

National Park Service
U.S. Department of the Interior

Big Cypress National Preserve
Florida



CONSTRUCT FIRE STATION AT BIG CYPRESS NATIONAL PRESERVE HEADQUARTERS COMPLEX



ENVIRONMENTAL ASSESSMENT

April 2023

National Park Service
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3100 Tamiami Trail East
Ochopee, Florida 34141

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GLOSSARY OF ACRONYMS, ABBREVIATIONS & INITIALISMS

| | |
|--------|---|
| BICY | Big Cypress National Preserve |
| BMP | best management practice |
| CFR | Code of Federal Regulations |
| CZMA | Coastal Zone Management Act |
| EA | Environmental Assessment |
| FEMA | Federal Emergency Management Agency |
| FOC | Fire Operations Center |
| NEPA | National Environmental Policy Act of 1969 |
| NPS | National Park Service |
| SHPO | Florida State Historic Preservation Office |
| SWFWMD | Southwest Florida Water Management District |
| U.S.C. | U.S. Code |

CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

Big Cypress National Preserve (BICY, the preserve) protects over 720,000 acres (1,125 square miles) of swamplands, flatwoods, estuarine wetlands, and associated habitats in southern Florida (Florida Natural Areas Inventory 2022). BICY is bordered to the north by land purchased through the Florida Forever land acquisition program; to the east by Miccosukee Indian Water Conservation Land, Everglades National Park, and Francis S. Taylor Wildlife Management Area; to the south by Everglades National Park; and to the west by Florida Panther National Wildlife Refuge and Fakahatchee Strand Preserve State Park among other conservation lands.

Recent increases in the numbers, intensity, and aerial coverage of wildfires in parts of the United States have drawn attention and interest in identifying the causes of wildfires, their consequences, and how risk from wildfires might be mitigated in the United States (Burke et al. 2021). The risk of wildfires may be exacerbated by factors resulting from climate change (Illowsky 2021). Therefore, prescribed fire is conducted annually at BICY by the BICY Fire and Aviation Program. BICY has one of the most active fire management programs in the National Park Service (NPS). These prescribed fires are conducted to reduce the number and intensity of wildfires in southern Florida, as the state has the second highest average number of wildfires in the nation, as well as to enhance the quality and health of the fire-dependent ecosystems within BICY (NPS 2022a).

This Environmental Assessment (EA) was prepared to evaluate the potential environmental impacts of the Proposed action. The Proposed action to construct a new consolidated Fire Operations Center (FOC), and associated facilities, at the BICY Headquarters Complex is described in detail in Chapter 2. This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 as implemented by the Council on Environmental Quality regulations (40 CFR §§ 1500-1508); NPS Director's Order #12: *Conservation Planning, Environmental Impact Analysis, and Decision-Making*; and the NPS NEPA Handbook (NPS 2011, NPS 2015b). In conjunction with this EA, the project is concurrently undergoing a review of potential effects to historic resources in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR Part 800). A Floodplain Statement of Findings was prepared in accordance with Director's Order #77-2 (*Floodplain Management*), and NPS Procedural Manual #77-2 (*Floodplain Management* [NPS 2002]), to address Executive Order 11988. A copy of the Floodplain Statement of Findings is in Appendix A.

PURPOSE OF AND NEED FOR ACTION

The purpose of this project is to provide a modern, safe, and adequate FOC in a centralized location to support the preserve's expanding Fire and Aviation Program.

NPS has identified a need to increase the annual acreage of prescribed fires at BICY. In light of recent extensive wildfires and associated damage in several areas of the United States (Burke et al. 2021, Illowsky 2021), an annual goal of >125,000 acres of prescribed fire is targeted to reduce the severity and extent of wildfires and to enhance the health and quality of the ecosystems within BICY.

Currently, the BICY Fire and Aviation Program is spread out amongst several buildings in different locations in the preserve, making for inefficient and potentially delayed emergency fire response. The buildings were originally built in the 1970s and are inadequate for today's operations, including exposure of

equipment to the elements, security concerns, failing utilities, and other significant deficiencies. The widely spaced arrangement of the existing facilities currently used by the Fire and Aviation Program, and the inadequacies of some of the existing buildings, underscore the need for an updated and efficient FOC and associated facilities (see Current Facilities and Existing Conditions for more information).

PROJECT AREA

The project area consists of approximately 16 acres of land along the south side of US Highway 41 (Tamiami Trail) in Ochopee, Collier County, Florida (Figures 1-1 and 1-2). It is located within Section 33, Township 52S, and Range 30E. The project area is adjacent to the existing BICY Headquarters Complex, at 33100 Tamiami Trail East, Ochopee, Florida.

The existing fire service facilities are distributed across a wide area in and around BICY and are not included in the Proposed action. Some of these facilities would require extensive renovation for their continued extended use.



Figure 1-1. Project Area Along the South Side of US Highway 41 in Ochopee, Florida

Notes: The project area is indicated with a white rectangle. Aerial image modified from Google Maps.

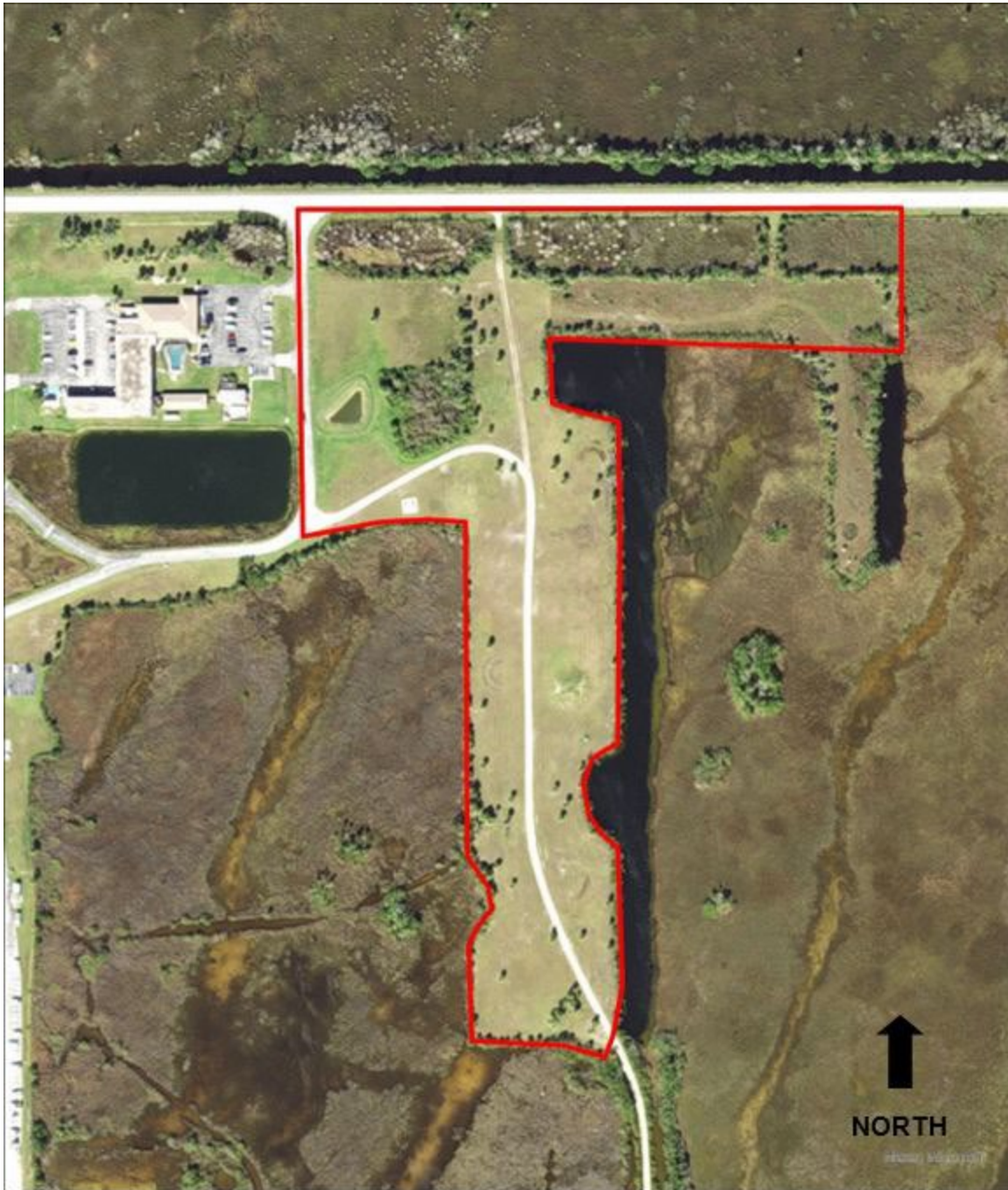


Figure 1-2. Aerial Image of the 16-Acre Project Area

Notes: Project area boundary in red. Aerial image modified from Google Maps.

CURRENT FACILITIES AND EXISTING CONDITIONS

The existing Deep Lake Fire Station and the Fire Operations Building are located several miles northwest of BICY, along SR-29, resulting in inefficient and potentially delayed emergency wildfire response times (NPS 2022b). The current fire station was constructed in the 1970s as a private residence and was significantly modified and updated in 1982 and 2002 to support fire station functions. The existing space is inadequate for current and expected staff and equipment (NPS 2022b). Recent theft of fire equipment at the Deep Lake Fire Station has shown the security of grounds at the existing FOC to be insufficient. The

existing facilities are inadequate for preventing degradation of equipment under the hot southern Florida sun. In addition, the indoor air and water quality are of concern to the personnel that utilize the existing facilities (NPS 2022b). Other concerns for the existing facilities include leaking air conditioning units and drip pans, faulty electrical outlets and internet connections, and other maintenance items associated with older buildings in subtropical climates (NPS 2022b). The widely spaced arrangement of the existing facilities and the inadequacies of some of the existing buildings further underscore the need for a new consolidated FOC and associated facilities.

The current Fire Operations Building (Figure 1-3) is located at 24940 SR-29, 6.1 miles northwest of the BICY Headquarters Complex. The Fire Operations Building currently houses office spaces for the fire crew and administration and includes a cache of fire management equipment, laundry, gym with lockers, kitchen, conference and planning room, and restrooms.

The current Deep Lake Fire Station (Figure 1-4) is in Jerome, Florida, 12.2 miles northwest of the BICY Headquarters Complex. The Fire Station has one Type-6 fire engine and three swamp buggies (NPS 2015a).

The aviation branch of BICY currently operates out of the Oasis Ranger Station Airfield (Figure 1-5), located along US Highway 41, 18.6 miles east of the BICY Headquarters Complex. Aviation assets at the Oasis Airfield include a Type-3 Bell 206 L3 Long Ranger helicopter (NPS 2015a). This airfield services not just BICY but also Everglades National Park and can support operations as far away as Dry Tortugas National Park (NPS 2015a).

The Greater Naples Fire Rescue provides protection from fire for the many outparcels (private inholdings) within BICY (NPS 2015a).



Figure 1-3. Aerial Image of Current Fire Operations Building, Along SR-29

Source: Aerial image modified from Google Maps



Figure 1-4. Aerial Image of the Deep Lake Fire Station, Along SR-29
Source: Aerial image modified from Google Maps



Figure 1-5. Aerial Image of the Oasis Ranger Station Airfield, Along US Highway 41
Source: Aerial image modified from Google Maps

The Southwest Florida Management District (SWFWMD) assigned the Florida Land Use, Cover and Forms Classification System codes shown in Figure 1-6 in and around the 16-acre project area. These codes can be used as a broad overview of existing conditions in and around the project area. The project area is coded as 3100: Herbaceous (Dry Prairie). The BICY Headquarters Complex and adjacent area is coded as 1400: Commercial and Services. The wetlands surrounding the project area are coded as 6420: Vegetated Non-Forested Wetlands and the open water is coded as 5120: Streams and Waterways and 5300: Reservoirs.

Cabbage palm (*Sabal palmetto*) line the riparian edges of the surrounding wetlands and occur as individuals and in small groups in the northern portion of the project area (Figure 1-7). Most of the project area is regularly mowed and is a mixture of sedges (Cyperaceae) (Figure 1-8a) and turfgrass such as non-native centipedegrass (*Eremochloa ophiuroides*) (Figure 1-8b).

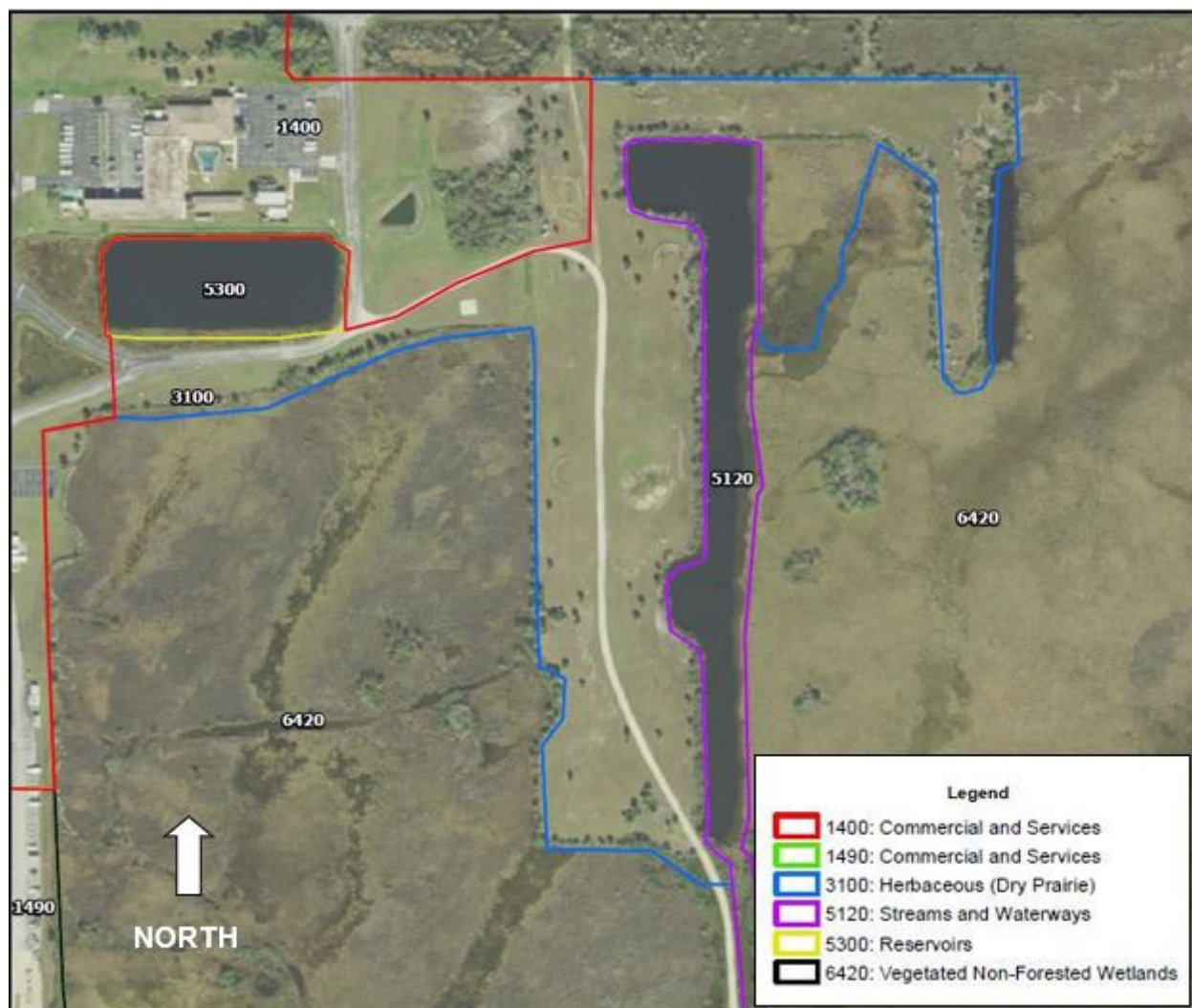


Figure 1-6. Project Area Florida Land Use, Cover and Forms Classification System Codes

Source: SWFWMD



Figure 1-7. Existing Conditions of the Project Area is Primarily Composed of Mowed Turfgrass, Sedges, and Scattered Cabbage Palms



Figure 1-8. Mowed Areas of the Project Area are Dominated by Sedges (a) Adjacent to Wetlands and (b) In Slightly Higher Elevation Areas

CHAPTER 2: ALTERNATIVES

This EA analyzes the potential environmental consequences of an action alternative (proposed action) and a no-action alternative. The elements of these alternatives are described in their respective subsections below. Impacts associated with each alternative are outlined in Chapter 3. In addition, several options associated with the proposed action were briefly studied but were eliminated from further consideration. These are described at the end of this chapter in Alternatives Eliminated from Further Analysis.

