natural hydrologic regime in South Florida, wood storks will forage in artificial habitats such as man-made lakes, flooded roadside ditches and flooded

pastureland. The closest known colony is located approximately 7 miles east of the Project Area and there are recorded occurrences of this species within 1/3 mile of the Project Area. Although the wood stork may occur within the Project Area, impacts to wetland habitat are limited to habitat not suitable for wood stork foraging. Therefore, under Section 7 of ESA, the project would have *no effect* on the wood stork and was not carried forward into detailed analysis in the EA.

Florida bonneted bat (Eumops floridanus) - The bonneted bat is endemic to Florida but have a limited distribution and low abundance within their range. Its range includes 17 counties within central and southern Florida including Collier County. This species will utilize open freshwater and wetlands as provide primary foraging habitat to forage for insects. They will also forage over ponds and streams and will drink when flying over open water (Marks and Marks 2008). Preferred habitat includes pine flatwoods, scrubby flatwoods, pine rocklands, royal palm hammocks, mixed or hardwood hammocks, cypress, sand pine scrub or other forest types. Structural characteristics such as snags, cavities, hollows, deformities, crevices or loose bark (USFWS Florida Bonneted Bat Consultation Guidelines, 2019) are important for protection during daytime roosting. The bat has been documented in trees greater than 33 feet in height, greater than 8 inches in diameter at breast height (DBH), with cavity elevations higher than 16 feet above ground level (Braun de Torrez 2019). While the Project Area does not include any trees meeting these criteria, and wetland vegetation in the area is too dense for roosting, the huts to be demolished provide potential roosting habitat for this species. Additionally, the wetland vegetation to be impacted is too dense and lacks the adequate open space necessary for flight. The structures proposed to be demolished meet the adequate height criteria of 15 feet to be considered suitable roosting habitat. The wetlands to be impacted provide suitable habitat for the bonneted bat to forage over. The permanent fill of this wetland habitat would cause a minimal loss of foraging habitat and these impacts would be considered negligible compared to the amount of foraging habitat available in the larger Everglades ecosystem. To avoid any short-term impacts to foraging behavior, construction would only occur during daylight hours. To avoid direct impacts to individuals potentially roosting within the huts, a limited roost survey would be conducted and specific BMPs as listed in the USFWS *Florida Bonneted Bat Consultation Guidelines* (2019) would be implemented. If any bats are observed roosting during this survey, consultation with USFWS would be reinitiated prior to the start of construction. Therefore, under Section 7 of ESA, the project *may affect, but is not likely to adversely affect* the Florida bonneted bat and was not carried forward into detailed analysis in the EA.

Tricolored bat (Perimyotis subflavus) - As of September 20, 2022, the USFWS proposed to list the tricolored bat as endangered. There is no designated consultation area for this species, but the Project Area falls within the range for this species, which is wide ranging across the eastern United States. This species may be found roosting in road-associated culverts or artificial structures and forested habitats where they roost in leaves of deciduous trees, Spanish moss (*Tillandsia usneoides*) and pine trees. While the Project Area has limited natural roosting habitat for this species, the species may utilize structures for roosting. Additionally, this species may forage in surrounding wetland habitat. While no roosts were observed during the most recent field survey, and no occurrences of the tricolored bat have been documented, the project would cause the loss of (i.e., removal) 1.2 acres of suitable foraging and roosting habitat for this species. Additionally, this species could roost within the existing structures that would be demolished as a result of the Project. In order to prevent direct impacts to individuals, an acoustic survey will be conducted prior to construction. All construction work would be conducted during daylight hours to minimize short-term

disturbance of the species. Therefore, under Section 7 of ESA, the project *may affect, but is not likely to adversely affect* the tricolored bat and was not carried forward into detailed analysis in the EA.

Florida panther (Puma concolor coryi) - The Project Area falls within the Primary Zone of the Florida Panther Focus Area and consultation area for the Florida panther. Land within the Primary Zone includes the only known breeding populations for the Florida panther and are important for the long-term success of this species. Panthers require large contiguous areas of habitat to meet their needs as they have wide ranging movement patterns and large home ranges. The panther will utilize a wide range of habitat types including pinelands, hardwood hammocks, mixed swamp forest, grassland prairies and agricultural areas and choose habitat based on prey availability and cover suitable for ambushing prey. Dry upland areas for required denning and resting. Although the Project Area falls within the Primary Zone, and this species is known to inhabit Everglades NP, this species is more commonly found in drier areas such as the pinelands of Long Pine Key, approximately 24 miles south of the Project Area. The surrounding wetland habitat is frequently inundated and is more suitable for movement not for denning or foraging. Additionally, the Camp is populated year-round, and this species is also known to be relatively shy and averse to human contact. A Florida Panther Habitat Assessment was completed following USFWS methodology to determine the amount of Panther Habitat Units (PHUs) impacted. Short-term avoidance of the Project Area, may occur as a result of construction activities. However, there would not be a long-term increase in vehicle traffic post-construction or fragmentation of habitat and no direct long-term adverse impacts are anticipated. As panthers are unlikely to occur in the Project Area, and impacts to panther habitat would be offset, the project *may affect, but is not likely to adversely affect* the Florida panther and was not carried forward into detailed analysis in the EA under Section 7 of ESA.

Monarch butterfly (Danaus plexippus) - As of May 2022, the monarch butterfly is listed as a candidate species for listing by USFWS. The monarch butterfly passes through Florida as part of its migration between overwinter and mating sites in Mexico and breeding grounds in the United States. Although, the Project Area does not include any milkweed plants required for egg laying, the monarch butterfly may feed on the nectar of flowers in the nearby roadside swales.

Everglades bully (Sideroxylon reclinatum subsp. austrofloridense) – The Everglades bully is a small, 3 – 6-foot, perennial shrub. This species prefers dry habitat and grows in pine rockland, marl prairie and sunny edges of rockland hammock. Although this species can tolerate freshwater inundation, it cannot tolerate saline water. This species is known to occur within Everglades NP but is not documented within the Project Area. The wetland habitat to be impacted is not suitable habitat for the Everglades bully, and no adverse impacts are anticipated for this species. Therefore, under Section 7 of ESA, the project would have *no effect* on the Everglades bully and was not carried forward into further analysis in the EA.

Cultural Resources

Background research indicated that 21 archeological studies have been conducted within one mile of the Project Area between 1981 and 2019. It was determined that one resource, Tamiami Trail (8DA6510), is located within the Project Area and is eligible for listing on the National Register of Historic Places (NRHP). Tamiami Trail (8DA6510) is an early 20th century road that crosses the northern portion of the Project Area, adjacent to the Camp. The Tamiami Trail was recommended as retaining historic significance under Criterion A for engineering and design. The Tamiami Trail also retains integrity in the form of its

setting, construction materials and workmanship and design. Given that the Camp has existed throughout the use of Tamiami Trail, the preliminary results of this research suggest that the proposed project would not erode the aspects of integrity retained by Tamiami Trail. Therefore, it is anticipated that this project would have no adverse effects on Tamiami Trail (8DA6510). There are no other known cultural resources concerns within the Project Area. The Camp has been occupied by the Tribe since time immemorial. The site has been continually used and modified over several generations and is considered by the NPS to be a significant cultural resource. However, the proposed improvements to the site would not adversely impact any of the elements or characteristics that make the site important. Therefore, the proposed improvements would not adversely affect cultural resources as a result of the action alternative and is dismissed from further analysis.

Lightscaapes

Natural lightscaapes include values and resources existing in the absence of artificial light sources at night (NPS 2021). Lightscaapes are important for many species that rely on natural day and night patterns to cue behavior and are also important for cultural value as they may be integral to the historical character of an area. Natural lightscaapes in many parks have been diminished by light pollution and is seen as a nuisance similar to artificial noise. At Everglades NP, the NPS endeavors to limit the use of artificial outdoor lighting other than what is necessary for basic safety requirements, ensuring outdoor lighting is shielded to the maximum extent possible and keep light on the intended subject and out of the night sky. Mitigation measures would be implemented regarding the use of dark sky-friendly lighting and construction related activities would only occur during daylight hours. Therefore, the proposed improvements would not adversely affect lightscaapes as a result of the action alternative and is dismissed from further analysis.

Environmental Justice

Executive Order (EO) 12898 on *Federal Actions to Address Environmental Justice in Minority and Low Income Populations*, issued in 1994, requires all federal agencies to identify and address the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. This EO emphasizes the importance of the public participation process. Public outreach efforts began early in the planning process for the CEPP EIS. During the CEPP, a Project Delivery Team was created consisting of individuals from various agencies, including representatives from the Tribes. The CEPP did not present any high, adverse or disproportionate impacts to low income, minority or Tribal populations and the associated activities would not impact subsistence (CEPP 2014). The Tribe and the Seminole Tribe of Florida have lived in the heart of the Everglades since the 1830s, well before the first efforts to drain the land began in the 1880s and have seen firsthand the impact of those efforts on their homes and livelihood. Today, members of the Tribe have administration of four reservation areas in the project vicinity: the Tamiami Trail Florida's Train Reservation, the Alligator Alley Miccosukee Reservation, the Krome Avenue Miccosukee Reservation and the Dade Corners Reservation (CEPP 2014). Today, most Tribal members live within the confines of their reservations. Subsistence activities for members of the Tribe include gathering materials, hunting, trapping, frogging and fishing; while the Miccosukee Tribes of Indians of Florida's commercial activities additionally include frogging, airboat and other guided tours and providing recreational and tourism facilities within the Everglades. While the Camp is not part of the reservation, the site functions as its neighboring reservation areas.