SELECTION STANDARDS

The following selection standards (screening criteria) were used to develop the reasonable range of alternatives that are presented below:

1. The alternative would provide adequate working space for BICY Fire and Aviation Program personnel to allow them to fulfill their missions at a high level. Working space would allow for future expansion of workforce as needed and would meet current accessibility standards.
2. The alternative would provide for a centralized operations area, within the boundaries of BICY, to improve efficiency and response time and to reduce travel time between program components.
3. The alternative would maximize energy efficiency, and provide lower maintenance costs, to the extent practicable.
4. The alternative would provide a facility that is built to withstand hurricanes and flooding such as storm surge. The facility would remain intact and would be able to quickly return to full functionality following a storm.
5. The alternative would avoid wetland impacts to the greatest extent practicable.
6. The alternative would avoid impacts to protected flora and fauna to the greatest extent practicable.
7. The alternative would include efficient access to the FOC such that construction, operation, and maintenance of facilities and equipment can proceed effectively. Such access would be via existing paved roads.

PROPOSED ACTION: FIRE OPERATIONS CENTER NEAR BICY HEADQUARTERS (PREFERRED ALTERNATIVE)

The proposed action entails locating an approximately 5,000-square foot FOC building, an approximately 4,000-square foot Emergency Operations Center building, and associated facilities and driveways on approximately 16 acres of land adjacent to the BICY Headquarters Complex off US Highway 41 (Tamiami Trail) in Ochopee, Florida. The land is composed of fill material that was placed there in the 1960s in preparation for a speculative housing development. The FOC will have a final finished elevation of 8 feet above NAVD88 (North American Vertical Datum of 1988) to address floodplain considerations. The FOC will include various storage rooms for fire-related equipment and supplies, a kitchen, several offices, meeting rooms, a gym, and a conference room. The planned accessory structures and areas consist of a separate engine bay and pole barn, helicopter hangar, four helipads, two concrete or asphalt parking lots, helicopter fueling area, portable storage unit, and an aviation overflow parking area.

The engine bay and pole barn will be sufficiently sized for engine and equipment storage and will have office space. An outdoor hose rack will be near the pole barn. The helicopter hangar will include an associated parking lot. The helipads will consist of three Type-1 helipads and a single Type-3 helicopter pad. Safety clearance radii of 75 feet and 110 feet will be designated around the Type-1 and Type-3 helipads, respectively. There will be a parking lot associated with the helipads. The fueling area will

include a storage tank for Jet-A fuel on a skid and associated containment system. The aviation overflow area will allow for the temporary storage of four to five helicopters. A tire shed and several stackable sheds are also planned.

A new asphalt road will be constructed to tie in the FOC and associated amenities with the existing road near the BICY Headquarters to the west of the project area. A new entranceway will also be constructed linking these facilities with US Highway 41 to the north. Left and right turn lanes will be installed along US Highway 41 adjacent to the entranceway to allow safe vehicle and equipment access to the project area. Underground utilities and sewer lines will be routed to support the FOC and associated infrastructure. A public fiber optic line along US Highway 41 will be tapped to serve the project area. Existing landscape buffers will not be affected by the proposed action, as development is expected to be contained entirely within the existing cleared grassy areas.

The site is located with other BICY administrative functions but is removed from the Nathaniel P. Reed Visitor Center and other visitor areas of the preserve.

The use of Best Management Practices (BMPs) will likely include the use of silt fencing, hay bales, and (or) turbidity curtains, as appropriate. The use of BMPs is typically required for federal, state, and local agency permitting including turbidity control measures. These measures are designed to minimize erosion, sedimentation, and (or) water turbidity. All measures would remain in place and in good working order until soils have stabilized sufficiently, after which all control measures will be removed.

For more information related to the visual characteristics of the proposed building and structures, see Appendix B, Visual Impact Assessment.



Figure 2-1. Schematic of Proposed Action: Fire Operations Center Building with Internal Room Configurations

Source: Modified from design drawing A101 of the final schematic design report by Walker Architects (2023)



Figure 2-2. Plan View of Proposed Action: Fire Operations Center and Accessory Structures

Source: Modified from figure on PDF page 21 of the final schematic design report by Walker Architects (2023)

NO-ACTION ALTERNATIVE

The No-Action alternative is for BICY Fire and Aviation Program personnel to continue to work with the existing Fire Operations Building, Deep Lake Fire Station, and the Oasis Ranger Station Airfield. The Fire Operations Building and the Deep Lake Fire Station are offsite and north of BICY. The Oasis Ranger Station Airfield is east of the BICY Headquarters. The three facilities are each separated from one another by several miles and are also separate from the BICY Headquarters Complex.

These existing facilities would continue to operate as they are now, including the aging structures themselves along with the inadequate space, air quality and water quality issues, the inefficiency associated with the spread-out arrangement of these facilities, and the distance from the BICY Headquarters Complex. However, one or more of the existing structures are likely to require extensive renovations to improve conditions for BICY Fire and Aviation Program personnel.

The continued use of the existing facilities under the No-Action alternative will not support the expanding Fire and Aviation Program at BICY. Further, this alternative does not address the purpose and need of this project to provide a modern, safe, and adequate fire operations facility.

ALTERNATIVES ELIMINATED FROM FURTHER ANALYSIS

During development and consideration of the proposed action, NPS also considered other alternatives that were dismissed because they did not meet the purpose and need for the project. Various alternatives were presented, compared, and eliminated during the project on-site meeting that took place 7–8 September 2022, with personnel from BICY, NPS's Denver Service Center, and environmental and architect consultants during the initial design process. A Value Analysis Study Workshop was conducted on 1 December 2022, during the schematic design phase of the project, to evaluate a range of alternatives to meet the project goals. The workshop included a review of background information, identification of design criteria, and an analysis of the layout and programming of the proposed FOC. Discussion and identification of alternatives related to placement of the FOC and accessory structures and the design, configuration, and proposed materials of these structures are described in the NPS (2022b) charrette report titled *Fire Operations Center at Big Cypress National Preserve Headquarters Complex*.

CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes current environmental conditions in and around the project area. This discussion is focused on resources that could potentially be affected by the implementation of the proposed project and provides a baseline for understanding the current condition of the resources. The analysis considers short- and long-term effects as well as adverse and beneficial effects. The affected environment section discusses environmental trends and past, current, and reasonably foreseeable future actions and their impacts for each of the resource issues. ‘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.

IMPACT ANALYSIS METHODS

In accordance with the Council on Environmental Quality regulations, the environmental consequences analysis includes the direct, indirect, and cumulative impacts potentially resulting from the proposed alternatives (40 CFR § 1508.1(g); 40 CFR § 1502.16). In considering whether the effects of the proposed action are significant, the potentially affected environment and degree of the effects of the action were analyzed (40 CFR § 1501.3(b)). Where appropriate, mitigation measures for adverse impacts are described along with their potential to ameliorate the impacts. The methods used to assess impacts vary depending on the resource being considered but are generally based on a review of pertinent literature and BICY studies, information provided by on-site experts and other agencies, professional judgment, and preserve personnel knowledge and insight.

This EA also considers cumulative impacts, defined as “effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, or reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR § 1508.1(g)(3)). Cumulative impacts are addressed in this EA by resource topic and are considered for the no action alternative and the proposed action. Some of these actions are in the early planning stages; therefore, the evaluation of the cumulative impacts is based on a general description of the project.

RESOURCES RETAINED FOR ANALYSIS

NPS identified environmental issues and impact topics for detailed analysis during the internal scoping processes. The issues and concerns that warranted further consideration are included in the impact topics discussed below. Some issues and impact topics were considered by NPS, but ultimately dismissed from detailed analysis. Floodplains were retained because land areas of BICY, including the project area, are only a handful of feet above sea level, are regularly subjected to storm events, and because floodplains are of regional concern in southern Florida. Those resources eliminated from analysis are included in Appendix C, Resources Eliminated from Further Analysis, along with a summary justification. In addition, a Visual Impact Analysis was conducted to understand potential visual impacts from the proposed buildings on the landscape (Appendix B). Visual impacts were eliminated from further analysis.

FLOODPLAINS IN THE AFFECTED ENVIRONMENT

Executive Order 11988, Floodplains Management, requires federal agencies to reduce the risk of flood loss; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. Federal agencies are required to evaluate the potential effects of any action it takes in the floodplain to ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management. When an action is proposed to be located within a floodplain, a federal agency is required to consider alternatives to avoid adverse effects and incompatible development in the floodplain. When the only practicable alternative consistent with the law and with the policy set forth in the executive orders require siting the action in a floodplain, the project must be designed or modified to minimize potential harm to the floodplain. Finally, the federal agency is required to provide public notice and an opportunity for public comment prior to proceeding with any action in a floodplain. In accordance with Director's Order #77-2 (Floodplain Management) and NPS Procedural Manual #77-2 (Floodplain Management [NPS 2002]), a Floodplain Statement of Findings is in Appendix A.

The most recently available flood maps provided by the Federal Emergency Management Agency (FEMA) show the project area to be entirely contained within Zone AE (Figure 3-1) as of the latest (16 May 2012) FEMA map update for this area. This zone, also known as the 100-year floodplain, is defined as an area inundated by a 1 percent annual chance of flooding and for which base flood elevations have been determined. Zone AE is within the High Risk Areas (Special Flood Hazard Area) category of flood zones. The proposed action area has elevations of from 6 to 7 feet above NAVD88 according to FEMA (<https://www.fema.gov/flood-maps/national-flood-hazard-layer>). Existing site benchmarks, surveyed by CHW Professional Consultants and shown on project design drawings dated 5 January 2023, show benchmark elevations of from 2.35 to 3.54 feet above NAVD88 in and adjacent to the project area.



Figure 3-1. FEMA Zone AE (100-year Floodplain) In and Around the Project Area

Notes: The 16-acre project area is outlined with a red line. The figure is modified from the FEMA Flood Map obtained 20 Mar 2023 from FEMA Flood Map Service Center (<https://msc.fema.gov/portal/home>).

Given that the project area consists of elevations from 2.35 to 3.54 feet above NAVD88, this area is particularly vulnerable to flooding and other effects of climate change. The most common extreme weather impacts to Collier County, including Ochopee and the project area, are from tropical depressions, tropical storms, and hurricanes. On average, Collier County is affected once every 2.67 years by tropical depressions and tropical storms, every 6.68 years by hurricanes, and every 10.5 years by major hurricanes (Byrne and Dickman 2019).

Climate change effects in some coastal parts of Florida, such as at Tampa, are projected to include sea level rise of 6 inches (15.2 cm) to 2.5 feet (76.2 cm) by the year 2050 and from 1 to 7 feet (0.3 to 2.1 m) by the year 2100 according to the Tampa Bay Climate Science Advisory Board (2015). Naples, closer to Ochopee, has 98% of its properties at risk of flood damage, with 25% of the flooding occurring outside of designated mapped flood zones (<https://floodriskamerica.com/blog/naples-flood-risk/>).

EFFECTS OF THE PROPOSED ACTION ON THE FLOODPLAIN

Implementation of the proposed action would include some impermeable surfaces in the form of a paved entranceway, two paved parking lots, and a concrete pad for the FOC. There will also be a continuous concrete apron linking the hangar with the two smaller helipads. The proposed construction of the FOC building and associated structures and entranceway would be conducted in a way that minimizes disturbance to the soil surface. The soil surface would be graded to match that of the surrounding (undisturbed) soils and overland flow of flood waters would not be impeded or otherwise altered from natural flow patterns. Included in the proposed action is a stormwater management facility to discharge stormwater runoff at pre-development rates to mimic the existing conditions (Walker Architects 2023).

In the event of any erosion or sedimentation during construction, such disturbance would only be temporary, and the use of turbidity curtains and hay bales, if needed, would help to contain the disturbance within the construction zone.

The use of BMPs (e.g., silt fencing, hay bales, turbidity curtains) where needed will help ensure that impacts would be minimized. Erosion or sedimentation resulting from construction activities may increase water turbidity by causing sediment particles to be introduced into the surrounding water column near to the construction. Such particles may be resuspended during tidal flux or by wind action against the water's surface. The following BMPs may be used during construction as erosion and sedimentation control structures as per standards in Florida Department of Environmental Protection (2008):

- Silt fencing
 - Would substantially reduce the chance of turbidity and sedimentation impacts to surface waters
- Hay bales (for use where trenching for silt fencing would damage tree roots)
 - Would help prevent excessive turbidity from flowing downstream along Halfway Creek

All measures would remain in place and in good working order until soils have stabilized sufficiently, after which all control measures will be removed.

Any spills of Jet-A fuel, or other hazardous materials, would be immediately reported and cleaned up in accordance with the Spill Prevention Control and Countermeasures Plan and all applicable regulations (Appendix D).

Climate change is addressed in the project design, which calls for the addition of fill prior to building construction, and final finished elevation of 8 feet above NAVD88. The FOC will include energy efficient utilities to minimize the project's carbon footprint. The centralization of the fire operations structures is believed to reduce fuel consumption of fire-related vehicles compared to the current spread-out distribution of fire-related buildings, thus reducing the carbon footprint for fire equipment.

For the reasons noted above, including the construction of a stormwater management facility, no significant or long-term impacts are expected to the 100-year floodplain. Although short-term impacts are expected during construction, in the form of minor possible erosion and (or) sedimentation, they will be minimized using the above-mentioned BMPs. Only minimal and temporary impacts are expected for the proposed action.

In accordance with the requirements of Executive Order 11988, the NPS must demonstrate that there is no practicable alternative to carrying out the proposed action within the floodplain. FEMA Flood Zone AE (100-year floodplain) covers the entire 16-acre project area (Figure 3-1). The entirety of the over 720,000-acre BICY occurs within Flood Zone AE (NPS 2020). For this reason, the FOC and associated facilities must necessarily be built within this flood zone if they are to be in a centralized location to support the preserve's expanding Fire and Aviation Program.

This EA considered all potential impacts of the proposed action and the No-Action alternative, both as solitary actions and in conjunction with other proposed activities. It is impossible to meet the purpose of, and need for, the action and avoid the 100-year floodplain. Therefore, there is no practical alternative to completing the proposed action in the floodplain.