The NPS is actively soliciting public participation as part of this EA and gave equal consideration to all input from persons regardless of age, race, income status or other socioeconomic or demographic factors. In 2021, EO 14008 on *Tackling the Climate Crisis at Home and Abroad* was issued, which reaffirmed the importance of environmental justice and instructed agencies to “make achieving environmental justice part of their mission by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.” The NPS is continuing to actively coordinate with the Tribes and other government agencies for this EA. It should be noted that there are other waterflow improvement projects occurring along Tamiami Trail to allow the CEPP to progress, and this type of project is not specific to the Camp, or its residents. As mentioned previously, there are four reservation areas in the project vicinity where no waterflow improvement projects are occurring because they are not located in areas that would be prone to flooding as a result of the CEPP. In accordance with EOs 12898 and 14008, an environmental justice review was conducted to determine if a disproportionate number of minority and low-income peoples are within the Project Area. The USEPA’s Environmental Justice Screening and Mapping Tool (Version 2.2) does not have any data for the Project Area. However, the Project Area is confined to one area within the park; a residential area occupied by members of the Tribe. The Tribes rely upon the Everglades in its natural state to support their religious, cultural, medicinal, subsistence and commercial activities (CEPP 2014). Commercial activities that occur within the Project Area includes constructing huts for various customers in the Everglades. Environmental justice was dismissed from additional analysis in this EA for the following reasons:

- The impacts associated with implementation of the preferred alternative would not disproportionately affect any minority or low-income population or community.
- Implementation of the preferred alternative would not result in any identified effects that would be specific to any minority or low-income community.
- The preferred alternative would not result in destruction or disruption of community cohesion and economic vitality, displacement of private facilities and services, increased traffic congestion, and/or exclusion or separation of minority or low-income populations from the broader community.
- The environmental impacts associated with this topic are not central to the proposal and are not necessary to make a reasoned choice between alternatives.

Soundscapes

Soundscape resources are naturally occurring sounds at the Park, including the interrelationships between natural sounds of different frequencies and volumes as well as the physical capacity for transmitting natural sounds. The Park is responsible for protecting natural landscapes from unnatural sound impacts by taking action to prevent or minimize noise that may adversely affect the natural soundscape or other park resources that exceed levels identified through monitoring efforts (NPS 2006). The Camp is within an existing developed area adjacent to a heavily used highway (Tamiami Trail) that impacts the natural soundscape of the park. The construction activities under the action alternative would have short-term, temporary impacts on natural soundscapes. Any adverse impacts on residents from construction-related noise and to reduce noise pollution is included under “Mitigation Measures and Best Management Practices”. Any impacts on wildlife from construction noise are discussed under “Species of Special Concern and Wildlife”. Therefore, soundscapes is dismissed from further analysis in this EA.

Visitor Use and Experience

The enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks. The NPS is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks, and the NPS will maintain within the parks an atmosphere that is open, inviting and accessible (NPS 2006). While the Camp is located within Everglades NP, it is not accessible or open to the public as it is a residential property occupied by members of the Tribe. Therefore, visitor use and experience is dismissed from further analysis in this EA.

Water Quality and Quantity

Waters throughout Everglades NP, designated as Outstanding Florida Waters (FDEP 2023), provide the predominate recharge for the Biscayne Aquifer which serves as a drinking water source for most of South Florida, including the Miccosukee Reserve Area and the Camp. Over the course of implementation of the CERP, the Next Steps Project, and the CEPP, additional long-term and beneficial impacts on water quality and quantity are anticipated in the Project Area as historic flow paths are re-established. Additionally, many of the proposed actions will result in a variety of beneficial effects due to additional impervious areas for parking pads and the roadway and new drainage structures. The parking pads and roadway work will be completed within previously disturbed areas reducing potential effects on water quality, and new drainage structures would be installed throughout the Camp further improving water quality.

Adverse water quality effects could include direct stormwater runoff from the impervious areas during flood events (i.e., storms) as well as short-term temporary impacts from construction-related activities. However, BMPs, such as silt fencing surrounding the limits of construction activities, would be implemented to ensure there is no degradation of adjacent wetlands and surface waters. Therefore, water quality would experience only short-term and minor adverse impacts to existing water quality and quantity during construction activities with adverse impacts ceasing after completion. Additionally, impacts on water quality and quantity are mitigated for, and discussed, in Chapter 2 of the EA. Water quality and quantity are therefore dismissed from further analysis in this EA.

Climate Change and Greenhouse Gases

The Project would result in an increase of GHG air emissions, lasting for the duration of construction activities. As stated in above in “Air Quality”, GHG emissions would be produced from the combustion of fuels in heavy construction-related equipment. Additionally, construction workers commuting daily to and from the job site in their personal vehicles and vehicles transporting construction equipment would also result in GHG air emissions. Construction activities associated with the implementation of the proposed action would contribute to GHG emissions but would be short-term during construction activities only. However, emissions associated with this Project are extremely small, relatively speaking, in a global context. Any effects of GHG emissions on climate change would not be discernible at a local or regional scale. Additionally, the proposed improvements would not only provide resiliency and better protect the Camp from higher water levels as a result of the CEPP, but also during flooding and severe weather events from an increase in storm frequency. Therefore, climate change and greenhouse gases were dismissed from further analysis in this EA.

Appendix B – Draft Wetland and Floodplain Statement of Findings

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Miccosukee Tribe of Indians of Florida Osceola Camp Cure Plan
DRAFT Wetland and Floodplain Statement of Findings (WFSOF)

Everglades National Park

**Prepared in Accordance with Director's Order 77-1 Wetlands Protection and 77-2
Floodplain Management and their respective handbooks.**

October 2023

Recommended:

Pedro Ramos, Superintendent,
Everglades National Park

Date

Certification of
Technical Adequacy and
Servicewide Consistency:

F. Edwin Harvey, Chief,
Water Resources Division

Date

Approved:

Mark J. Foust, Regional Director,
Interior Region 2, National Park Service

Date

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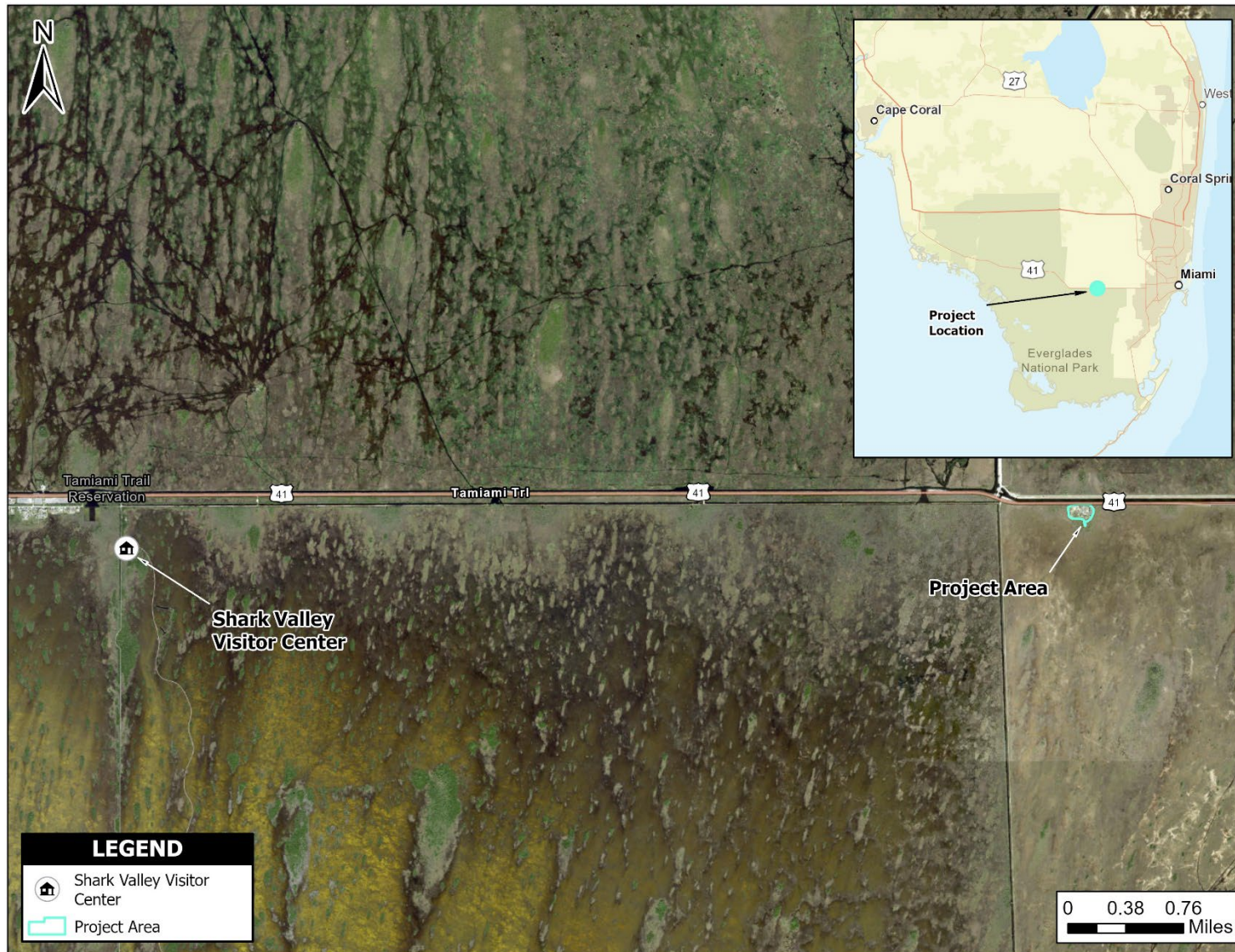
INTRODUCTION

The National Park Service (NPS) is proposing improvements to the Miccosukee Tribe of Indians of Florida Osceola Camp (Camp) due to water levels in the area rising from the Central Everglades Planning Project (CEPP), a component of the Comprehensive Everglades Restoration Plan (CERP). The Camp is in Everglades National Park (Everglades NP or “the park”) along United States (US)-41/Tamiami Trail in Miami-Dade County, Florida (**Figure 1**). The “Project Area” includes the manmade structures within the Camp as well as the associated wetlands within the limits of disturbance. The Project Area is located downstream of one of the CERP flow-ways and the Camp’s current ground surface elevation, select structures, roadways and driveways must be elevated to provide appropriate levels of flood protection to the Camp before the water levels can be raised as part of the CERP. The site plan to modify the site elevations to accommodate the CEPP is referred to as the Cure Plan for the Camp. The NPS and Miccosukee Tribe (Tribe) have worked together to develop the Cure Plan to allow for the progression of the CEPP while preserving the Camp facilities, functions, and public health of the residents.