EFFECTS OF THE NO-ACTION ALTERNATIVE ON THE FLOODPLAIN

Under the No-Action alternative, the floodplain would remain unchanged from baseline conditions. No significant impacts are expected from the No-Action alternative. No mitigation measures would be needed under the No-Action alternative.

CUMULATIVE EFFECTS TO THE FLOODPLAIN

The significance threshold for water resources includes any action that substantially depletes surface water supplies, substantially alters drainage patterns, or results in the loss of waters of the United States that cannot be compensated. Given that the impermeable surfaces are minimal as proposed, and because a stormwater management facility is included in the proposed action, no impacts to the floodplain are expected for the proposed action. The only impacts to the floodplain expected are limited to the duration of construction and no long-term impacts are expected.

Additional projects slated for construction in the area include the NPS housing relocation and improvement project for Everglades National Park personnel. Hurricane-damaged housing for NPS personnel in Everglades City, Florida, approximately 4.8 miles southwest of the project area, is proposed to be demolished and replaced with a storm-resistant two-story, four-unit (5,036-square foot) housing structure in a new location. Housing Units 601, 602, and 603 are slated for demolition along with associated wood pilings, concrete sidewalks, driveways, and lift stations. The demolition is expected to take eight to ten months. Replacement housing will be constructed in Ochopee, along Mahogany Drive, approximately 0.3 miles southwest of the project area. The new housing will be of reinforced concrete, impact-resistant windows, and a steel roof and will sit on top of a concrete pad on imported fill (NPS 2020). The project area at Mahogany Drive is composed primarily of filled land built up from material dredged from the adjacent canal system (NPS 2020). The area sits on top of hard-packed limestone and the site is not expected to contribute substantially to flood storage or stormwater management. Surface water flows directly into the adjacent canals which convey water out toward the Gulf coast as part of the BICY watershed. In contrast to the majority of the over 720,000-acres of wetlands at BICY, this developed

area with altered soils does not contribute substantially to the floodplain function of the surrounding BICY watershed (NPS 2020).

Overall, for the reasons discussed above and because the proposed action, and the NPS housing relocation project, occur on altered sites with added fill, they are no longer functional components of the BICY watershed, no significant adverse cumulative impacts are expected to the floodplain.

CHAPTER 4: INTERAGENCY COORDINATION AND CONSULTATIONS

Per the requirements of Intergovernmental Cooperation Act of 1968 (42 U.S.C. 4231[a]) and Executive Order 12372, federal, state, and local agencies with jurisdiction that could be affected by the proposed action were notified during the development of this EA.

COASTAL ZONE MANAGEMENT ACT

A Coastal Zone Management Act (CZMA) consistency determination was sent to the Florida State Clearinghouse prior to the publication of this EA for their concurrence. Correspondence regarding the consultations with the above-mentioned agencies will be appended to the NEPA decision document.

NATIONAL HISTORIC PRESERVATION ACT

As required by Section 106 of the National Historic Preservation Act (54 U.S.C. 306101), the NPS is consulting with the Florida State Historic Preservation Office to assess the effect of the project on historic properties. The Section 106 consultation process is conducted separately from, but concurrent with, the NEPA process. Final correspondence and concurrence with the Florida State Historic Preservation Office (SHPO) will be appended to the NEPA decision document.

GOVERNMENT TO GOVERNMENT CONSULTATIONS

The National Historic Preservation Act § 106 (54 U.S.C. 306101), and implementing regulations at 36 CFR Part 800, direct federal agencies to coordinate and consult with federally recognized Native American tribes historically affiliated with the land underlying a project area. Consistent with these regulations, federally recognized tribes that are historically affiliated with the BICY Headquarters Complex geographic region are invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation and the interagency coordination process, and it requires separate notification of all relevant tribes. The timelines for tribal consultation are also distinct from those of other consultations.

The Presidential Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships, dated 26 January 2021, emphasizes the recognition of tribal sovereignty and self-governance and the commitment to fulfilling federal trust and treaty responsibilities to tribal nations. The current administration prioritizes the regular, meaningful, and robust consultation with tribal nations and honors the promises made between the U.S. Government and tribal nations for more than two centuries.

The following Native American tribal governments are being consulted regarding this Proposed Action:

- Miccosukee Tribe of Indians of Florida
- Seminole Nation of Oklahoma
- Seminole Tribe of Florida

Correspondence and results of these consultations will be appended to the NEPA decision document.

PUBLIC AND AGENCY REVIEW

This EA and Floodplain Statement of Findings (Appendix B) are undergoing formal public and agency review for 30 days (17 April to 17 May 2023) and have been distributed to interested individuals, agencies, and organizations. These documents were also made available online at <https://parkplanning.nps.gov/FOC>.

Before including personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

CHAPTER 5: LIST OF PREPARERS

This report was prepared by ANAMAR Environmental Consulting, Inc. for, and under the direction of, the NPS. Members of the professional staff, and their respective qualifications and roles, are in Table 5-1.

Table 5-1. Preparer Names, Disciplines and Affiliations for this EA

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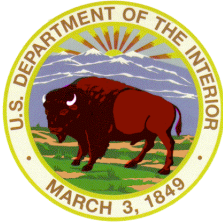
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STATEMENT OF FINDINGS FOR FLOODPLAIN MANAGEMENT
TO CONSTRUCT A FIRE STATION AT
BIG CYPRESS NATIONAL PRESERVE HEADQUARTERS COMPLEX
BIG CYPRESS NATIONAL PRESERVE
OCHOPEE, FLORIDA



Recommended:

Superintendent

Date

Certified for Technical Accuracy and Service-wide Consistency:

Chief, Water Resources Division

Date

Approved:

Regional Director

Date

Introduction

This Floodplain Statement of Findings (SOF) is in accordance with Executive Order 11988 (*Floodplain Management*), Executive Order 13690 (*Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*), Director's Order #77-2 (*Floodplain Management*), and NPS Procedural Manual #77-2 (*Floodplain Management*) (NPS 2002). Additionally, as a federal capital investment project, the design of the fire operation facilities will use the Freeboard Value Approach following EO 13690 Federal Flood Risk Management Standard (FFRMS). This SOF summarizes the floodplain development associated with providing a modern, safe, and adequate Fire Operations Center (FOC) in a centralized location to support Big Cypress National Preserve's (BICY's) expanding Fire and Aviation Program.

Project Area Description

The project area for the Proposed Action consists of approximately 16 acres of land along the south side of US Highway 41 (Tamiami Trail) in Ochopee, Collier County, Florida (Figure 1). It is located within Section 33, Township 52S, and Range 30E. The project area is adjacent to the existing BICY Headquarters Complex, at 33100 Tamiami Trail East, Ochopee, Florida. The project area is mostly flat and is composed of fill material that was placed there in the 1960s in preparation for a speculative housing development.

Flood maps provided by the Federal Emergency Management Agency (FEMA) show the project area to be entirely contained within Zone AE (Figure 2) as of the latest (16 May 2012) FEMA map update for this area. This zone, also known as the 100-year floodplain, is defined as an area inundated by a 1 percent annual chance of flooding and for which base flood elevations have been determined. Zone AE is within the High Risk Areas (Special Flood Hazard Area) category of flood zones. The project area has a base flood elevation of approximately 6 feet NAVD88 (North American Vertical Datum of 1988) above sea level according to FEMA (<https://www.fema.gov/flood-maps/national-flood-hazard-layer>). Existing site benchmarks were surveyed by CHW Professional Consultants and shown on project design drawings dated 5 January 2023. These drawings show benchmark elevations of from 2.35 to 3.54 feet NAVD88 in and adjacent to the project area.

The finished floor elevations (FFE) of the existing buildings within the complex range from 5.40 feet NAVD88 (accessory building north of the water treatment area) to 5.59 feet NAVD88 (BICY Headquarters building). These buildings are just above-grade.

The project area of the Proposed Action is nearly all uplands but is surrounded by wetlands associated with Halfway Creek that flows southwest to Chokoloskee Bay in the Ten Thousand Islands and eventually to the Gulf of Mexico. The aerial-interpreted wetlands shown in USFWS National Wetlands Inventory (NWI) are based on high altitude imagery (Figure 3). Wetlands adjacent to the project consist of a Freshwater Emergent Wetland, Freshwater Ponds, Estuarine and Marine Wetlands, and the roadside ditch is termed Riverine by NWI. The small triangular water body in the northern portion of the project area, part of the existing wastewater treatment facility, was not indicated to be a wetland by USFWS NWI.

Proposed Action

The principle construction component of this Proposed Action entails locating an approximately 5,000-square-foot FOC building in the project area (Figure 4). The FOC will include offices, a gym, various storage rooms for fire-related equipment and supplies, a kitchen, meeting rooms, and a conference room (Figure 5). The planned future structures of this Proposed Action consist of a 4,000-square-foot Emergency Operations Center, an engine bay/pole barn, helicopter hangar, four helipads, two concrete or asphalt parking lots, helicopter fueling area, portable storage shed units, and an aviation overflow parking area. These future structures are planned to be located as far as possible on site from the regularly occupied FOC and the public road. This provides the best acoustic separation as well as limiting visibility and restricting access for security purposes. The different facilities are categorized into different class actions as defined in NPS Director's Order #77-2 and Procedural Manual #77-2, which are described in Table 1.

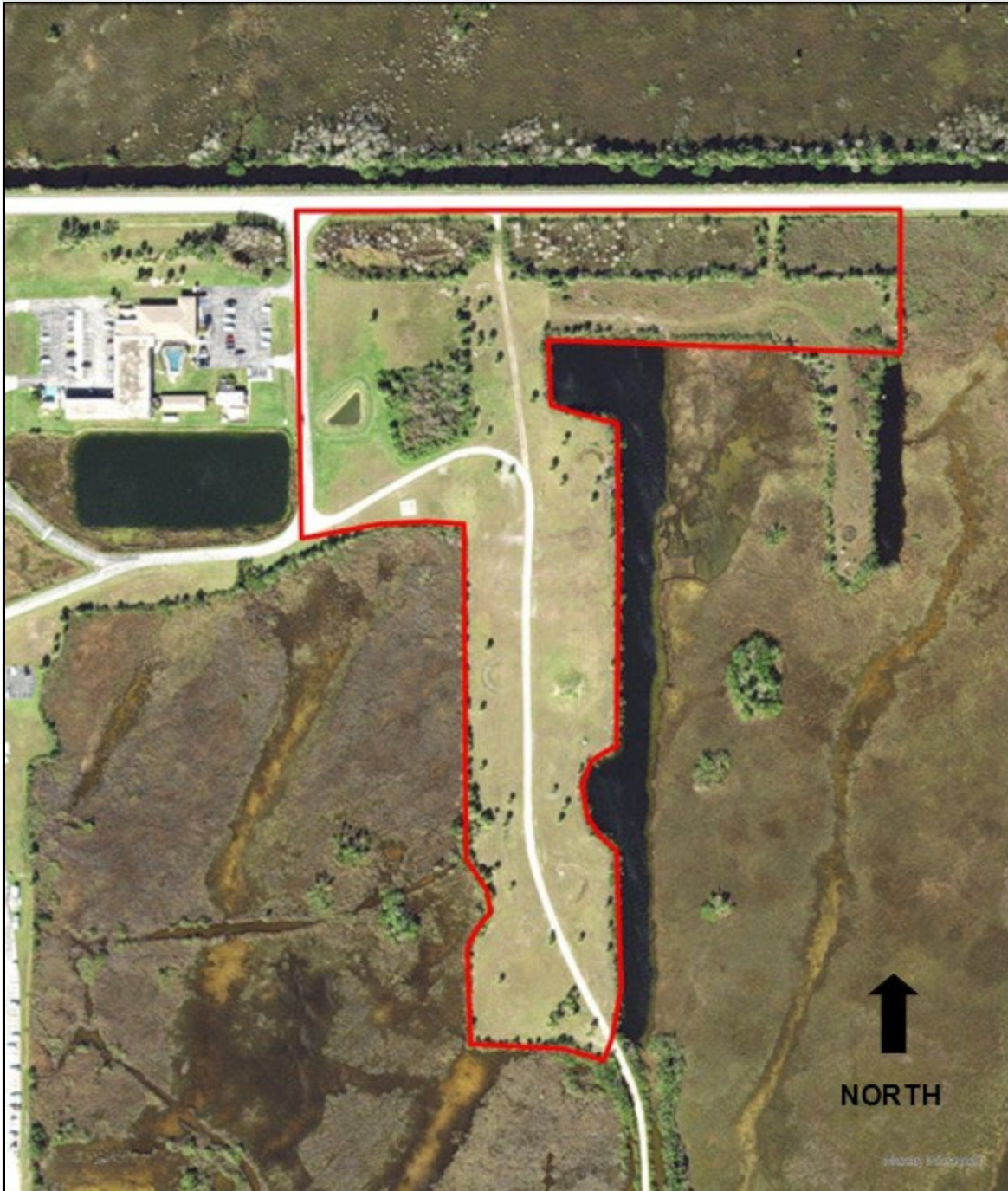


Figure 1. Aerial Showing the 16-Acre Project Area at the Big Cypress Headquarters Complex in Ochopee, Florida

Notes: Project area boundary in red. Aerial image modified from Google Maps.

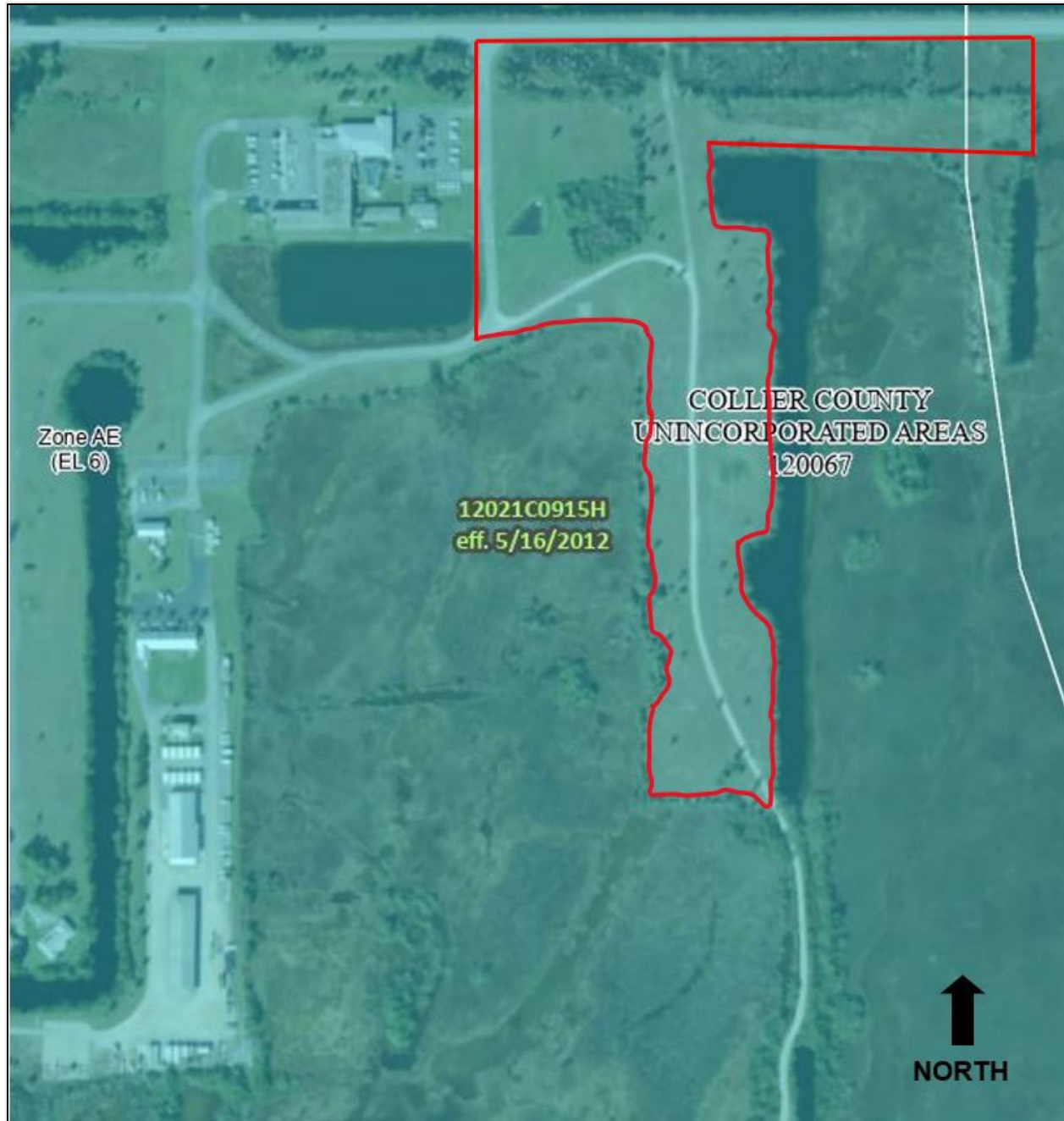


Figure 2. FEMA Zone AE (100-year Floodplain) In and Around the Project Area

Notes: The 16-acre project area is outlined with a red line. The figure is modified from the FEMA Flood Map obtained 20 Mar 2023 from FEMA Flood Map Service Center (<https://msc.fema.gov/portal/home>).



Figure 3. Wetland Habitats and Water Bodies In and Around the Project Area Based on National Wetlands Inventory Data

Notes: The 16-acre project area is outlined with a red line. Figure modified from USFWS National Wetlands Inventory Wetland Mapper online spatial database (<https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>) accessed 27 Oct 2022.



Figure 4. Plan View of Proposed Action Area for Fire Operations Center and Accessory Structures

Notes: The 16-acre project area is outlined with a red dashed line.
FOC = Fire Operations Center, EOC = Emergency Operations Center



Figure 5. Schematic of Proposed Action: Fire Operations Center Building with Internal Room Configurations

Source: Modified from design drawing A101 of the final schematic design report by Walker Architects (2023)

Justification for Use of the Floodplain

Currently, the BICY Fire and Aviation Program is spread out amongst several buildings in different locations in and around BICY, making for inefficient and delayed emergency fire response. The buildings were originally built in the 1970s and are inadequate for today's operations, including exposure of equipment to the elements, security concerns, failing utilities, and other significant deficiencies. The widely spaced arrangement of the existing facilities currently used by the Fire and Aviation Program and the inadequacies of some of the existing buildings, coupled with an increase in the annual prescribed fire at BICY (targeted at >125,000 acres/year), underscore the need for an updated and efficient FOC and associated facilities at a central location. The BICY Fire and Aviation Programs support the preserve's prescribed fire program related to the maintenance of the natural resources and habitats of BICY. Structural fire support is provided by the Greater Naples Fire Rescue within BICY.

The majority of BICY is within the 100-year floodplain and the area is relatively flat, so perspective sites within BICY are weighed evenly from a flood mitigation perspective. The 16-acre project area adjacent to the BICY Headquarters Complex was selected because of its central location, ease of access, presence of fill material, adequacy of available space, and existing utilities. The anthropogenically modified and slightly elevated soil surface of the project area allows for an ideal project area and greatly avoids potential effects to wetlands and other habitats.

No alternate sites were able to accommodate the proposed project without causing negative impacts on natural habitats and (or) wetlands.

Description of Site-Specific Flood Risk

Flooding at the project area of the Proposed Action is typically caused by tropical storms and hurricanes. BICY is composed of a mosaic of inland and coastal water bodies, along with groundwater, that collectively contribute to the greater Everglades watershed that includes BICY. This watershed originates in basins associated with Lake Okeechobee and flows slowly southward through BICY and Everglades National Park to the Ten Thousand Islands and Florida Bay. This water eventually enters the Gulf of Mexico. Storm events having sufficient duration and (or) intensity in the area have the potential to have significant effects on the hydrology and hydraulics at BICY.

Storm warnings are provided typically at least 24 hours prior to large storm events, such as tropical storms and hurricanes. Such notifications are expected to provide sufficient time for preparations and/or evacuation of the proposed facilities. The FOC, and associated facilities, are not intended for sheltering-in-place.

The proposed FOC, and associated facilities, will be constructed with strict adherence to best management practices and will have no impact on erosion, accretion, modifications to surrounding water bodies, or other geomorphic concerns.

Surveyed benchmark elevations in and around the project area range from 2.35 to 3.54 feet NAVD88 based on design drawings by CHW Professional Consultants dated 5 January 2023. Given that the base flood elevation at the project site is approximately 6 feet NAVD88, this indicates that the project area could be subject to up to 3.65 feet of flood depth during a 100-year flood.

Determination of Regulatory Flood and Applicability of FFRMS

NPS Director's Order #77-2 and Procedural Manual #77-2 consider the evaluation of actions that may be grouped into the following three categories:

- Class I Actions — include administrative, residential, warehouse and maintenance buildings, and nonexempted (overnight) parking lots.
- Class II Actions — those that will create “an added disastrous dimension to the flood event.” Class II actions include schools, clinics, emergency services, fuel storage facilities, large sewage treatment plants, and structures such as museums that store irreplaceable records and artifacts.
- Class III Actions — Class I or Class II Actions that are located in high hazard areas such as those subject to flash flooding.

The proposed project includes both Class I and Class II Actions (Table 1). The construction of the facilities will be staggered based on funding allocation in the future. The FOC is the first structure that will be built. Classifying each structure individually provides flexibility in design with unknown funding and construction timelines. In addition, each structure has a different operation associated with it and classifying them individually provides a more nuanced approach for design

and addressing the needs of BICY. Following EO 11988, the regulatory floodplain for Class I Actions is the 100-year floodplain. For Class II Actions, the Regulatory Floodplain is the 500-year floodplain.

Table 1. Class Determination for Structures

| Structure | Class Determination | Operation |
|---|----------------------------|--|
| Fire Operations Center (FOC) | Class I | The FOC consists of offices, a kitchen, restroom facilities, conference room, and a gym. This space is administrative in nature and used for day-to-day office operations. Emergency equipment is not held within this building and would not be used for operations during a weather event. If the FOC was damaged during an event, the operations out of this facility could be relocated elsewhere in BICY. |
| Emergency Operations Center (EOC) | Class II | The EOC will house BICY's Law Enforcement operations. Operations include administrative use, office space, and day-to-day operations. The EOC would also be used throughout a large weather event, or major event, and would need to be operational throughout. BICY's dispatch center is located in Tallahassee and will not be located onsite. |
| Parking lots/driveways, aviation overflow area, sheds | Class I | <p>Parking Lots/Driveways: A new asphalt road will be constructed to tie in the FOC and other structures with the existing road near the BICY Headquarters to the west of the project area. A new entranceway will also be constructed linking these facilities with US Highway 41 to the north. Left and right turn lanes will be installed along US Highway 41 adjacent to the entranceway to allow safe vehicle and equipment access to the project area.</p> <p>Aviation Overflow Area: The aviation overflow area will allow for the temporary storage of four to five helicopters as space is needed. During an event, the helicopters would be moved to another location (usually to northern Florida) outside of an approaching storm.</p> |

| | | |
|--------------------------|----------|---|
| | | Sheds: The sheds are temporary and removable structures that will house non-emergency-related equipment. |
| Pole Barn and Engine Bay | Class II | The pole barn and engine bay would house two Type-6 fire engine and three swamp buggies. In the event of a hurricane and anticipated flooding event, sensitive equipment, like engines, would be moved to safer locations with high ground, potentially out of BICY. Should hurricane or flooding event result in damages or delay in operability of the pole barn and engine bay, the equipment and operations housed in these structures could remain effective at a temporary offsite location while repairs are made. |
| Hangar | Class I | The hangar would house aviation assets that are currently located at the Oasis Airfield, including a Type-3 Bell 206 L3 Long Ranger helicopter. In the event of a hurricane and anticipated flooding event, sensitive equipment, like helicopters and fixed-wing aircraft, would be moved to a safer location with higher ground, potentially out of BICY. Should hurricane or flooding event result in damages or delay in operability of the hangar, the equipment and operations housed in these structures could remain effective at a temporary offsite location while repairs are made. |
| Jet Fuel Storage | Class II | Jet-A fuel would be stored on site in a 7,500 gallon UL2085 double wall fireguard enclosed canopy design AST tank 120/25 GPM Jet-A aircraft fueling skid mounted system. The system will include a 4,000 psi concrete, wire, or rebar reinforced support pad that will be 33' long x 14' wide x 8" thick. (Sloped Front to Rear as required). The tank bottom shell will be approx. 3" above grade. |

Following EO 13690, because the proposed project involves a federal capital investment, the Federal Flood Risk Management Standard (FFRMS) applies. Per FEMA's implementing guidelines for EO 11988 and 13690, agencies may use a Freeboard Value Approach in establishing FFRMS flood elevations in areas where the 100-year Base Flood Elevation levels are known.

Description and Explanation of Flood Mitigation Plans

In accordance with Executive Order 13690 and the Freeboard Value Approach, all Class I actions (non-critical actions) will have an elevation of FEMA base flood +2 feet and all Class II actions (critical actions) will have an elevation of FEMA base flood + 3 feet. This will result in an elevation of 8 feet above NAVD88 for Class I structures, and 9 feet above NAVD88 for Class II structures identified in Table 1.

Incorporated into the FOC design are multiple mitigating strategies consistent with the intent of the *Criteria for Land Management and Use*, under 44 CFR Part 60 to reduce hazards to human life and property due the flooding. Additional fill will be added to the base of the FOC to raise the final finished elevation to 8 feet above NAVD88. This will allow for 2 foot of flood elevation variation above the FEMA-established base flood elevation. This final finished elevation will be an improvement over that of the existing adjacent buildings within the BICY Headquarters Complex. The proposed floor construction for the FOC will be a slab-on-grade with an impermeable vapor barrier below. The structural perimeter foundation/slab edge will be designed to resist hydrostatic and hydrodynamic loads and the effects of buoyancy. The FOC will be engineered to remain intact, to protect the contents, and to return online immediately following a direct flooding event. The structural design of the building is designed to 161 mph wind speed. The Risk Category per Florida Building Code / International Building Code for the purposes of structural design is Category II, which is between Category I (structures that represent a low hazard to human life in the event of failure, such as an agricultural building) and Category III (structures that represent a substantial hazard to human life in the event of a failure, such as an assembly building). The exposure category is D, which is the most stringent exposure and is used where the surrounding area is flat and unobstructed. The building is designed to function sustainably and be resilient. It is energy and water efficient, with a Florida friendly landscape design that minimizes irrigation needs and uses low maintenance plant selections. The construction uses durable, low maintenance materials and is made of metal in order to resist termites. The facility will comply with the Climate Friendly Park (CFP) goals aimed at reducing greenhouse gas emissions as well as meeting the Director's call to action item numbers 23 (Go Green), 24 (Invest Wisely), 30 (Tools of the Trade), and 31 (Destination Innovation).

It is anticipated that similar measures will be employed for the planned future structures identified in Table 1 for their respective Class determination. A risk analysis should be conducted during the design phase for these future structures to confirm assumptions about the level of protection required.

The land surface of the project area has been previously disturbed by anthropogenic modifications, so there are no anticipated adverse effects to the natural and beneficial floodplain values. The proposed construction of the FOC building and other structures and entranceway will be conducted in a way that minimizes disturbance to the soil surface. The soil surface will be graded to match that of the surrounding (undisturbed) soils and overland flow of flood waters is not expected to be

impeded or otherwise altered from natural flow patterns. Included in the project is a stormwater management facility to discharge stormwater runoff at pre-development rates to mimic the existing conditions (Walker Architects 2023). For the reasons discussed above, no significant impacts are expected to the 100-year floodplain from the Proposed Action.

There are no unacceptable risks to human health and life associated with the proposed project location. Large storm events are preceded by storm warnings typically 24 hours in advance. This provides sufficient time for storm preparations and/or evacuations of the proposed facilities.

Summary

The project area for the Proposed Action is within FEMA Zone AE, which is part of the 100-year floodplain. The NPS has determined that there are no practicable alternative locations for this critical facility. However, the NPS has determined that there is no unacceptable risk to human safety since the FOC and associated structures could be quickly evacuated in the case of flooding. Also, there is an established storm warning system that typically allows at least 24 hours prior notice before major storm events. There is minimal risk to property as mitigation measures (specified above) will have been taken during design and construction. No significant impacts to floodplains are expected resulting from the proposed project.

Therefore, it is determined that the Proposed Action is consistent with Executive Order 11988 (*Floodplain Management*), Executive Order 13690 (*Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*), Director's Order #77-2 (*Floodplain Management*), and NPS Procedural Manual #77-2 (*Floodplain Management*).

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VISUAL IMPACT ASSESSMENT REPORT CONSTRUCT FIRE STATION AT BIG CYPRESS NATIONAL PRESERVE HEADQUARTERS COMPLEX, OCHOPEE, FLORIDA



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February 2023

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GLOSSARY OF ACRONYMS, ABBREVIATIONS & INITIALISMS

| | |
|------|---------------------------------|
| AVE | area of visual effect |
| BICY | Big Cypress National Preserve |
| FNAI | Florida Natural Areas Inventory |
| FOC | Fire Operations Center |
| GMP | General Management Plan |
| km | kilometer(s) |
| KOP | key observation point |
| NPS | National Park Service |
| ORV | off-road vehicle |
| VIA | visual impact assessment |

EXECUTIVE SUMMARY

NPS has identified a need to increase the annual acreage of prescribed fires at BICY. In light of recent increase in wildfire intensity, aerial coverage, and associated damage in several areas of the United States, an annual goal of >125,000 acres of prescribed fire is targeted for BICY. This goal aims to help reduce the severity and extent of wildfires, and to enhance the health and quality of the ecosystems, within BICY. To help achieve this goal, a new consolidated Fire Operations Center, and associated facilities, are needed at BICY Headquarters Complex.

This VIA report was prepared to evaluate the potential visual impacts of the proposed action. NPS intends to improve the BICY Fire and Aviation Program by constructing a new consolidated Fire Operations Center (FOC), and associated facilities, at the BICY Headquarters Complex as described in the Environmental Assessment by NPS (2023) entitled *Construct Fire Station at Big Cypress National Preserve Headquarters Complex, Environmental Assessment, Big Cypress National Preserve, Ochopee, Florida*.

Overall, the project would further the park's mission as well as meet management zone- and site-specific guidance from the BICY General Management Plan (GMP) and from the 2016 Fire Management Plan by NPS et al. (2016). The GMP guides visitor use, natural and cultural resource management, and general development. It provides a direction for resource management and preservation as well as appropriate visitor use and interpretation of the resources within the original BICY boundaries and acreage. The 2016 Fire Management Plan discusses fire management and describes how prescribed fire is used to meet BICY objectives.