To preserve the environmental integrity of both wetland and floodplains, NPS has established Director’s Order (DO) 77-1: *Wetland Protection* and DO 77-2: *Floodplain Management*. These orders were established to comply with Executive Order (EO) 11990: *Protection of Wetlands*, EO 11988 *Floodplain Management* and EO 13690 *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*. The purpose of these EOs is to avoid impacts, to the extent possible, to both wetlands and floodplains. Procedural Manual 77-1: *Wetland Protection* (NPS 2016) and Procedural Manual 77- 2: *Floodplain Management* (NPS 2002) outline the procedures and policies for the NPS to comply with the EOs. Guidance for the Federal Flood Risk Management Standard is described in EO 13690 and the associated implementation guidelines.

This Wetland and Floodplain Statement of Findings (WFSOF) was prepared per DO 77-1: *Wetland Protection* and DO 77-2: *Floodplain Management* for the proposed Miccosukee Tribe of Florida Osceola Camp Cure Plan and documents compliance with the NPS wetland protection and floodplain management procedures. The NPS has completed a WFSOF because the proposed Project would occur within the 100-year floodplain and would result in a loss of wetlands within Everglades National Park (NP).

125 **Figure 1 Project Vicinity**



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PROPOSED ACTION

The NPS proposed action and the preferred alternative would increase the site elevations at the Camp to allow for the implementation of the components of the CEPP while also preserving the Camp facilities, in addition to maintaining the functions, and public health of the residents.

The site generally consists of paved and unpaved gravel areas and green areas composed of vegetation, grass and bare dirt. The general ground surface would be elevated by removing the top 3 inches of the organic surface materials prior to placing and compacting the fill. The fill from the demolition of Old Tamiami Trail from the Florida Department of Transportation's (FDOT's) Tamiami Trail Next Steps roadway project would be utilized for the site elevations. The fill material would be transported to the property and used to raise the elevation of each structure by placing it on a new slab on top of the fill material. A total of 18,500 cubic yards of fill would be required for the improvements. The fill is currently stockpiled 0.75 miles away from the Camp and would be used as needed to fill the areas to be raised. Stockpiling would not occur in wetlands or floodplains.

Twenty-five chickee hut structures (huts) would be demolished as they do not meet the required finished floor elevations. Once the structures are demolished, the debris would be removed and transported to the nearest landfill for that type of material. The grade would be elevated at the sites for the new huts to meet the CERP guidelines 11.0 feet National Geodetic Vertical Datum (NGVD) for non-residential structures, and time allowed for the Tribe to rebuild the huts prior to construction continuing. The huts would be reconstructed out of the traditional wood pole framing with a thatched roof. Fifteen storage structures would be demolished, disposed offsite, and rebuilt in their new locations.

Approximately 17,000 square feet of the gravel road, 1,700 square feet of asphalt pavement and 4,000 square feet of asphalt walkway would be removed and disposed offsite. The new roadway would be comprised of 35,349 square feet of asphalt pavement and would meet the minimum elevation of 10.0 feet NGVD. All residences would have concrete parking pads, approximately 21 total, constructed throughout the Project Area (3 for each residential house).

Approximately 450 linear feet of the existing wood fence, including the gate and posts to enter the Camp, would be demolished and disposed of offsite, and replaced with 450 linear feet of 8-foot concrete masonry unit fence and new gates and posts. As a result of the site elevations, select trees would require relocation. However, many of the trees that require relocation are in poor condition and would need to be removed. Several coconut palms (*Cocos nucifera*), sabal palms (*Sabal palmetto*), a loquat (*Eriobotrya japonica*), slash pines (*Pinus elliottii*), and lemon trees (*Citrus limon*) would be relocated.

The utilities on site would be replaced. New water piping would be installed to the eight residences, the central washing station and the restroom facility. Due to the State of Florida Department of Health, Chapter 64E-6, Florida Administrative Code Standards for Onsite Sewage Treatment and Disposal Systems, effective July 18, 2018, the septic system would be replaced with a new system to service the residences and restroom. The electrical power supply from offsite would remain as-is.

The telecommunications services would need to be raised. There are no utility works or connections proposed within the public right-of-way as the telecommunications service boxes would be remounted to existing on-site utility poles at higher elevations. With the exception of one residential housing structure that would be relocated to a new elevated location within the Project Area, no changes would be made to the residential structures as they currently meet the required United States Army Corps of Engineer (USACE) criteria; however, the electrical connection, generator connection, water line and sewer connections require relocation or elevation to prevent inundation.

The above-described proposed action will fall under a Class I Action of DO 77-2. This Class Actions is defined as follows (NPS 2007): "Class I Actions include location or construction of administrative, residential, warehouse, and maintenance buildings; non-excepted parking lots; or other man-made features which by their nature entice or require individuals to occupy the site, are prone to flood damage, or result in impacts to natural floodplain values. Class I Actions are subject to the floodplain policies and procedures if they lie within the 100-year floodplain (the Base Floodplain)." As the Camp is within a 100-year floodplain (further described later in this analysis) and due to requirements under Class I Actions, Project modifications would ensure that elevations within the Project Area are above the 100-year flood elevation of 10.0 feet NGVD (8.5 feet North American Vertical Datum [NAVD])). The Camp facilities would be raised based on the USACE elevations requirements as follows:

- 10.0 feet NGVD (8.5 feet NAVD) for ground surface elevations
- 11.0 feet NGVD (9.5 feet NAVD) for finished floor elevations of non-residential structures
- 11.1 feet NGVD (9.6 feet NAVD) for finished floor elevations of residential structures

Requirements surrounding floodplain resources are further detailed in subsequent sections.

BACKGROUND AND CURRENT CONDITIONS

The Camp appears to have been constructed in a low area that was raised with fill material. The Camp was established by William and Alice McKinley Osceola in 1935. The Camp served as a family residence and gift shop and then later a site for air boat rides after the opening of US-41/Tamiami Trail brought tourists into the Everglades. In 1936, the Camp was home to approximately 15-25 Tribal residents and contained a large store with groceries and goods made by Native American Tribes. Today, there are no intact historic buildings at the Camp. Recently, fill material was placed by the present residents, descendants of William McKinley Osceola, to further expand and elevate the Camp and its buildings so they will not be flooded by rising water levels.

The Camp is an approximate 9.4-acre residential village within Everglades NP, as previously illustrated in **Figure 1**. The Camp is located approximately 11.4 miles west of the intersection of US-41/Tamiami Trail and County Road 997/Krome Avenue and 6.7 miles east of the Shark Valley Visitor Center. The approximate central coordinates for the entrance to the Camp are 25° 45' 38.8" N.; 80° 39' 53.8" W. The structures/facilities at the Camp include eight residential housing structures, 25 huts, 15 storage structures, 4 generators, pads and structures, 3 water supply systems, pads and structures, roadways and driveways, and wastewater treatment systems. All of these structures/facilities would be impacted, with the exception of the residential housing structures, 4 of the storage structures, the generator structures, and the water supply structures.