For each of the three key observation points (KOPs), data were collected to identify the qualities and condition of the existing landscape and the viewer groups associated with those locations. The existing landscape is inventoried below in terms of landscape character, visual elements (form, line, color, and texture), and spatial composition.

The placement of the FOC, and related facilities, at an area already having been disturbed decades ago, rather than elsewhere in BICY natural habitats, minimizes any negative effects to the viewshed. The current BICY Headquarters Complex, coupled with the presence of vegetation near the southern edge of US-41, effectively hides most of the proposed new structures from view from KOPs 1 through 3. The FOC and proposed new structures are far enough away from US-41 that they are mostly hidden. Given that the BICY Headquarters building has been there since 1970, and the project area landscape has had fill added in the 1960s, and the distance between the FOC and the views from US-41, collectively make the placement of more anthropogenic structures there much less imposing compared to adding these structures elsewhere at one of the many pristine areas at BICY or in more visible areas such as adjacent to one of the visitor centers. The addition of these facilities is not expected to detract from the viewshed along US-41 as it passes through BICY. The many natural vistas remain unblemished as viewed from the visitor centers, Loop Road, and from any of the many hiking and other trails used by visitors to BICY.

1 INTRODUCTION

Big Cypress National Preserve (BICY) protects over 720,000 acres (1,125 square miles) of swamplands, flatwoods, and estuarine wetlands and associated habitats in southern Florida (Florida Natural Areas Inventory [FNAI] 2022). BICY is bordered to the north by land purchased through the Florida Forever land acquisition program; to the east by Miccosukee Indian Water Conservation Land, Everglades National Park, and Francis S. Taylor Wildlife Management Area; to the south by Everglades National Park; and to the west by Florida Panther National Wildlife Refuge and Fakahatchee Strand Preserve State Park among other conservation lands.

Recent increases in the intensity and areas in national wildfire activity have drawn attention and more interest to the causes of wildfires, their consequences, and how risk from wildfires might be mitigated in the United States (Burke et al. 2020). The risk of wildfires may be exacerbated by factors resulting from climate change (Illowsky 2021). Therefore, prescribed fire is conducted annually at BICY by the BICY Fire and Aviation Program. BICY has one of the most active fire management programs in the National Park Service (NPS). These prescribed fires are conducted to reduce the number and intensity of wildfires in southern Florida, as the state has the second highest average number of wildfires in the nation, as well as to enhance the quality and health of the fire-dependent ecosystems within BICY (NPS 2022a).

This visual impact assessment (VIA) report was prepared to evaluate the potential visual impacts of the proposed action. NPS intends to improve the BICY Fire and Aviation Program by constructing a new consolidated Fire Operations Center (FOC), and associated facilities, at the BICY Headquarters Complex as described in the Environmental Assessment by NPS (2023) entitled *Construct Fire Station at Big Cypress National Preserve Headquarters Complex, Environmental Assessment, Big Cypress National Preserve, Ochopee, Florida*.

NPS has identified a need to increase the annual acreage of prescribed fires at BICY. In light of recent increase in wildfire intensity, aerial coverage, and associated damage in several areas of the United States, an annual goal of >125,000 acres of prescribed fire is targeted for BICY. This goal aims to help reduce the severity and extent of wildfires, and to enhance the health and quality of the ecosystems, within BICY. To help achieve this goal, a new consolidated FOC, and associated facilities, are needed at BICY Headquarters Complex.

2 PROJECT BACKGROUND

The current Fire Operations Building is 6.1 miles northwest of the BICY Headquarters Complex. The current Deep Lake Fire Station is 12.2 miles northwest of the BICY Headquarters Complex. The aviation branch of BICY currently operates out of the Oasis Ranger Station Airfield, 18.6 miles east of the BICY Headquarters Complex. The current fire station was constructed in the 1970s as a private residence and was significantly modified and updated in 1982 and 2002 to support fire station functions. The existing space is inadequate for current and expected personnel and equipment (NPS 2022b). Recent theft of fire equipment at the Deep Lake Fire Station has shown the security of grounds at the existing FOC to be insufficient. The existing facilities are inadequate for preventing degradation of equipment under the hot southern Florida sun. In addition, the indoor air and water quality are of concern to the personnel that utilize the existing facilities (NPS 2022b). Other concerns for the existing facilities include leaking air conditioning units and drip pans, faulty electrical outlets and internet connections, and other maintenance items associated with older buildings in subtropical climates (NPS 2022b). The widely spaced arrangement of the existing facilities of the BICY Fire Operations Program and the inadequacies of some of the existing buildings underscore the need for a new consolidated FOC and associated facilities.

2.1 Project Design Visual Characteristics

Due to the aging structure of the current Fire Operations Building and its inconvenient location away from BICY headquarters, and the locations of other fire-related facilities spread out over several miles, a new purpose-built FOC is proposed along with accessory structures and areas. The BICY Headquarters Complex, including the FOC and accessories, is used for administrative purposes and is removed from park visitor areas.

FOC: The proposed approximately 5,000-square foot single-story FOC building and associated facilities on approximately 16 acres of land will be adjacent to the BICY Headquarters Complex off US Highway 41 (US-41 or Tamiami Trail) in Ochopee, Florida. The FOC will include various storage rooms for fire-related equipment and supplies, a kitchen, several offices, meeting rooms, a gym, and a conference room. Exterior walls will be painted stucco on reinforced concrete masonry units (NPS 2022c). The FOC will have a standing seam metal roof with a 4:12 slope with glass-fiber faced gypsum soffits painted white (Walker Architects 2023). Exterior walls will be colored with the standard NPS colors of brown and (or) beige. The top of the FOC roof peak will be approximately 25 feet.

The long axis of the FOC will be oriented east-west for solar control, shading, and optimal energy performance (NPS 2022c). The short sides of the building will be exposed to low, direct sunlight in morning and late afternoon. Along the southern building face, the overhang of the roof will act as a buffer from direct sunlight during the hot mid-day sun (NPS 2022c). More direct heat gain will occur along the southern face of the building in winter when the angle of the sun is at its lowest along the horizon. All year long, windows positioned along the long north face of the building can let in ample indirect sunlight, maximizing interior exposure to natural light without the heat gain of direct sun exposure (NPS 2022c).

BICY has some of the least amount of anthropogenic light pollution in the eastern United States, making for a particularly dark sky at night (NPS 2022c). The FOC is designed to minimize disruption to the night sky with carefully considered, Dark Sky compliant lighting strategies. This will include low light emittance fixtures and minimizing the quantity of fixtures throughout the site (NPS 2022c). Fixtures will be fully shielded and color temperature; intensity and timing will be controlled to ensure that light pollution is limited.

The FOC design considers bird-friendly strategies in the design of exterior glazing (NPS 2022c). Characteristics such as etched glass windows, reducing the amount and (or) size of windows, incorporating glass film, using interior window shades, using exterior screens, and the use of strategic shading elements.

Although no landscape plantings are currently planned for the FOC, such plantings can be included if visual screening were needed around the FOC.

Accessory structures and areas associated with the FOC: The planned accessory structures and areas consist of a separate engine bay, pole barn, helicopter hangar, four helipads, parking lot, helicopter fueling area, portable storage unit, and aviation overflow area. Exterior walls of accessory structures will use the standard NPS colors of brown and (or) beige.

The pole barn is planned to measure approximately 60 by 200 feet (12,000 square feet) and will include an attached engine bay and equipment storage space as well as an open-air gym and office space. The barn is planned to have a truss roof with a 3:12 pitch and a maximum height of approximately 31 feet at its peak. The helicopter hangar is planned to measure 50 by 100 feet (5,000 square feet) and will include an associated parking lot of 100 by 20 feet (2,000 square feet) and have a similar maximum height as that of the pole barn. The hangar will have an exterior paint color of beige, like that of the FOC. The helipads will consist of three Type-1 helipads, each measuring approximately 15 by 15 feet square, and a single Type-3 helicopter pad of 30 by 30 feet. Safety clearance radii of 75 feet and 110 feet will be designated around the Type-1 and Type-3 helipads, respectively. The parking lot will measure 110 by 145 feet (15,950 square feet). The 30 by 30 foot (900 square foot) fueling area will include a 7,500-gallon storage tank for Jet-A fuel on a skid and associated containment system. The aviation overflow area will allow for the temporary storage of four to five helicopters.

The hangar and helipads are planned to be placed farthest south from US-41 to minimize visibility from the road.

Entranceway and road: A new asphalt entranceway will be constructed to tie in the FOC and associated amenities with the existing road near the BICY Headquarters to the west of the project area. A new entranceway will also be constructed linking these facilities with US-41 to the north. Underground utilities and sewer lines will be routed to support the FOC and associated infrastructure. A fiber optic line along US-41 will be tapped to serve the project area. Existing landscape buffers will not be affected by the Proposed Action, as development will be contained entirely within the existing cleared grassy areas.

2.2 Visual Context

The project area consists of approximately 16 acres of land along the south side of US41 in Ochopee, Collier County, Florida. The project area is adjacent to the existing BICY Headquarters Complex, at 33100 Tamiami Trail East, Ochopee, Florida. A wide expanse of wetland habitats, having a mix of woody and herbaceous vegetation, surround the Headquarters Complex on all sides and north of US-41. The project area is approximately 0.2 miles east of the Nathaniel P. Reed Visitor Center and separated from it by Halfway Creek and associated vegetation. The vegetation associated with the creek effectively provides a visual barrier between the visitor center and the project area. The proposed FOC, and related structures, would not be in the direct view of visitors to BICY because of the distance between the FOC combined with the presence of vegetation between these areas. The BICY Headquarters Complex is designed for use by BICY administrative and facilities operation personnel rather than for use by general visitors. Also, a gate and fence are planned to restrict access to the aviation area, hangar, fueling station, helipads, and parking areas beyond the FOC.

The project area is relatively flat with little elevation change over the approximately 16 acres of the project area, at approximately 6 feet NAVD88. US-41 is the northern border of the project area.

Surface waters in and around the project area consist of a roadside ditch along US-41, an excavated portion of Halfway Creek along the eastern boundary of the project area, and a natural marsh west of the project area.

Most of the project area is regularly mowed and is a mixture of sedges (Cyperaceae) and turfgrass such as non-native centipedegrass (*Eremochloa ophiuroides*). Cabbage palm (*Sabal palmetto*) line the riparian edges of the surrounding wetlands and occur as individuals and in small groups in the northern portion of the project area.

Halfway creek is vegetated with wetland-associated plants such as red mangrove (*Rhizophora mangle*), buttonwood (*Conocarpus erectus*), dahoon holly (*Ilex cassine*), sawgrass (*Cladium jamaicense*), common reed (*Phragmites australis*), and saltbush (*Baccharis halimifolia*) (Ford 2021).

The ditch along US-41, north of the project area has baldcypress (*Taxodium distichum*), southern cattail (*Typha domingensis*), and fragrant beaksedge (*Rhynchospora odorata*) growing along its banks (Ford 2021).

The marsh west of the project contains wetland plants such as sawgrass, fimbry (*Fimbristylis spadicea*), gulf spikerush (*Eleocharis cellulose*), saltgrass (*Distichlis spicata*), and black needlerush (*Juncus roemarianus*) (Ford 2021). Note that although most of Florida has a year-round growing season, including the project area, the level of visual screening afforded by vegetation will vary by season, relative rainfall, and stochastic events. Stochastic events that may reduce the amount of foliage and thus the level of visual screening of the FOC include disease or insect outbreaks, flooding, fire, and high winds such as those accompanying major storms. However, such variability of vegetative screening is not expected to strongly affect the level of visual impacts resulting from the proposed project, as the proposed structures will have a relatively low profile, will be on level ground, and will be in the proximity of existing buildings.

There are no cultural resources identified within the 16-acre project area (Krawitz 2020, Menchaca 2022). The BICY Headquarters building was constructed in 1970 as the Golden Lion Motor Inn. The motel closed in the early 1980s and was purchased by the NPS in 1986 (Whichello 2018, Krawitz 2020). Various modifications to the building since its use as a motor lodge have made it ineligible from being designated as a state historic property (Krawitz 2020). The only elements within a 1-mile radius of the project area that are eligible for a designation as a state historic property are US-41 itself and Tamiami Canal that runs along the north edge of this road (Krawitz 2020) (Table 2-1).

Table 2-1. Cultural Resources Recorded Within a 1-Mile Radius of the Project Area

| Florida Master Site File ID | Site Name or Description | State Historic Preservation Office Determination |
|-----------------------------|---|--|
| 8CR00927 | US Highway 41 (Tamiami Trail) | Eligible |
| 8CR00928 | Tamiami Canal | Eligible |
| 8CR01085 | Turner River Road complex | Insufficient info |
| 8CR01110 | US-41/Red Yankee Canal Slab Bridge | Not eligible |
| 8CR01111 | US 41/Hydro Canal Slab Bridge | Not eligible |
| 8CR01149 | US 41/Gator Hole Culvert | Not eligible |
| 8CR01150 | Wooten's Airboat Tours | Not eligible |
| 8CR01582 | Birdon Packing House (BICY-473) | Not eligible |
| 8CR01583 | Watson's General Store (BICY-474) | Not eligible |
| (not found) | BICY Headquarters Building (ex-Golden Lion Motor Inn) | Not eligible |

Sources: BICY Headquarters data taken from Krawitz (2020), all other data from a table on page 3 of Menchaca (2022)

2.3 Area of Visual Effect

The area of visual effect (AVE) defines the geographic extent of the analysis area for this project's inventory and impact assessment. The AVE was identified to be a 1000-foot radius around the centroid of the project area (Figure 2-1). This AVE was chosen based on a viewshed analysis run from the proposed project components to identify the total area that may have visibility of the project. This area includes views from US-41. It has been determined by BICY staff that a building the size and height proposed for the FOC would not be observable from the Nathaniel P. Reed Visitor Center and so this vantagepoint was excluded from further analysis.

Within the AVE, three viewpoints were identified through coordination with personnel of BICY, and from the NPS Denver Service Center, to assess the effect of the construction, operation, and maintenance of the project. The following viewpoints, or key observation points (KOPs), are further described in Subsection 4.2 (Existing Landscape) and are depicted in the plan view in Figure 2-2:

- **KOP 1: US-41 northwest of the BICY Headquarters Complex.** This KOP is approximately 800 feet northwest from the project area. The view is southeast toward the project area. It is possible, although unlikely, for the FOC and accessory structures to be visible from this vantage point due to the presence of vegetation along the south edge of the road, the two-story headquarters building, and the vegetation associated with the marsh behind this building.
- **KOP 2: US-41 north of the BICY Headquarters Complex.** This KOP is adjacent to the northwest corner of the project area. The view is south-southeast toward the project area. It is possible that the FOC and accessory structures may be visible to drivers from this vantage point because of the presence of an entranceway leading south from US-41, making a less obstructed view from the road to the project area.
- **KOP 3: US-41 northeast of the BICY Headquarters Complex.** This KOP is adjacent to the north-central border of the project area. The view is south toward the project area. This is the closest KOP to the project area and offers the least obstructed view as there is an existing gravel entranceway leading south from the road to the project area.