Wetlands

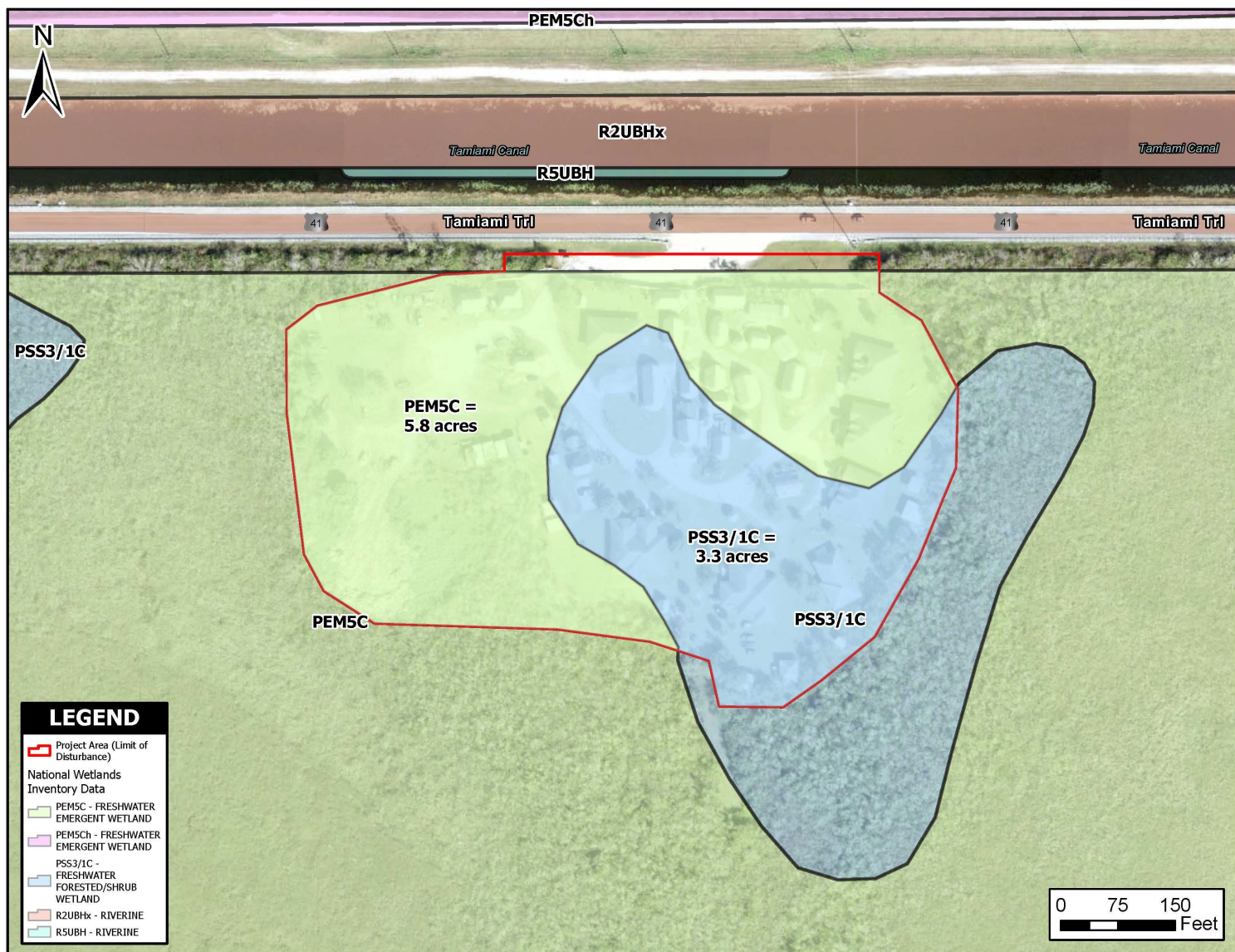
To gain a better understanding of current conditions of wetlands and waterways within the Project Area, a desktop review of the National Wetland Inventory (NWI) database and the National Hydrology Dataset (NHD) was completed (USFWS 2023, USGS 2023). These resources report two wetlands (totaling 9.1 acres) and no waterbodies within the Project Area. One wetland is classified as a freshwater emergent wetland (PEM5C) and comprises 5.8 acres within the Project Area. The other wetland is classified as a freshwater forested/shrub wetland (PSS/1C) and comprises 3.3 acres within the Project Area. **Figure 2** illustrates NWI and NHD features within the Project Area.

An in-situ delineation of wetlands within the Project Area was completed in 2007 by the NPS. The GIS data from the 2007 delineation provided a baseline of the historical wetlands in proximity to the Project Area. Then, during the preparation of the Cure Plan in 2021, an updated wetland delineation was performed. After this delineation occurred, it was discovered that previous filling of wetlands had occurred within the Project Area by the residents to elevate the Camp and its buildings to combat rising water levels. This resulted in a net loss of wetlands that were not immediately evaluated. The report identified 1.3 acres of wetland adjacent to the Camp that would be impacted due to filling to preserve the Camp. However, because the previous filling was not immediately accounted for, this number cannot be considered accurate.

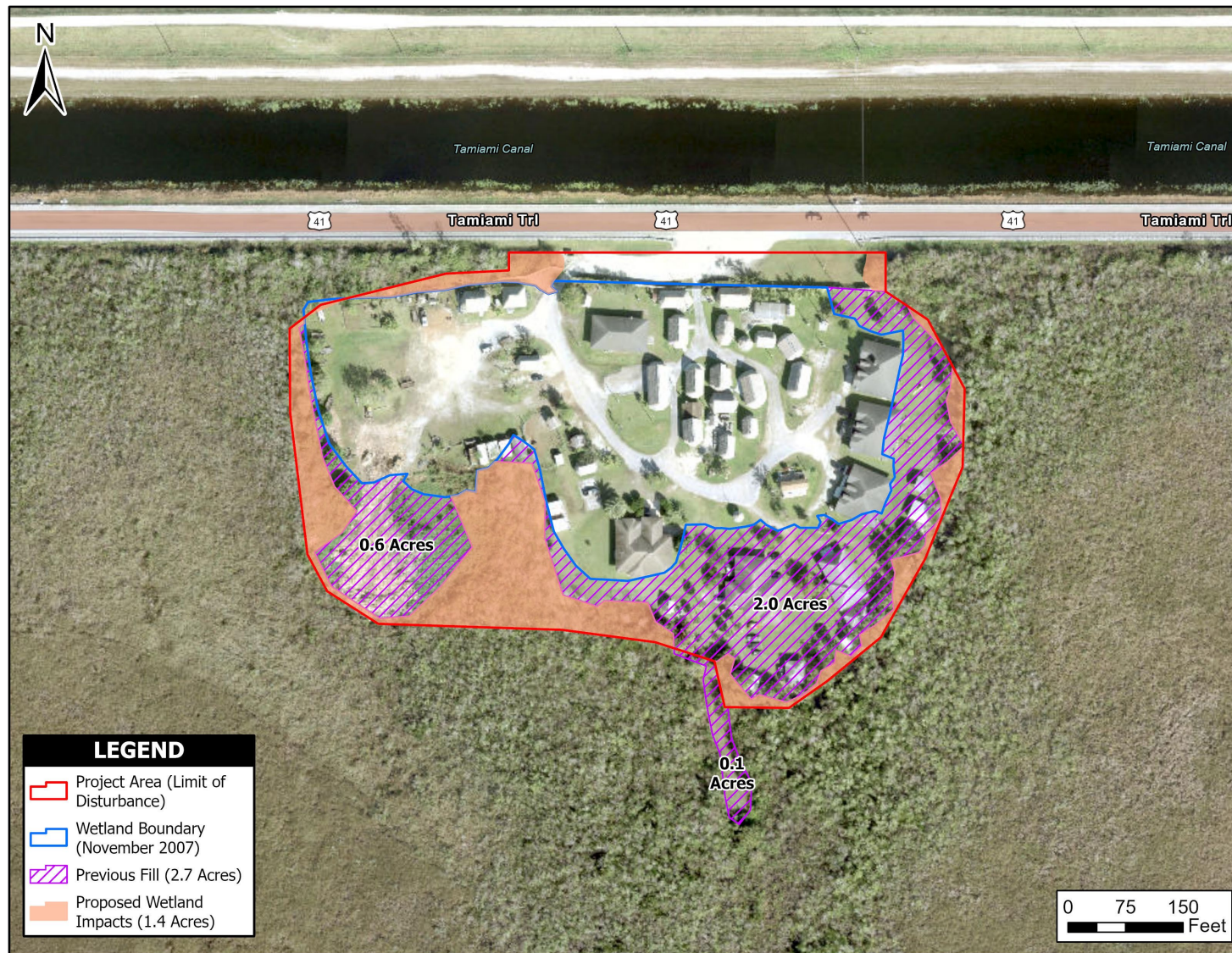
In 2023, updated field surveys of the Project Area were performed. These field surveys compared the wetland boundary identified in 2007 with the proposed limit of disturbance. The goal of these updated field surveys was to further characterize the areas of previous fill, as well as the areas of proposed fill in accordance with the Cure Plan to more accurately determine overall impacts to the

existing wetlands. Field teams confirmed two wetlands within the Project Area comprising 1.4 acres, as documented during the 2021 field surveys. When comparing the 2007 wetland delineation with the 2023 wetland delineation, it was found that 2.6 acres of wetlands within the Project Area had been filled between 2007 and 2023. In addition, there is a 0.1-acre strip of land south the Project Area that has also been filled. This strip of land is not included in the current Project Area; however, this land is taken into consideration when calculating compensatory mitigation to comply with DO 77-1 and Clean Water Act (CWA) requirements. Therefore, the total area of wetlands that were filled between 2007 and 2023 totals 2.7 acres. The areas of previous fill are illustrated in **Figure 3**. The Project Area, including both the previous fill areas and proposed fill areas, are illustrated in **Figure 4**.

248 **Figure 2 National Wetland Inventory Features within the Project Area**



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250 **Figure 3 Previous Fill within the Project Area**

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252 **Figure 4 Delineated Wetland and Water Features Within the Project Area**



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Vegetation and Habitat

The Project Area is surrounded on the eastern, western, and southern sides by wetlands within Everglades NP. Adjacent wetlands are primarily forested with mixed-shrub and emergent species. Vegetation within adjacent wetlands include pond apple (*Annona glabra*), Carolina willow (*Salix caroliniana*), swamp bay (*Persea palustris*), dahoon holly (*Ilex cassine*), wax myrtle (*Myrica cerifera*), myrsine (*Rapanea punctata*), giant leather fern (*Acrostichum danaeifolium*), strangler fig (*Ficus aurea*), salt bush (*Baccharis halimifolia*) and cocoplum (*Chrysobalanus icaco*). Within the Project Area, habitat consists mostly of mowed grass with sporadic trees such as coconut palms (*Cocos nucifera*) and sabal palms (*Sabal palmetto*).