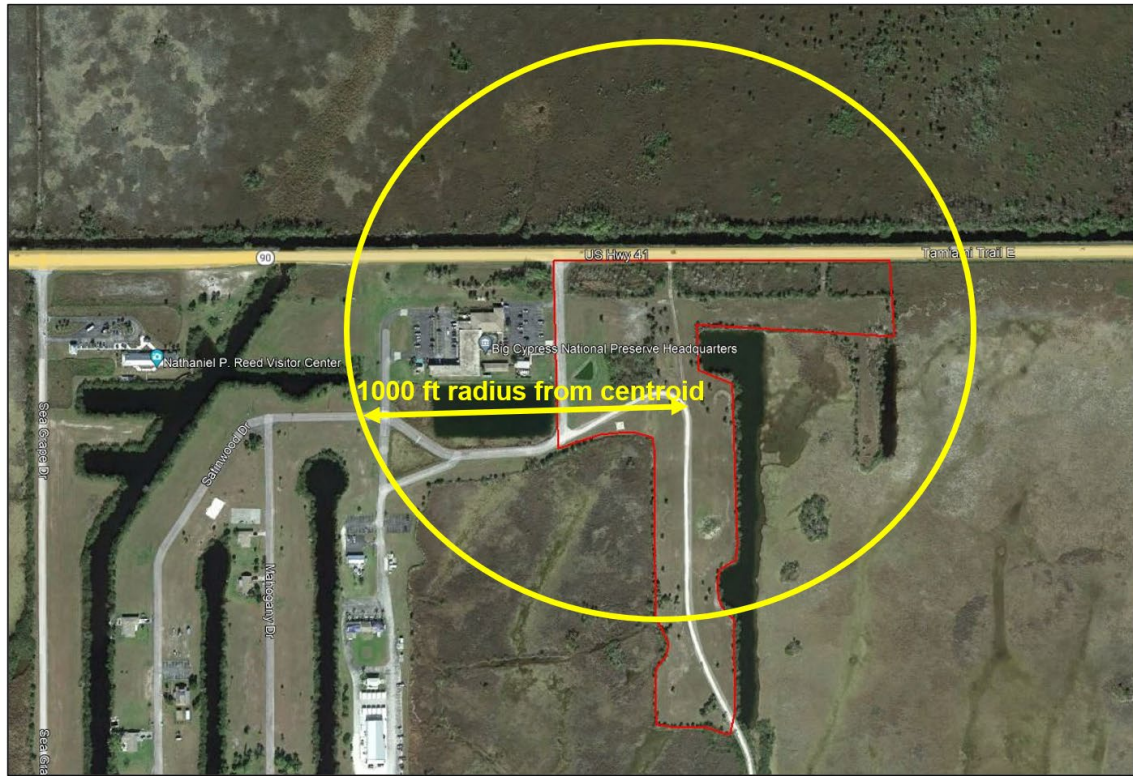


Figure 2-1. The Area of Visual Effect is Defined as a 1000 Foot Radius of the Centroid of the Project Area

Notes: The area of visual effect is shown as the yellow circle. Project area outlined in red.

Source: Google Earth aerial dated July 2021



Figure 2-2. The Three Key Observation Points are Shown in Relation to the Proposed Fire Operations Center (FOC) and Planned Accessory Structures within the Project Area

Notes: KOPs and viewing directions in yellow. EOC = planned Emergency Operations Center

Source: Modified from figure on PDF page 21 of the final schematic design report by Walker Architects (2023)

3 REGULATORY FRAMEWORK

Visual resource policies from relevant NPS documents were gathered to form a baseline for this VIA and are described below.

3.1 National Park Service Organic Act

The NPS Organic Act directs NPS to “conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (NPS 2021b).

3.2 National Park Service Visual Assessment Methodology and Guidelines

The NPS VIA methodology and guidelines were updated in 2021 to address visual resource inventory and impact procedures (NPS 2021a). These methods were designed for a wider audience, to inform park management, and to enhance collaboration with stakeholders. The first goal of these methods is to evaluate the relative change in a view from development of a project (or other activity) and the potential impacts on the visual landscape. These changes are evaluated from selected viewing locations or KOPs, which form the basis for the subsequent inventory and analysis. In addition to the level of visual change (or contrast) introduced by a project, these methods analyze the effect on viewer experience, NPS interpretive opportunities, and on overall park visual resources. More detail on the inventory and impact assessment methodologies for this project are described in Subsections 4.1 and 5.1 respectively.

3.3 Big Cypress National Preserve General Management Plan

The BICY General Management Plan (GMP) and Environmental Impact Statement were written as a single document, finalized in 1992. BICY was established in 1974 as a 574,440-acre preserve, with an additional 146,000 acres added to the preserve in 1988, with the objectives of ensuring the preservation, conservation, and protection of the natural, scenic, hydrologic, plants and animals, and recreational values of the BICY watershed (NPS 1992). It also was designed to provide for public enjoyment of the resources within BICY. The GMP was written to guide visitor use, natural and cultural resource management, and general development within BICY (NPS 1992).

Planning issues and management concerns addressed in the GMP by NPS (1992) are as follows:

- **Visitor Use Issues:** BICY is primarily used by hikers, hunters, fishers, off-road vehicle (ORV) users, campers, and owners of improved properties within and adjacent to BICY. To this list can be added bird and wildlife viewing/photography, botanists, and other non-extractive naturalist activities. There were, at the time that the GMP was written, few entrances into the preserve. There were also few opportunities for the public to learn and appreciate the unique resources at BICY. Such opportunities have increased somewhat since the time of the GMP. There are currently two visitor centers at BICY.
- **Natural Resource Issues:** Issues with hydrology, mineral extraction, wildlife, species richness of vegetation, and fire management.

Hydrologic concerns focus on the quality, quantity, seasonality, and distribution of surface water and its effect on the natural communities in BICY and downstream, in the Everglades. Canal and road construction have altered the natural flow patterns in portions of BICY through the diversion and (or) obstruction of surface water. Oil and gas exploration and extraction, along with agricultural nutrient contamination, have the potential to degrade the water quality at BICY and its hydrologically sensitive resources.

The locations and timing of oil and gas exploration and development operations must be carefully evaluated to ensure that natural and cultural resources are not negatively affected. BICY has a Minerals Management Plan that includes specific management objectives to protect important resources within its boundaries.

The 1,600+ species of native plants at BICY must be protected against such dangers as invasive plant species. Such invasive plants have the potential to outcompete native plants for limited resources and are, therefore, controlled in BICY.

BICY experiences the largest fire load of any national park, both in terms of numbers of fires and in annual expenditures of fire suppression efforts. Most plant communities within BICY are dependent on periodic burn cycles for their survival. Prescribed burning is used in BICY for a variety of purposes, including maintaining pastures for grazing cattle, and to improve and manage nesting habitat for red-cockaded woodpecker (*Leuconotopicus borealis*) and Cape Sable seaside sparrow (*Ammospiza maritima mirabilis*).

BICY is home to an exceptional number of rare and protected species. Such iconic species as federally endangered Florida panther (*Puma concolor coryi*), state-managed Florida tree snail (*Liguus fasciatus*), and the federally protected Cape Sable seaside sparrow and red-cockaded woodpecker call BICY their homes. Management of Florida panthers includes ensuring that sufficient populations of white-tail deer (*Odocoileus virginianus*) and feral hog (*Sus scrofa*) are available as prey. Because of the risk of disturbance of Florida panthers due to hunting activities, and the possible reduction of prey populations due to excessive hunting mortality, hunting itself is closely managed inside BICY.

- **Cultural Resource Issues:** There were 395 known archeological sites (both historic and prehistoric) at the time that the GMP was written. Many of these sites are on dry hammocks where there is potential for damage from oil and gas activities, ORV use, hunting camps, invasive plants, feral hog rooting, nine-banded armadillo (*Dasypus novemcinctus*) burrowing, illegal digging/looting, and vandalism. The most serious threats to archeological resources appear to be illegal digging/looting and digging activities by hogs and armadillos. Such looting has been documented at several of the larger, more readily accessible archaeological sites as well as Miccosukee and Seminole sites. The roots of Brazilian pepper (*Schinus terebinthifolius*) and Australian pine (*Casuarina* spp.) cause changes to the stratigraphy of such sites. Other damage may have occurred due to activities at hunting camps and inholdings as such upland sites were also often used by Native Americans. ORV use can erode some archaeological sites. Peat fires can damage sites through compaction of soils and oxidation of carbonate soils. Access to archaeological sites in some areas is made easier for looters via roads for oil and gas development. Future oil and gas exploration and development may also cause damage to archaeological sites if not properly planned to avoid such sites.

- **Related Issues and Concerns:** Further actions were developed based on the strategies for addressing issues and achieving management objectives over the life of the GMP (which is stated to have been 10 to 15 years). These include more detailed implementing plans, or action plans, that are designed to carry out the plan concepts. Various rules and regulations were and continue to be developed as a result of the GMP, especially concerning hunting activities and ORV use. These regulations and rules require a public review process while in the proposal stage, and as such, the GMP does not in and of itself provide the exclusive basis for the adoption of future rules and regulations. Oil and gas interests are privately owned (NPS does not own such mineral rights). The approval process for the GMP necessitated the revision and updating of several related management plans. These related management plans include the 1982 Environmental Assessment for Fire Management, the 1982 General Development Plan, the 1983 proposed sensitive resource areas map, the 1984 Interpretive Plan, the revised Land Protection Plan of 1984 (revised in 1986 and 1988). The GMP goes on to address its relationship to state programs, the Florida

Environmental Land and Water Management Act, the Save Our Everglades program of 1983, the designation of BICY waters as “special waters” of the state, the Florida Coastal Zone Management Program, and the 1989 state comprehensive plan titled Outdoor Recreation in Florida.

The proposed FOC and associated facilities are to be sited away from the Nathaniel P. Reed Visitor Center, which is approximately 0.2 miles west of the project area and separated from it by Halfway Creek. Therefore, these proposed new structures would not be in direct view by the visiting public. The FOC and associated facilities will not be open to the public and will not receive general visitors to the preserve. The FOC will be managed primarily to support prescribed burning, fire suppression, and other fire-related activities.

4 INVENTORY

The inventory of visual resources, based on the new draft NPS VIA methods and guidelines document, focuses on the three KOPs identified in Subsection 2.3. The following section first outlines the methodology to inventory existing visual resources from the KOPs with subsequent subsections documenting (1) the existing conditions from each KOP and (2) viewer groups in their viewshed.

4.1 Methodology

For each of the three KOPs, data were collected to identify the qualities and condition of the existing landscape and the viewer groups associated with those locations. The existing landscape is inventoried below in terms of landscape character, visual elements (form, line, color, and texture), and spatial composition.

In addition to the existing landscape, knowing the types of viewers who visit and use each KOP is important to understanding their visual expectations in the viewshed. The first inventory component is the type of viewer (casual eye, critical observer, or repeat local observer). Casual eye viewers expect to see a scenic landscape but often have little prior knowledge about the location and depend on and enjoy interpretation to gain information. Critical observers have special knowledge that contributes to their interpretation of the view (e.g., photographers, painters, bird watchers); authenticity of the place may be an important item for these viewers. Repeat local observers include BICY personnel, partners, and commercial use authorization holders, as well as visitors whose connection to the landscape is generational with a considerable concern for changes in the landscape.

4.2 Existing Landscape

The following paragraphs describe the existing landscape for each KOP. Visual simulations of “before” and “after” construction of the FOC, and associated accessory structures, are shown in Figures 4-3 through 4-6.

• KOP 1: US-41 northwest of the BICY Headquarters Complex (Figures 4-1 and 4-2)

- **Landscape character:** A combination of urban and natural elements compose the landscape. Urban elements consist of asphalt road, guardrail, utilities, power poles, mowed turfgrass, ditch, and the BICY Headquarters building and associated paved parking lot with parked vehicles. Natural or semi-natural elements are cabbage palms, sedges and rushes growing along the ditch, and taller trees and shrubs south of the KOP. A cluster of purple marten nesting boxes are visible near a dredged channelized finger of Halfway Creek, south of the KOP. Brazilian pepper line this portion of the creek.
- **Visual elements:** The view is split horizontally, with a blue sky and white fluffy clouds contrasting with the vibrant green of the grasses, sedges, and rushes in the foreground. These two major components are separated by a thin horizontal dark green line formed from the palms, shrubs, and trees in the background. The light-colored portions of the Headquarters building, and the white vehicles in the background, blend in with the sky to some degree. The imagery was taken in July 2021 during peak growing season. The vegetation in winter would be expected to have a stronger presence of gray tones than in this image, although the palm fronds and Brazilian pepper leaves would remain green year-round.
- **Spatial composition:** The blue horizon is punctuated by the tallest palms and the BICY Headquarters building. The buildings and vehicles detract only a minor amount from the overall pleasant theme of the view. The eye is drawn to the far horizon and the dark green

ribbon of vegetation beyond the building. The Continuity of the view is interrupted by the roadside guardrail and by the tall BICY Headquarters building.

• **KOP 2: US-41 northeast of the BICY Headquarters Complex (Figures 4-3 and 4-4)**

- **Landscape character:** The view is dominated by an asphalt road running south towards the horizon. This road, and the fence and associated gate, stop sign, and vehicles represent the urban components of the view. The remaining components are natural elements in the form of lush vegetation. The roadside ditch is not easily observed from this viewpoint except for the downward slope of the road bank. The background is a narrow line of palms, shrubs, and trees off in the distance.
- **Visual elements:** The view is dominated by blue sky with white fluffy clouds and an expanse of pavement leading to the green horizon. Lime green cypress needles dominate the foreground along with cabbage palm. Tall panic grass, sedges, and rushes are less dominant in the foreground. Grayish portions of the grasses in the foreground stand out somewhat from the green vegetation. The fence, gate, and associated structures break up the continuity of the view somewhat but is partially blocked by the pleasingly green and lush vegetation along the roadside ditch.
- **Spatial composition:** The bluish-gray pavement clashes somewhat with the lush green vegetation on either side of the view but blends somewhat with the light blue sky and white clouds. The dark fence and gate merge into the nearby trunks of palms and cypress except under scrutiny, in which case they stand out against the green background.

• **KOP 3: US-41 north of the BICY Headquarters Complex (Figures 4-5 and 4-6)**

- **Landscape character:** Blue sky and white fluffy clouds compete against the rich greens of the cabbage palms, cypress, Brazilian pepper, and herbaceous vegetation in the middle ground. The light gray winding gravel road draws the eye towards the horizon. The heavy cylindrical steel gate, gravel road, asphalt main road, and a glimpse of a building at the right side of the image together represent the anthropogenic components of the view.
- **Visual elements:** The lush green foliage dominate the view. The sky and clouds are less dominate than the vegetation. The tallest palms and cypress break up the continuity of the horizon. The light gray gravel road provides a pleasing break in the otherwise green landscape. Some grayish branches can be seen among the cypress and Brazilian pepper. The yellow gate is somewhat obtrusive against the flow of the meandering grayish gravel road.
- **Spatial composition:** The view is well balanced, with the eye naturally being led toward the horizon via the grayish gravel road. A slightly richer green ribbon is revealed in the background.



Figure 4-1. Before Construction of Key Observation Point 1: Google Earth Street View Image along US Highway 41 Approximately 800 Feet Northwest of the Project Area

Source: Image modified from Google Earth street view image, dated July 2021.



**Figure 4-2. Before Construction Visual Simulation of Key Observation Point 1 along US Highway 41
Approximately 800 Feet Northwest of the Project Area**

Source: Image courtesy of Walker Architects



Figure 4-3. Before Construction of Key Observation Point 2: Google Earth Street View Image along US Highway 41 at the Northwest Corner of the Project Area

Source: Image modified from Google Earth image, dated July 2021.