FDOT's Florida Land Use and Cover Classification System (FLUCCS) identifies three types of land cover within the Project Area. A breakdown of the types of land cover within the Project Area are included in **Table 1** and illustrated in **Figure 5** below.

Table 1 FLUCCS Categories within the Project Area

FLUCCS Code	Description	Acreage
1400	Commercial and Services	7.9
6170	Mixed Wetland Hardwoods	1.3
6410	Freshwater marches/Graminoid Prairie – Marsh	0.2
TOTAL		9.4¹

¹Any negligible difference in totals is due to rounding of raw data.

FLUCCS categories are defined in the FDOT (1999) handbook as follows:

- Commercial and Services (1400).** Commercial areas are predominantly associated with the distribution of products and services. This category is composed of a large number of individual types of commercial land uses which often occur in complex mixtures. The Commercial and Services category includes all secondary structures associated with an enterprise in addition to the main building and integral areas assigned to support the base unit. Included are sheds, warehouses, office buildings, driveways, parking lots and landscaped areas. Other types of Commercial areas include shopping centers and commercial strip developments. These areas have distinctive patterns which are readily identifiable on aerial photographs. Frequently, individual houses and other classes of urban land use may be found within commercial areas. Such uses normally are not delineated unless they can be plotted into polygons of at least one acre size at Level III. Otherwise, the Mixed category should be used. Commercial use which cannot be easily identified on aerial photography is the commercial resort. These businesses cater to vacationing patrons and often contain associated recreational facilities such as swimming pools and ball courts.
- Mixed Wetland Hardwoods (6170).** This category describes the forested wetland hardwood communities in the adjacent Everglades wetlands which are composed of a large variety of hardwood species tolerant of hydric conditions where no species is dominant. Species present include red maple (*Acer rubrum*), willow (*Salix caroliniana*), cypress (*Taxodium distichum*), pond apple, pond ash (*Fraxinus caroliniana*) and dahoon holly.

- **Freshwater marshes/Graminoid Prairie – Marsh (6410).** The communities included in this category are characterized by having a vegetative community dominated by herbaceous species where one or more of the following species predominate: sawgrass (*Cladium spp.*), cattail (*Typha spp.*), arrowhead (*Syngonium podophyllum*), maidencane (*Panicum hemitomon*), buttonbush (*Cephalanthus occidentalis*), cordgrass (*Sporobolus spp.*), giant cutgrass (*Zizaniopsis miliacea*), switchgrass (*Panicum virgatum*), bulrush (*Scirpus spp.*), needlerush (*Juncus roemerianus*), common reed (*Phragmites australis*), and/or arrowroot (*Maranta arundinacea*).

During 2023 field surveys, the desktop review of FLUCCS land use types were verified. The majority of wetlands in the Project Area were classified as mixed wetland hardwoods, which is consistent with the FLUCCS data. However, two instances of differing field conditions were observed. Firstly, the area to the east of the Project Area was identified as freshwater marsh habitat by FLUCCS but was deemed to be mixed wetland hardwoods in the field. Secondly, there was a small portion on the north end of the Project Area that was identified as commercial and services in the FLUCCS data but was determined to be roadside ditch wetland habitat based on field observations.

309 **Figure 5 Florida Land Use and Cover Classification System Results**

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Soils

The United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) Web Soil Survey of Miami-Dade County, Florida indicated two soil types within the Project Area (USDA NRCS 2019). A breakdown of the soil types found within the Project Area are included in **Table 2** below and illustrated in **Figure 6**. Of the two mapped soil series, both are classified as predominately hydric (a hydric soil rating of 67 to 100) or partially hydric (a hydric soil rating of 1 to ≤ 66) by the USDA NRCS.

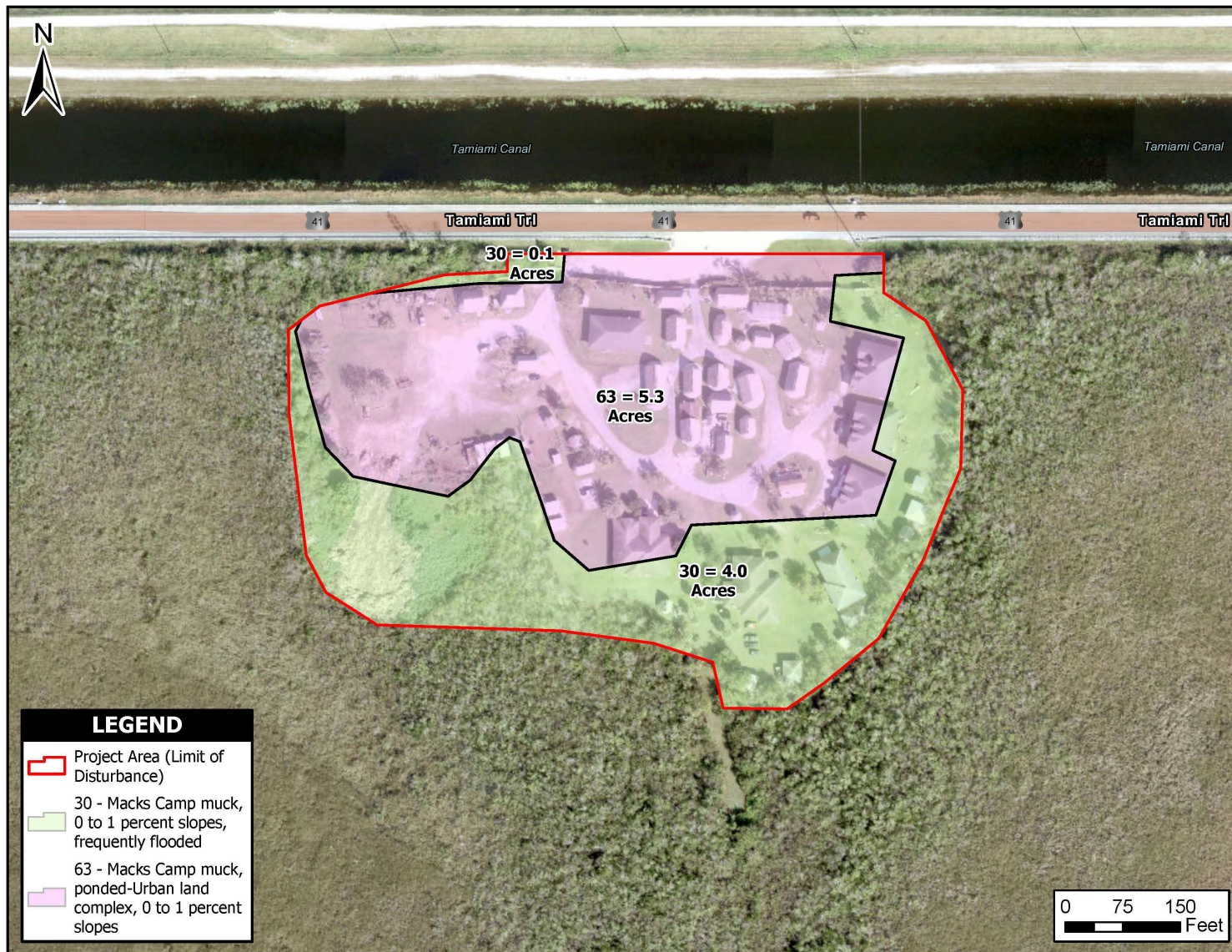
Table 2 Soil Types within the Project Area

Map Unit Symbol	Soil Series Name	Hydric Soil Rating	Area (acres)	Percent of Total Project Area
30	Macks Camp muck, 0 to 1 percent slopes, frequently flooded	Hydric	4.1	43.6
63	Macks Camp muck, ponded-Urban land complex, 0 to 1 percent slopes	Partially Hydric	5.3	56.4
TOTAL			9.4¹	100¹

¹Any negligible difference in totals is due to rounding of raw data.

Soil series are defined by USDA NRCS (2023) as follows:

- Macks Camp muck, 0 to 1 percent slopes, frequently flooded (30).** This component is on saw grass marshes on marine terraces on coastal plains. The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 39 to 59 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Non-irrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.
- Macks Camp muck, ponded-Urban land complex, 0 to 1 percent slopes (63).** The parent material consists of herbaceous organic material over limestone. Depth to a root restrictive layer, bedrock, lithic, is 36 to 51 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is low. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at three inches during January, February, March, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 75 percent. Non-irrigated land capability classification is 7w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 1 within 30 inches of the soil surface.

346 **Figure 6** United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey Results

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Functions and Values

During the 2023 site visits, wetland functions and values were assessed via the Uniform Mitigation Assessment Method (UMAM) (**Appendix A**). This method was established to fulfill the mandate of subsection 373.414(18), F.S., which requires the establishment of a uniform mitigation assessment method to evaluate proposed wetland impacts and determine the appropriate amount of mitigation needed to offset adverse impacts to wetlands and other surface waters and their loss of function. This mitigation evaluation method was also used to calculate the appropriate number of mitigation bank credits [Florida Department of Environmental Protection (FDEP) 2022]. Scoring within each UMAM category can be subdivided based on the quality of each feature within the given wetland. Features that score a 0 are deemed insufficient to provide wetland/surface water functions. Features that score between 0 and 4 are deemed to have a minimal level of support of wetland/surface water functions. Features that score between 4 and 7 are sufficient to maintain most wetland/surface water features. Features that score between 7 and 10 are optimal and fully support wetland/surface water features. The overall score is an average of each category and thus, a score closer to 1.0 is the most optimal score.

After the 2023 site visit, it was determined that the wetland identified as the “US-41 roadside ditch wetland” (as illustrated on **Figure 4**), is approximately 0.2 acres. After reviewing UMAM forms, biologists concluded that this wetland received a UMAM composite score of 2 out of 10 (2/10) for location and landscape support, 3/10 for water environment, and 3/10 for community structure. This gave the wetland an overall UMAM score of 0.3 (as methodology requires adding up all values and dividing by 30 for an overall score). Based on this assessment, the US-41/Tamiami Trail roadside ditch wetland has been given a “low” functional quality rating. The second wetland, “Everglades perimeter wetland” (as illustrated on **Figure 4**), is approximately 3.9 acres. This wetland has a UMAM composite score of 7/10 for location and landscape support, 7/10 for water environment, and 7/10 for community structure. This gave the wetland an overall UMAM score of 0.7. Based on this assessment, the Everglades perimeter wetland has been given a “medium” functional quality rating. It is of note that 0.1 acres of this wetland falls outside the Project Area.

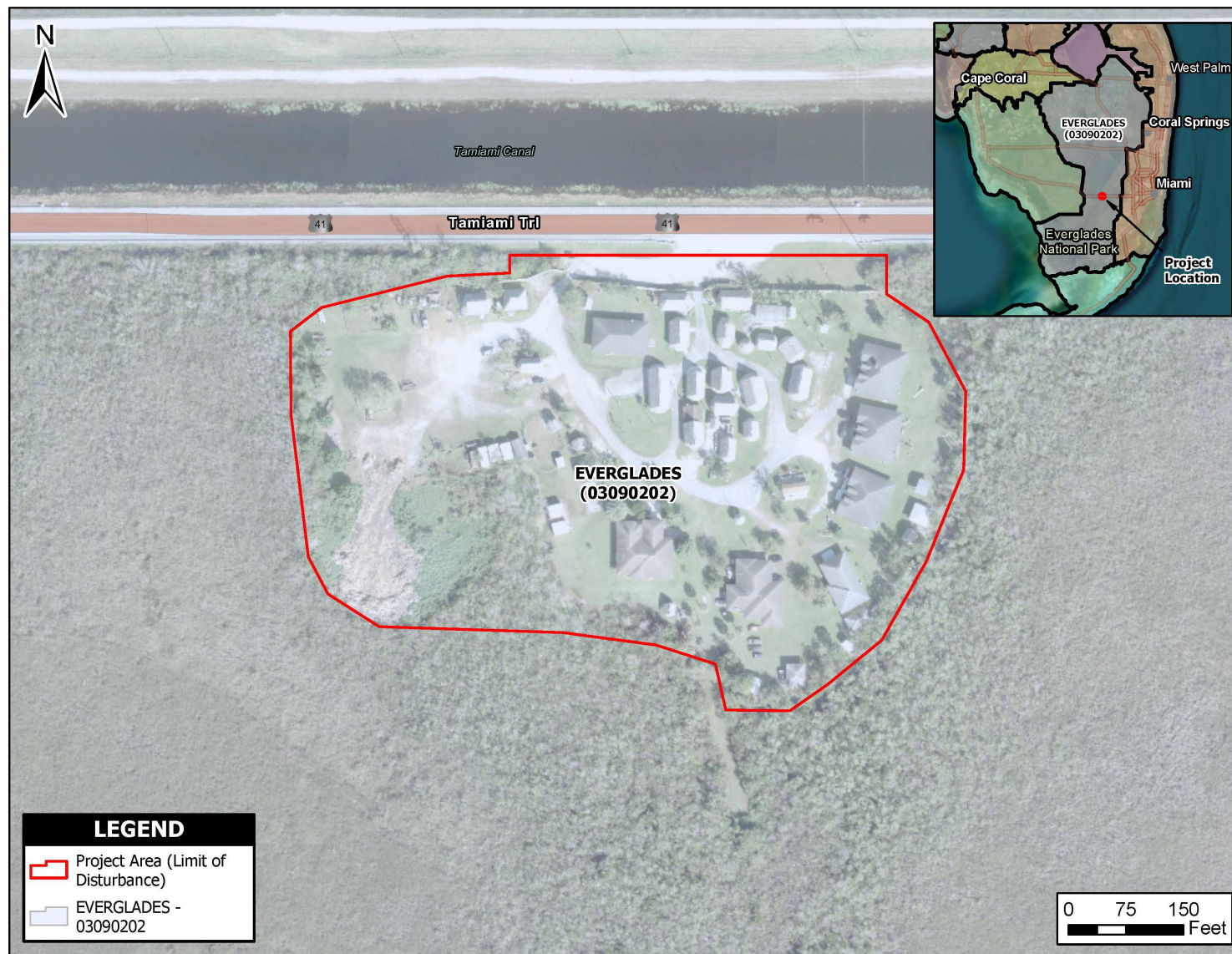
As described on the UMAM forms (**Appendix A**), the delineated wetlands function to capture untreated runoff from the Camp as well as from US-41/Tamiami Trail via roadside ditches. Similarly, numerous animal species such as fish, freshwater invertebrates, and aquatic reptiles and amphibians were noted as likely to utilize the wetlands habitat. The wetlands were also described as having the potential to provide foraging habitat for wading birds.

Floodplains

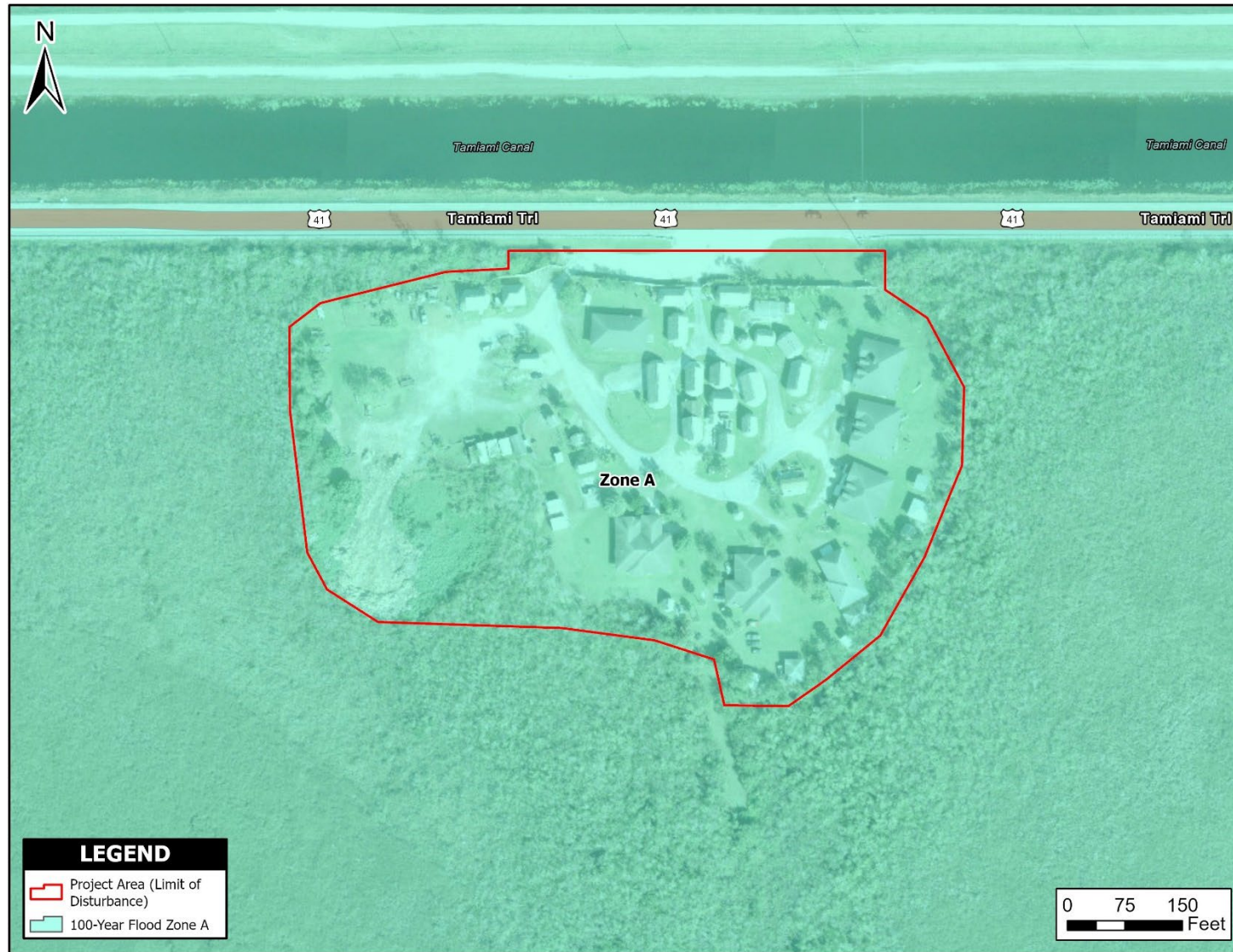
The Project Area falls within the Everglades sub-basin which is within hydrologic unit code (HUC) 8 #03090202 (**Figure 7**; USGS 2020). A desktop review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) indicates that the entirety of the Project Area is within special flood hazard area, Zone A (**Figure 8**; FEMA 2009). Zone A floodplains are defined as areas with a 1 percent annual chance of flooding (i.e., located within the 100-year floodplain).