Figure 4-4. Before Construction Visual Simulation of Key Observation Point 2 along US Highway 41 at the Northwest Corner of the Project Area

Source: Image courtesy of Walker Architects



Figure 4-5. Before Construction of Key Observation Point 3: Google Earth Street View Image along US Highway 41 Near the North-Central Border of the Project Area

Source: Image modified from Google Earth image, dated July 2021



Figure 4-6. Before Construction Visual Simulation of Key Observation Point 3 along US Highway 41 Near the North-Central Border of the Project Area

Source: Image courtesy of Walker Architects

4.3 Viewer Groups

Different viewer groups were analyzed from each KOP to understand how viewers would respond to the introduction of the project. Due to the accessibility of each KOP and the range of visitors to the park, every KOP is expected to have casual eye observers, critical observers, and repeat local observer viewers (as defined in Subsection 4.1) with their different visual and experience expectations.

Visitors to BICY can engage in a wide assortment of activities. Wildlife viewing and photography are popular at the park and include watching and photographing alligators, birds, and manatees. Additional activities include hiking, cycling, camping, fishing, hiking, paddling, picnicking, and attending ranger programs (NPS 2008). Bird watching is most often done during the dry season (November through April), when migratory birds and overwintering birds are present. Most visitation at BICY occurs from December through March when the weather is cooler and less humid, wildlife is more concentrated due to lower water levels, and there are fewer biting mosquitoes (NPS 2008). Hunting takes place in BICY, and special regulations apply. Some visitors also engage in ORV activities. Oil drilling also takes place at BICY (NPS 2008).

Visitation at BICY was recorded at 794,350 for 2018, which is the most recent statistic available. The annual number of visitors to BICY from 2001 through 2018 varied from 400,902 to as high as 1,192,858 and was highest in 2014 (<https://www.nps.gov/bicy/learn/management/statistics.htm>). The two visitor centers at BICY are the Nathaniel P. Reed Visitor Center (nearest to the project area) and the Oasis Visitor Center. Visitor statistics were not available broken down by visitor center at the time of this study.

The two-story BICY Headquarters building at 33100 Tamiami Trail East does not receive general visitors. The shape and style of this building is reminiscent of a mid-century motel because it was originally built in 1970 for use as a motor lodge (the Golden Lion Motor Inn) as discussed in Subsection 2.2. The building is ineligible as a designated state historic property due to various modifications since its closure in the 1980s as a motel (Krawitz 2020). It is currently used by BICY personnel, primarily administration. General visitors are not permitted to enter the BICY Headquarters Complex and gates are used to control entry into the area from US-41.

US-41 in Ochopee is a two-lane road that was completed in 1928 after 11 years of construction and a cost of \$7 million (Florio 2021). In the area of Ochopee, this road runs between Naples, in Collier County, to Miami, in Miami-Dade County. A 50-mile stretch of US-41 was deemed a Florida Scenic Highway in 1999 by the Florida Department of Transportation (Whichello 2018), but this designation was later removed from this stretch of highway. The highway's southern terminus is in the Brickell neighborhood of downtown Miami at the intersection of Brickell Avenue (US Highway 1). From a broader perspective, US-41 runs north from Miami to the Upper Peninsula of Michigan, a distance of 2,008 miles (3,232 km). Its northern terminus is east of Copper Harbor, Michigan, at Fort Wilkins Historic State Park within the Keweenaw Peninsula. Between Chattanooga, Tennessee, and Naples, Florida US-41 parallels Interstate 75. The portion of US-41 that runs from Tampa to Miami, including at Ochopee, has the alternate name of Tamiami Trail, derived from a combination of the names Tampa and Miami. The section between Naples and Miami was termed US Highway 94 until 1949, when the name was changed to US-41. The road runs not only through BICY but also through portions of Everglades National Park. A canal runs along the northern edge of US-41 as it passes through BICY. A ditch runs along the southern edge of this road and is obscured in many areas by vegetation. Wetland vegetation lines much of the lengths of these water bodies.

The Nathaniel P. Reed Visitor Center at 33000 Tamiami Trail East is approximately 0.2 miles west of the project area. This visitor center features an NPS information desk, a giftshop, and public restrooms. It offers indoor and outdoor exhibits related to the natural and cultural history of BICY along with brochures and a video showing the stories of BICY, its resources, and recreational opportunities available at BICY.

Art exhibits are often on display at the visitor center. An onsite auditorium is available to be reserved for events.

The Oasis Visitor Center at 52105 Tamiami Trail East is about 18.1 miles east-southeast of the project area. It was built in the 1960s as a private airport with a hangar and restaurant. It later became the site of a service station before it was purchased by the NPS in the 1980s to be used as a visitor center (<https://www.nps.gov/bicy/planyourvisit/oasis-visitor-center.htm>). This visitor center includes exhibits relating to natural history and cultural history of BICY, educational materials, a bookstore, an introductory video, and public restrooms.

4.4 National Park Service Interest

From a park-wide perspective the FOC will be managed for a very low level of visitor use as it is designed for use only by BICY Fire and Aviation Program personnel and is approximately 0.2 miles from the Nathaniel P. Reed Visitor Center. The project area is associated with the BICY Headquarters Complex, which currently has gates at the two entranceways leading from US-41. General visitors to BICY will not have access to the FOC and there is no interpretation media or facilities planned for inclusion with the FOC. The FOC, and associated facilities, will be managed to support BICY fire operations and related work.

This subsection describes NPS interest for each of the three KOPs through assessing the viewpoint's importance (value of the viewed landscape), uniqueness (one-of-a-kind viewing opportunity or cultural, historic, or scientific significance), and NPS' commitment to spending funds or committing personnel time to enhance the viewer's experience.

• KOP 1: US-41 northwest of the BICY Headquarters Complex.

- **Importance (value of the viewed landscape):** US-41 is frequented by drivers and passengers bound for BICY, Everglades National Park, the Naples area, Miami area, or the Florida Keys. A glance towards the south reveals a brief view of the BICY Headquarters Complex and associated parking lot. There are no interpretive opportunities at this area. Much of the views along US-41 have better views of undisturbed natural areas than this view does, given the presence here of anthropogenic structures, mowed turfgrass, and artificially modified water bodies.
- **Uniqueness (incl. any cultural, historic, or scientific significance):** This view is unique in showing the basic structure of a classic style 1970s motor lodge (the Golden Lion Motor Inn, built in 1970), now the BICY Headquarters building. This building is not eligible as a state-designated historic property, however. There are no known cultural or scientific significance associated with this KOP.

US-41 itself is eligible for designation as a state historic property as is Tamiami Canal that runs along its north border. US-41 leads visitors to BICY visitor centers (Nathaniel P. Reed Visitor Center to the west and Oasis Visitor Center to the east), campgrounds, and various areas used for wildlife viewing/photography, hiking, fishing, and hunting. These facts are also true for the stretches of road at KOPs 2 and 3.

- **NPS commitment:** The sight of the BICY Headquarters building is not screened from view and there is little to no vegetative cover here as the area appears regularly mowed. There are typically no rangers or visitor services offered in this area as this and other KOPs are along a public road.

• KOP 2: US-41 northeast of the BICY Headquarters Complex.

- **Importance (value of the viewed landscape):** US-41 is frequented by drivers and passengers bound for BICY, Everglades National Park, the Naples area, Miami area, or the

Florida Keys. A glance towards the south reveals a paved road and gated fence framed on both sides by vegetation. There are no interpretive opportunities at this area. This view is not important from a natural areas/natural habitats standpoint given the anthropogenically manipulated foreground of asphalt road and fencing and background of mowed turfgrass. This view is less attractive compared to most views along US-41 between Naples and Miami and is therefore of low importance.

- **Uniqueness (incl. any cultural, historic, or scientific significance):** It is difficult to find unique features of this view as the vegetation associated with the road-side ditch is unexceptional for southern Florida and the remainder of the viewed landscape is mowed turfgrass and asphalt road with a fence and gate. There are no known historic, cultural, or scientific significance associated with this KOP besides US-41 itself.
- **NPS commitment:** Vegetation is managed along the roadside ditch in part to screen the view of the BICY Headquarters building southwest of this KOP. There are typically no rangers or visitor services offered in this area as this and other KOPs are along a public road.

• **KOP 3: US-41 north of the BICY Headquarters Complex.**

- **Importance (value of the viewed landscape):** US-41 is frequented by drivers and passengers bound for BICY, Everglades National Park, the Naples area, Miami area, or the Florida Keys. Drivers and passengers glancing towards the south at this point briefly view an inviting gravel road seemingly leading to a distant tree line along the horizon. There are no interpretive opportunities at this area. Although this view is perhaps more important than the views from KOPs 1 and 2, both of which show artificial structures, this view also has some artificial structures (a metal gate and a gravel road) along with pleasing natural vegetative features. Overall, this view from US-41 is not particularly important given that there are many miles of BICY (and Everglades National Park) along US-41 exhibiting natural habitats in prime condition.
- **Uniqueness (incl. any cultural, historic, or scientific significance):** There are no known unique features of this view when the other views from the Tamiami Trail section of US-41 are considered. Although the sky here is often beautiful, the same can be said for many other views in southern Florida most of the year. The vegetation in the view are common species that are often visible along roadsides in other areas of southern Florida. There are no known historic, cultural, or scientific significance associated with this KOP besides US-41 itself.
- **NPS commitment:** Vegetation is used in part to effectively hide anthropogenic structures in the background from view from US-41, except for the break in the vegetation where the gravel road runs south from the KOP. There are typically no rangers or visitor services offered in this area as this and other KOPs are along a public road.

5 IMPACTS

The assessment of impacts on visual resources, based on the draft NPS VIA manual, uses the same three KOPs identified in Subsection 2.3 and described in Section 4. This section first outlines the methodology used to assess impacts on visual resources with following subsections documenting the visual change proposed from each KOP, effects on viewer experience and NPS management associated with each KOP, and the overall impacts to park visual resources.

5.1 Methodology

The assessment of impacts, as described in the new NPS VIA methods and guidelines document (NPS 2021a), involves a team of evaluators who form conclusions, especially when assessing the visual change proposed from each KOP. To support the analysis and depict the proposed changes within the view from each KOP, visual simulations were developed from the KOPs and are shown in Figures 5-1 through 5-3. To assess impacts from each KOP associated with the visual change proposed by the project, the following visual components were assessed: (1) project compatibility with existing landscape character, (2) contrast of visual elements (form, line, color, texture), and (3) contrast with spatial composition and patterns. Finally, the overall impact was assessed (adverse; no effect; beneficial with a scale of high, moderate, low) incorporating the above information with additional consideration of differing lighting conditions, changes due to seasonality, and other variable factors that may affect the evaluation. After each team member reviewed the draft form, the team discussed the results to reach a consensus for each factor, including the impact level for the final version of the form. The assessment only considered what can be seen in the simulations completed from each KOP. The 1000-foot radius of the AVE is shown in plan view in Figure 2-1. The three KOPs are shown in plan view in Figure 2-2.

The second component of the visual assessment was determining the impact of the project on viewer experience and NPS management. The assessment of impacts on viewer experience focused on how a change in landscape character, visual elements, and spatial composition would affect viewer visual experience based on different viewer groups. After assessing the impact on each user group, a summary conclusion was identified, balancing the different user groups and the effect of seasonal variation and other variable factors (e.g., hunting seasons, fishing seasons, wildlife viewing and photography periodicity, tourist season). To evaluate impacts to NPS management, the view from each KOP was assessed as it relates to the park's cultural landscape and visitor experience.

The final component of the assessment was determining the overall impact to park visual resources. A summary table of impacts first summarizes the conclusions from each KOP, using the previous two analysis components, and then considers the effect of the project on the park and visitors. While this evaluation relies on the KOP analysis, the focus of the analysis is on compatibility of the project with the long-term vision for BICY.

5.2 Visual Change

Key information from observations of the “after construction” visual simulations of KOP 1 through KOP 3 are summarized here. The “after construction” visual simulations (superimposed red building with blue roof), courtesy of Walker Architects, are included as Figures 5-1 through 5-3.

• KOP 1: US-41 northwest of the BICY Headquarters Complex (Figure 5-1)

- **Compatibility with landscape character:** The FOC and associated facilities would be compatible with the existing BICY Headquarters building given that this existing building mostly or fully hides the proposed FOC from view at this KOP. Also, the area is already

heavily modified with buildings and mowed turfgrass so additional buildings fit in, although seemingly not visible from this vantage point.

- **Contrast with visual and spatial elements:** The additional FOC and associated structures do not contrast with the existing visual elements. The existing elements apparently hide the proposed additions from view. The colors and other external features of the proposed new structures would conform with NPS standards to blend in with existing NPS structures.
- **Additional and variable factors:** Because the proposed new structures are hidden by buildings rather than by vegetation, there seems little chance of variability in screening related to seasonal changes in foliage density.
- **Overall effect on scenic quality:** This view is of low quality, with or without the addition of the FOC and associated structures, given the paucity of natural habitats evident here. Very little if any effect can be observed on scenic quality based on the visual simulation from this KOP. The proposed new structures are not readily visible from this vantage point.

• **KOP 2: US-41 northeast of the BICY Headquarters Complex (Figure 5-2)**

- **Compatibility with landscape character:** The addition of the proposed FOC appears easily compatible with the existing landscape given the effective screening by the existing vegetation from this viewpoint.
- **Contrast with visual and spatial elements:** Little to no contrast is evident as the FOC is not easily observed from this vantage point. Spatial elements at this KOP already contain a combination of anthropogenic and natural components.
- **Additional and variable factors:** The FOC may be more visible during late fall and winter, when foliage may be reduced and vegetative screening is less effective. This can be mitigated by planting native evergreen species such as saw palmetto, American holly, dahoon holly, southern magnolia, sweetbay magnolia, Gordonia, swamp bay, or red bay.
- **Overall effect on scenic quality:** The view from this KOP is of only moderate quality, with or without the addition of the FOC and associated structures, so the addition of proposed structures do not appear to affect the scenic quality appreciably. Views elsewhere along US-41 show natural habitats in prime condition and so the view from this KOP seems insignificant compared to opportunities east or west of this area.

• **KOP 3: US-41 north of the BICY Headquarters Complex (Figure 5-3)**

- **Compatibility with landscape character:** The addition of the proposed FOC appears easily compatible with the existing landscape given the effective screening by the existing vegetation from this viewpoint.
- **Contrast with visual and spatial elements:** Little to no contrast is evident as the FOC is not easily observed from this vantage point. Spatial elements at this KOP are primarily natural but the FOC is mostly or fully hidden by foliage, so contrasts are minimized.
- **Additional and variable factors:** The FOC may be more visible during late fall and winter, when foliage may be reduced and vegetative screening is less effective. This can be mitigated by planting native broadleaf evergreen species such as saw palmetto, bluestem palmetto, American holly, dahoon holly, southern magnolia.
- **Overall effect on scenic quality:** The view from this KOP is of moderately high quality due to the lush vegetation in the foreground and background. Due to the screening ability of the vegetated foreground, the addition of the FOC and associated structures have only minimal effect on the overall scenic quality viewed from this KOP. The view from this area provides a fairly rare opportunity to view vegetation along the background, near the

horizon, as most of the views along US-41 are blocked by lush foreground vegetation much of the year.