The floodplain currently functions to capture excess water from surrounding areas. This function is especially important during storm events and hurricanes. Historically, natural water movement within the floodplain has been diminished due to development within the Everglades, more specifically the Camp and the US-41/Tamiami Trail roadway. Structures within the Project Area that are currently impacting the floodplain include: 8 residential housing structures; 25 huts; 15 storage structures; 4 generator pads; and 3 potable water-well systems as well as an 8-foot-tall wooden fence at the entrance of the Camp. There are also paved roadways within the Project Area including parking pads and driveways. In addition to impacts from manmade structures, the floodplain is anticipated to be impacted by climate change and rising sea levels. Further impacts from the structures within the Project Area would be minimized through the implementation of the preferred alternative action. This would in turn enhance floodplain resiliency and thus minimize the potential impacts to human safety.

As previously described, the proposed action is considered a Class I Action per NPS Procedural Manual 77-2: *Floodplain Management* (NPS 2007). Project activities within the floodplain are also governed by EO 13690 which established a Federal Flood Risk Management Standard (FFRMS). These standards were implanted to enhance the nation's resilience to flooding as well as ensure that newly constructed infrastructure remains functional for its intended lifespan. The FFRMS mandates that federal agencies choose one of three methods to establish higher vertical flood elevations beyond the guidelines in EO 11988. The three methods available are Climate Informed Science Approach, Freeboard Value Approach, and the 500-year floodplain (FEMA 2022). As part of the CERP, the USACE calculated the recommended design elevations which this Project has adopted. This most closely follows the Climate Informed Science approach. Methods the USACE used to determine elevations can be found in the Cure Plan (NPS 2021).

414 **Figure 7 Watershed Hydrologic Unit Code-8**

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416 **Figure 8 Federal Emergency Management Agency Floodplain Map**

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JUSTIFICATION FOR THE USE OF WETLANDS AND FLOODPLAINS

Wetland Impacts

Under the proposed action, 4.1 acres of wetland would be filled or disturbed, and normal function would be permanently or temporarily lost as a result of the proposed construction activities. This includes the 2.7 acres of wetlands that were previously filled since the 2007 wetland delineation as well as 1.4 acres of current wetlands within the Project Area.

Floodplain Impacts

General

The proposed action is located entirely within the regulatory floodplain. The intent of the Project, however, is to reduce flood risk by elevating structures above the current ground surface. Current obstructions within the floodplain would be raised above the 100-year flood elevation. While these obstructions would be elevated above the floodplain, this would also mean the floodplain would be reduced in size, although this reduction would be minimal.

Potential Risk to Human Health and Safety

The proposed action would be beneficial to human health and safety because manmade structures would be elevated to heights greater than the 100-year flood elevation as determined by the USACE as part of the CERP. This would ensure that all homes within the Project Area would be at a lower risk of flooding compared to the current condition.

Potential Risk to Property

Upon completion of the proposed action, all manmade features within the Project Area would be above USACE recommended elevations and outside of the 100-year floodplain. In turn, this would decrease the likelihood of property loss due to flood related occurrences. Risk to property would be significantly greater if the proposed action was not performed.

Potential Risk to Floodplain Functions and Values

The proposed action would not significantly impact floodplain functions and values. Construction activities would be limited to already disturbed areas. Furthermore, as part of the Cure Plan, hut structures within the Camp would be demolished and rebuilt with some being combined upon reconstruction. Depending on the designs of the newly combined huts, their footprint within the floodplain could be smaller, thus increasing the floodplain's capacity. Since some of the existing features designed to be combined upon reconstruction, floodplain storage capacity has the potential to increase depending on new feature design. When considering the greater floodplain area outside the Project Area, the effects of the Project would be overall minimal. Upon completion of the proposed action, the floodplain would continue to operate as it does in its current condition.

Mitigation Measures

The following sections include mitigation measures for floodplain and wetland resources. Additionally, a list of permitting requirements is included for floodplain and wetland resources, as these measures are expected to contribute to the minimization of effects.

Floodplain Mitigation

DO 77-2 requires federal agencies to develop guidance on the following: reducing the risk of flood loss; minimizing impacts of floods on human safety, health, and welfare; and, restoring and preserving natural and beneficial values served by floodplain resources (NPS 2007). This order replaces the NPS floodplain management guidance provided in Special Directive 93-4. Additionally, any proposed future development within the Camp would adhere to received FDEP and USACE permits as further discussed within permitting mitigation measures. As part of the Project's USACE requirements, any proposed future development within the Camp would incorporate methods for minimizing flood damage, as contained in the National Flood Insurance Program Floodplain Management Criteria for Flood-Prone Areas (44 Code of Federal Regulations [CFR] § 60.3), and in accordance with any additional state or county requirements for flood-prone areas.

Below are additional proposed measures to mitigate impacts to floodplains under the preferred alternative.

- Comply with DO 77-2 and raise all structures within the Camp above the flood above the 100-year flood elevation to decrease probability of flooding within the Camp. To mitigate potential risk to property, structures within the Project Area would be elevated above the 100-year flood elevation of 10.0 feet NGVD (8.5 feet NAVD). The structures would then meet the standards of the National Flood Insurance Program (44 CFR § 60).
- Implement pre-and post-construction erosion control Best Management Practices (BMPs) for drainage, erosion and sediment control to prevent or reduce runoff from entering the water column.
- Inspect and maintain erosion and sediment control BMPs on a regular basis and after each measurable rainfall to ensure they are functioning properly.
- Adhere to all BMPs resulting from required regulatory permits (further detailed below). To mitigate potential risk to human health and safety, a flood response plan will be developed. This plan will include a forecasting system, a flood alert system, and a pre-flood evacuation plan.
- To mitigate potential risk to human health and safety, a flood response plan would be developed. The NPS will coordinate with the Tribe for completing a flood response plan as part of the Special Use Permit for occupation of the site. Appropriate measures will be employed to prevent or control spills of fuels, lubricants, or other contaminants during Project construction. Actions would be consistent with state water quality standards and Clean Water Act, Section 401 certification requirements.
- Orange construction fencing (4 feet) will be placed along the limits of disturbance. An NPS staff member or representative will be on site when the wetland fill is being placed and graded to make sure equipment does not impact wetlands beyond the fencing.

Wetland Mitigation

NPS Procedural Manual 77-1 states that wetland compensation is required if short- and long-term adverse impacts to wetlands from the Project total 0.1 acres or more (NPS 2016). Under the preferred alternative, 4.1 acres of wetlands would be permanently filled, therefore, compensatory mitigation is

required. Compensatory mitigation will meet regulatory requirements associated with obtaining state and federal permits as well as meet the NPS standard of 1:1 mitigation on a per acre basis. Mitigation for permanent and temporary wetland impacts from this Project will be offset through the purchase of wetland mitigation credits from the Hole-in-the-Donut (HID) Mitigation Bank. The HID Mitigation Bank is in the southeast portion of Everglades NP and services the Project Area. The HID Mitigation Bank is an approved wetland mitigation project under the CWA, as well as State law. This mitigation bank is the closest approved mitigation project to the site of impacts and mitigating at HID would be consistent with DO 77-1 guidance that requires all compensatory mitigation be acquired within the park, thus maintaining a no-net-loss of NPS managed wetlands.

In addition to meeting FDEP and USACE-based requirements for compensating for wetland impacts resulting from this work, NPS policy requires a minimum of 1:1 compensation on a per acre basis for new impacts to wetland plant communities that result from NPS actions. Impacts resulting from this Project must meet the 1:1 compensation is required for any newly impacted areas resulting from the expanded footprint required to raise the elevation of the Camp.

Purchase of 4.1 credits is required to ensure that the NPS 1:1 compensation requirement is met for the preferred alternative. NPS considers the restored wetlands resulting from mitigation at the HID Mitigation Bank to be functionally of higher value to the wetlands that would be impacted by this Project and concluded that a 1:1 ratio is sufficient to maintain a no-net-loss of NPS wetlands.

Any temporary impacts to wetlands in areas surrounding the Project Area will be allowed to recover naturally in order to avoid/minimize the introduction or spread of non-native, invasive plant and animal species. If necessary, and in coordination with the park Biologist, any fill, mulch, reseeding, and sod material brought into the park must be free of non-native, invasive plants and animals, and noxious weeds. Finally, NPS will continue to work to identify any measures to further minimize impacts to wetlands during the detailed design process.

Permitting

Below are proposed measures to acquire appropriate permits necessary for Project construction. These measures will further aid in the reduction of anticipated impacts to floodplain and wetland resources.

- All permitting will be acquired from the FDEP prior to commencement of work.
- USACE 401 and Section 404, and National Pollutant Discharge Elimination System (NPDES) permits, as applicable, will be obtained for this Project prior to commencement of work.
- An Erosion and Sediment Control and Stormwater Pollution Prevention Plan (SWPPP) will be developed to comply with the current FDEP NPDES requirements and a FDEP NPDES Construction General Permit coverage would be obtained. The SWPPP will be developed to address all stormwater management BMPs.

ADDITIONAL COMPLIANCE

In addition to EOs 11988, 11990, and 13690, and DO 77-1: *Wetland* Protection and 77-2: *Floodplain Management*, compliance with other applicable laws and regulations pertaining to wetland and floodplain impacts will be acquired and include CWA Section 401 and 404, the National Environmental Policy Act of 1969, and Chapter 62-330 of the Florida Administrative Code. Therefore, a separate Compensatory Mitigation Plan will be developed and finalized in conjunction with, and as a requirement of, the FDEP's Section 404 permit process.

CONCLUSIONS

Due to water levels rising because of the CEPP, portions of the Project Area will be below flood elevations if no action is taken. This would negatively impact surrounding wetland and floodplains due to runoff from the Camp. In addition, residents within the Camp would be at risk of flooding. Therefore, negative impacts would be observed in human health and safety, property, wetlands, and floodplains if no action were taken. The proposed action includes raising the base elevations of structures within the Project Area outside of the 100-year flood zone. This alternative would mitigate the negative impacts that would be observed and experienced if no action were taken. The NPS evaluated additional alternatives but concluded that the preferred alternative would provide the greatest benefit with the least negative impacts.

The preferred alternative would involve the filling of 1.4 acres of wetlands within the Project Area. In addition, there are 2.7 acres of wetlands that have been previously filled that are accounted for in mitigation calculations. Therefore, the total area of wetland impacts is 4.1 acres, and 4.1 credit acres will be purchased as compensation. These credits are anticipated to be purchased from the HID Mitigation Bank. Compliance with all federal and state regulations and policies to minimize impacts to wetlands and floodplains would be strictly adhered to during and after construction. All necessary federal and state permits necessary to complete the Project would be obtained before the beginning of construction. This Project would not have any long-term negative impacts to surrounding wetlands and floodplains. Therefore, the NPS finds that the preferred alternative to be acceptable under DO 77-2: *Floodplain Management* and DO 11988 for the protection of floodplains and under DO 77-1: *Wetland Protection* and EO 11990 for the protection of wetlands.

569 **QUALIFICATIONS OF THE DELINEATORS**

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578 B.A., Marine Affairs and Ocean Policy, University of Miami, 2000

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APPENDIX A

PART I – Qualitative Description
(See Rule 62-345.400, F.A.C.)

Site/Project Name National Park Service – Osceola Camp Everglades National Park Improvement to Miccosukee Camp		Application Number		Assessment Area Name or Number US 41 roadside ditch wetlands	
FLUCCs code 510		Further classification (optional) ditched wetlands		Impact or Mitigation Site? Impact	
Assessment Area Size 0.2 acres					
Basin/Watershed Name/Number Everglades National Park		Affected Waterbody (Class) N/A		Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) Outstanding Florida Waters	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Roadside ditched wetlands adjacent to US 41 and the small filled residential village site on South side of US 41. Exotic infested wetlands wetlands within Everglades National Park					
Assessment area description The existng wetlands adjacent to an existing tribal residential village surrounded on 3 sides by Everglades National Park and on the north side by US 41 and the associated roadside ditches.					
Significant nearby features Everglades National Park, US 41, existing residential homesites, small area where materials are processed for the chickee's		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique - the first residential homes at this site were constructed on fill placed here in the early 1960's within Everglades National Park on the south side of US 41			
Functions Collects runoff from US 41 and also collects and directs untreated runoff from the filled village property directly into Everglades National Park.		Mitigation for previous permit/other historic use N/A			
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) fish, aquatic reptiles and amphibians, forage habitat for wading birds in the Everglades. Seasonal refugia for numerous freshwater invertebrates including crayfish, snails, shrimp, etc..		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential forage habitat for several listed wading bird species including wood stork, limited potential for use by everglades mink, other listed species present in the Everglades.			
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Numerous fish species, cooter, alligator, little blue heron, white ibis, American egret					
Additional relevant factors: This is a small filled tribal residential area surrounded by Everglades National Park. Minimal impacts from the activities on site due to small number of residents. Runoff collected in the roadside ditch is discharged untreated into the Everglades.					
Assessment conducted by: C Schmittler / A Cabrera		Assessment date(s): 3/27/2023			

PART II – Quantification of Assessment Area (impact or mitigation)
(See Rules 62-345.500 and .600, F.A.C.)

Site/Project Name National Park Service – Osceola Camp Everglades National Park Improvement to Miccosukee Camp	Application Number	Assessment Area Name or Number US 41 roadside ditch wetlands
Impact or Mitigation Impact	Assessment conducted by: C. Schmittler / A Cbrera	Assessment date: 3/27/2023

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support w/o pres or current with 2 0	Pre scores include the roadside ditch wetlands between US 41 and the Miccosukee Village. There is limited natural habitat remaining in this general area and the scores are very low due to this lack of habitat. Post scores will decrease due to the filling and displacement of the minimal wetland and buffer habitat that will be filled. US 41 will still be present to the north and the village to the south. Adjacent land uses in the village will not change.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with 3 0	Pre scores are higher because water flow does occur even though it is untreated and ditched. There are no natural, undisturbed wetlands in this specific area of the proposed development improvements. Currently untreated runoff from US 41 flows directly into this roadside ditch and eventually outfalls into the Everglades as untreated discharge. Post scores will be much lower due to the filling of the wetlands for improvements to the camp property. However, water quality improvements and treatment from the village property will benefit the receiving Everglades waters.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with 3 0	Pre scores are higher which reflects the presence of some desirable wetland vegetation in these ditched wetland habitats. However, the existing exotic infested wetlands are of poor quality and contain only limited numbers of desirable native wetland species. Post scores drop to zero as a result of fill placement in the ditched wetlands for the improvements to the camp. This fill will result in the loss of the limited wetland function and water quality treatment in the areas affected.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres with
0.26667 0

If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.266 x 0.2 = -0.1

Delta = [with-current]
-0.267

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =

PART I – Qualitative Description
(See Rule 62-345.400, F.A.C.)

Site/Project Name National Park Service – Osceola Camp Everglades National Park Improvement to Miccosukee Camp		Application Number	Assessment Area Name or Number Everglades perimeter wetlands
FLUCCs code 617	Further classification (optional) Mixed Wetland Hardwood	Impact or Mitigation Site? Impact	Assessment Area Size 3.9 acres
Basin/Watershed Name/Number Everglades National Park	Affected Waterbody (Class) N/A	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) Outstanding Florida Waters	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Adjacent to small filled residential village site on South side of US 41, non-forested wetlands within Everglades National Park			
Assessment area description The existng wetlands adjacent to an existing residential village surrounded on 3 sides by Everglades National Park and on the north side by US 41 and the associated roadside ditches			
Significant nearby features Everglades National Park, US 41, existing residential homesites, small area where materials are processed for the chickee's		Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique - the first residential homes at this site were constructed on fill placed here in the early 1960's within Everglades National Park on the south side of US 41	
Functions untreated runoff from the filled village property discharges directly into Everglades National Park, untreated runoff from US 41 also discharges directly into the park from the roadside ditches		Mitigation for previous permit/other historic use N/A	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) fish, aquatic reptiles and amphibians, forage habitat for wading birds in the Everglades. Seasonal refugia for numerous freshwater invertebrates including crayfish, snails, shrimp, etc..		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Potential forage habitat for several listed wading bird species including wood stork, limited potential for use by everglades mink, other listed species present in the Everglades.	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Numerous fish species, cooter, alligator, little blue heron, white ibis, American egret			
Additional relevant factors: This is a small filled area surrounded by Everglades National Park. Minimal impacts from the activities on site due to small numer of residents.			
Assessment conducted by: C Schmittler / A Cabrera		Assessment date(s): 3/27/2023	

PART II – Quantification of Assessment Area (impact or mitigation)
(See Rules 62-345.500 and .600, F.A.C.)

Site/Project Name National Park Service – Osceola Camp Everglades National Park Improvement to Miccosukee Camp	Application Number	Assessment Area Name or Number Everglades adjacent wetlands
Impact or Mitigation Impact	Assessment conducted by: C. Schmittler / A Cbrera	Assessment date: 3/27/2023

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current with</p> <p>7 0</p>	<p>Pre scores include the buffering of the Everglades over much of the area being considered with the existing filled residential camp site making up the other parts. The existing habitat scores are fairly high because it's Everglades National Park, the habitat is fairly high quality. Adjacent land uses are minimal except for the Miccosukee Village facilities and US 41 to the north.</p> <p>Post scores will decrease due to the filling and displacement of the wetlands vegetation. US 41 will still be present to the north. Adjacent land uses in the village will not change.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current with</p> <p>7 0</p>	<p>Pre scores are higher because water sheet flow is natural and unobstructed through the Everglades, however US 41 directly discharges untreated water into the Florida Everglades.</p> <p>Post scores will be much lower of the filling of the wetlands for improvements to the camp property. However, water quality improvements around the filled areas will benefit the receiving Everglades waters.</p>
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current with</p> <p>7 0</p>	<p>Pre scores are higher which reflects the existing marsh wetlands of the Everglades. The existing exotic infested wetland edges will be removed resulting in higher quality wetlands adjacent to the camp property.</p> <p>Post scores drop to zero as a result of fill placement in the wetlands for the improvements to the camp. This fill will result in the loss of wetland function and water quality treatment in the areas affected.</p>

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.700	0

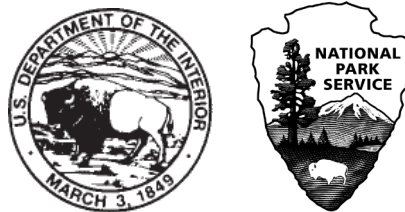
If preservation as mitigation,
Preservation adjustment factor =
Adjusted mitigation delta =

For impact assessment areas
FL = delta x acres = -0.7000 x 3.9 = -2.73

Delta = [with-current]
-0.7000

If mitigation
Time lag (t-factor) =
Risk factor =

For mitigation assessment areas
RFG = delta/(t-factor x risk) =



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under US administration.

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