**Figure 5-1. After Construction Visual Simulation of Key Observation Point 1 along US Highway 41
Approximately 800 Feet Northwest of the Project Area**

Note: The proposed Fire Operations Center is shown in red (to be clearly visible in this simulation) but would use standard NPS colors of brown and (or) beige and would be hidden by the current Headquarters Complex.

Source: Image courtesy of Walker Architects



Figure 5-2. After Construction Visual Simulation of Key Observation Point 2 along US Highway 41 at the Northwest Corner of the Project Area

Notes: The proposed Fire Operations Center is shown in red and blue (to be clearly visible in this simulation). The Fire Operations Center is not expected to be visual from this KOP due to the presence of the vegetation, the level ground on which it will be built, and the relatively low profile of the proposed structure.

Source: Image courtesy of Walker Architects



**Figure 5-3. After Construction Visual Simulation of Key Observation Point 3 along US Highway 41
Near the North-Central Border of the Project Area**

Note: The proposed Fire Operations Center is shown in red and blue but would be mostly hidden by existing vegetation, at least during peak growing season.

Source: Image courtesy of Walker Architect

5.3 Impacts to Viewers and National Park Service Interpretation

In addition to the level of contrast (visual change) introduced by the project, this assessment seeks to identify the impact on the viewer experience and its effect on NPS management of these views. This subsection first describes the impact the visual change would have on the experience from each KOP and then considers the effect the visual change would have on park interpretive themes as well as management and resource allocation within BICY.

5.3.1 Viewers

Through consideration of the results from Subsection 5.2 (Visual Change), this subsection summarizes how those changes introduced by the project could affect the visual experience for different viewer groups at each KOP. This assessment included the consideration of how different user groups would react to changes proposed in the viewshed, including the casual eye, critical observer, and repeat local observer viewers (as described in Subsection 4.1 [Methodology]).

5.3.2 Benefits of a Centralized Fire Operations Center to Viewers

Benefits to viewers of a centralized and efficient FOC include the proliferation of healthy populations of flowering plants and other members of the fire-adapted natural communities of BICY. Nutrients from burned organic material are recycled back into the soil and are utilized by a myriad of plant species, including many flowering plants. The enhanced health of the vegetation in turn enhances local populations of pollinators (e.g., bees, butterflies). The positive effects of enhanced plant and invertebrate populations may benefit higher-level consumers within BICY as well.

5.4 Summary of Impacts and Proposed Mitigation

This subsection summarizes the results from Subsection 5.2 (Visual Change) to consider the overall effect of the project on each KOP and to assess the overall effect on the park and visitors. This includes compatibility of the project with the BICY GMP and the long-term vision for the park. Possible mitigation actions are listed in this subsection for use in the unlikely event that visual impact mitigation is found to be necessary.

Overall, the project would further the park's mission as well as meet management zone- and site-specific guidance from the GMP and from the 2016 Fire Management Plan by NPS et al. (2016). The GMP guides visitor use, natural and cultural resource management, and general development. It provides a direction for resource management and preservation as well as appropriate visitor use and interpretation of the resources within the original BICY boundaries and acreage. The 2016 Fire Management Plan discusses fire management and describes how prescribed fire is used to meet BICY objectives.

The placement of the FOC, and related facilities, at an area already having been disturbed decades ago, rather than elsewhere in BICY natural habitats, minimizes any negative effects to the viewshed. The current BICY Headquarters Complex, coupled with the presence of vegetation near the southern edge of US-41, effectively hides most of the proposed new structures from view from KOPs 1 through 3. The FOC and proposed new structures are far enough away from US-41 that they are mostly hidden. Given that the BICY Headquarters building has been there since 1970, and the project area landscape has had fill added in the 1960s, and the distance between the FOC and the views from US-41, collectively make the placement of more anthropogenic structures there much less imposing compared to adding these structures elsewhere at one of the many pristine areas at BICY or in more visible areas such as adjacent to one of the visitor centers. The addition of these facilities is not expected to detract from the viewshed along US-41 as it passes through BICY. The many natural vistas remain unblemished as viewed from the visitor centers, Loop Road, and from any of the many hiking and other trails used by visitors to BICY.

It is unlikely that mitigative actions are needed to reduce contrast (visual change) introduced by the project. Nonetheless, the following potential mitigation measures may be considered to minimize effects on viewer experience, and limit impacts on NPS management:

- Minimize the height of proposed FOC and associated structures to the extent possible to decrease their visibility (and level of visual dominance) from viewpoints and to blend with the existing setting.
- Choose building materials, paint, stain, and other color treatments to match existing park structures and the natural surroundings to minimize their visual intrusion and adverse effects on natural resources.
- Maintain or expand landscape plantings to minimize visibility of structures proposed by the project. Additional plantings along the US-41 roadside could potentially help reduce the visibility of the FOC and related facilities to drivers using the highway.

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APPENDIX C

RESOURCES ELIMINATED FROM FURTHER ANALYSIS

The National Park Service (NPS) eliminated the following resource topics from further analysis based on the scope of the action alternative (proposed) action and the no-action alternative, as well as preliminary analyses. In general, if such resource topics were very similar between the alternative scenarios, they were eliminated from comparison. NPS identified and categorized the potential for various abiotic and biotic resources to be impacted by the proposed project using an NPS interdisciplinary team. Such resources or parameters were dismissed from further analysis if they do not meet the criteria from the NPS (2015) NEPA Handbook.

These criteria can be summarized as follows:

- 1) The environmental impacts associated with the resource are central to the proposal;
- 2) A detailed analysis of environmental impacts related to the resource was necessary to make a reasoned choice between alternative actions;
- 3) The environmental impacts associated with the resource are a point of contention; or
- 4) Potentially significant impacts on resources are associated with the proposal.

The following resource topics were deemed to have relatively insignificant effects to the proposed project based on review by the interdisciplinary team and the criteria summarized above from NPS (2015). Unless otherwise noted below, the region of influence for each resource topic discussed in this section is no larger than the 16-acre project area shown in Chapter 1 of the Environmental Assessment (EA).

Noise

For the purposes of this analysis, noise is defined as undesirable sound that interferes with speech communication and hearing or is otherwise annoying (unwanted sound). The noise levels generated by construction equipment vary by the type and model of equipment, the type of construction being performed, and the condition of the equipment (Quagliata et al. 2018). NPS eliminated noise from further consideration in this EA given the following three factors: (1) no nearby sensitive receptors (i.e., children, the elderly, and the acutely and chronically ill) such as residences, schools, playgrounds, daycare centers, convalescent homes, and hospitals; (2) only a short-term increase in ambient noise levels from project construction is anticipated which would not cause significant adverse impacts on the surrounding population, (3) the ambient noise level would return to its normal level following construction with the exception of occasional noise from helicopters during fire operations which is comparable to the noise from airboats at the nearby Wooten's Everglades Airboat Tours. For these reasons, noise does not require evaluation.

Environmental Justice and Protection of Children

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, assures that federal agencies focus attention on the potential for a proposed federal action to cause disproportionately high and adverse health effects on minority or low-income populations. Potential health and safety impacts that could disproportionately affect children are considered under the guidelines established by Executive Order 13045, *Protection of Children from Environmental Health Risks*

and Safety Risks. Ensuring environmental justice is a key consideration of Executive Order 14008, *Tackling the Climate Crisis at Home and Abroad*. There are no environmental justice areas of low-income and (or) minority or child populations immediately adjacent to the project area, and site construction would not adversely impact low-income and (or) minority or child populations. No subsistence populations, facilities utilized by environmental justice communities, or school or daycare locations exist within or adjacent to the project area. Consequently, the NPS has eliminated environmental justice and protection of children from detailed evaluation in the EA.

Socioeconomics

There are approximately 581 people living in the unincorporated community of Ochopee, Florida (<https://places.us.com/florida/ochopee/>). This town has a population density of less than 1 person per square mile.

The workforce is expected to be primarily local to the Collier County and Miami-Dade County area. The cost of the proposed action is insignificant compared to the annual expenditures on construction-related contractors in these two counties and would therefore constitute a negligible beneficial impact on the work force in the region during the construction phase of the project. Consequently, NPS determined that the socioeconomic impact from the Proposed Action, and the No-Action alternative, do not warrant further evaluation and eliminated it from further consideration in the EA.

Biological Resources

The approximately 16-acre project area is currently maintained as lawn and is devoid of natural habitats although it is surrounded on most sides by relatively natural habitats including wetlands. As stated under Chapter 3, Existing Conditions of the EA, most of the project area is regularly mowed and is a mixture of sedges and turfgrass. Given that the project area is already maintained as lawn, has fill added to raise it above surrounding wetlands, and is adjacent to the BICY Headquarters, the proposed action and the no-action alternative are not expected to affect existing natural vegetation, wildlife, federally protected species, or wetlands. A query of the FNAI Biodiversity Matrix database (<https://www.fnai.org/BiodiversityMatrix/index.html>) was conducted on 7 January 2023, for matrix unit 49621, which is a one-square-mile area that includes the 16-acre project area. A query was also conducted with the U.S. Fish and Wildlife Service (USFWS) IPaC (Information for Planning and Consultation) online database of federally protected species and their critical habitat. After reviewing the available data on species protected under the Endangered Species Act with potential to occur in the project area, NPS made the determination that the project actions would have no effect on federally protected species. For this reason, biological resources do not warrant further evaluation and so they are eliminated from further consideration in the EA.

Cultural Resources

Cultural resources are historic districts, sites, buildings, structures, or objects considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. Depending on the condition and historic use, such resources might provide insight into the cultural practices of previous civilizations, or they might retain cultural and religious significance to modern groups. Cultural resources that are listed in or eligible for listing in the National Register of Historic Places are known as historic properties.

Ten cultural or historical resources are known from within a 1-mile radius of the project area (Table 1). None of these resources are located within the project area itself.

Table 1. Cultural and Historical Resources Recorded Within a 1-Mile Radius of the Project Area

| Florida Master Site File ID | Site Name or Description | State Historic Preservation Office Determination |
|-----------------------------|---|--|
| 8CR00927 | US Highway 41 (Tamiami Trail) | Eligible |
| 8CR00928 | Tamiami Canal | Eligible |
| 8CR01085 | Turner River Road complex | Insufficient info |
| 8CR01110 | US-41/Red Yankee Canal Slab Bridge | Not eligible |
| 8CR01111 | US 41/Hydro Canal Slab Bridge | Not eligible |
| 8CR01149 | US 41/Gator Hole Culvert | Not eligible |
| 8CR01150 | Wooten's Airboat Tours | Not eligible |
| 8CR01582 | Birdon Packing House (BICY-473) | Not eligible |
| 8CR01583 | Watson's General Store (BICY-474) | Not eligible |
| (not found) | BICY Headquarters Building (ex-Golden Lion Motor Inn) | Not eligible |

Sources: BICY Headquarters data taken from Krawitz (2020), all other data from a table on page 3 of Menchaca (2022)

A cultural resource assessment survey was conducted by the BICY archaeologist on 9 March 2022, at the project area in addition to a literature review and a search of available historical records, surveys, and aerial images (Menchaca 2022). A backhoe was used during the field survey to remove the approximately 42–50 cm of overlying limestone-dominated fill, exposing the native soil surface. A series of three pits were then hand-dug attempting to reach at least 1 m below the native soil surface (Menchaca 2022). The pits were in the southern portion of the project area (Figure 1). The resultant pits measured approximately 50 cm deep by 50 cm wide (Menchaca 2022). Each pit reached either the water table or limestone bedrock. The water table was observed at 50 to 60 cm below the native soil surface. The soils taken from each pit were sieved through 0.25-inch wire mesh to uncover any cultural materials, however, no such materials were uncovered during the field work (Menchaca 2022).



Figure 1. The Three Pits Dug to Potentially Uncover Cultural Materials During the Cultural Resource Assessment Survey

Note: The pits are shown as orange plus symbols in the image. The project area is outlined in red. Image modified from Figure 6 of Menchaca (2022)

Based on the results of the cultural resources survey, including the lack of cultural resources found within the project area, NPS is consulting with the Florida State Historic Preservation Office under the National Historic Preservation Act. Consequently, NPS has eliminated cultural resources from further evaluation in the EA.

Visual Impacts

Visual impacts were analyzed in a Visual Impact Analysis (Appendix B of the EA). The placement of the FOC, and related facilities, at an area already having been disturbed decades ago, rather than elsewhere in BICY natural habitats, minimizes any negative effects to the viewshed. The current BICY Headquarters Complex, coupled with the presence of vegetation near the southern edge of US-41, effectively hides most of the proposed new structures from view. The FOC and proposed new structures are far enough away from US-41 that they are mostly hidden. Given that the BICY Headquarters building has been there since 1970, and the project area landscape has had fill added in the 1960s, and the distance between the FOC and the views from US-41, collectively make the placement of more anthropogenic structures there much

less imposing compared to adding these structures elsewhere at one of the many pristine areas at BICY or in more visible areas such as adjacent to one of the visitor centers. The addition of these facilities is not expected to detract from the viewshed along US-41 as it passes through BICY. The many natural vistas remain unblemished as viewed from the visitor centers, Loop Road, and from any of the many hiking and other trails used by visitors to BICY. Therefore, visual impacts do not warrant further evaluation and so they are eliminated from further consideration in the EA.

References

- Krawitz, R. 2020. *Determination of Eligibility (Ineligible) for Listing in the National Register of Historic Places, Big Cypress National Preserve, Administration Building, Formerly the Golden Lion Motor Inn, 33100 Tamiami Trail East, Ochopee, FL*. BICY, Ochopee, FL.
- Menchaca, V. 2022. *Cultural Resources Report for the Big Cypress National Preserve New Fire Operations Center*. Cultural Resource Report No. 2022-127 (PEPC 98610), NPS, BICY, Ochopee, FL.
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SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN



**Big Cypress National Preserve
Ochopee, FL**

Oasis Ranger Station

1 March 2016

Prepared by:

HGS Engineering, Inc
Anniston, AL 36201

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MANAGEMENT APPROVAL

This SPCC Plan is fully supported and approved by the Superintendent's Office at Big Cypress National Preserve (The Preserve). The necessary resources will be committed to implementing this plan and modifying it as needed, due to expansions, modifications, and improvements to the facility.

Tamara Whittington; Superintendent

Date

PROFESSIONAL ENGINEER CERTIFICATION

I have reviewed this Spill Prevention Control and Countermeasure Plan, and being familiar with the requirements of the Environmental Protection Agency regulations 40 CFR 112, 117, and 264, 33 CFR 153, and CERCLA, have examined the facility and do attest that the plan has been prepared in accordance with good engineering practices.



Harry G. Summers, PE

5/27/2016

Date

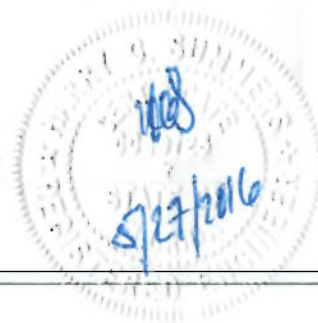


Table 1-1: Plan Review Log

| By | Date | Activity | PE certification required? | Comments |
|----|------|----------|----------------------------------|----------|
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* Previous PE certifications of this Plan are summarized below.

| Date | Scope | PE Name | Licensing State and Registration No. |
|------------|--------------------------|---------------|---|
| 2001 | Certification of Plan | PRIZM, Inc | Not Identified |
| 12/30/2010 | Re-Certification of Plan | Harry Summers | AL 17129 |
| 3/1/2016 | Re-Certification of Plan | Harry Summers | AL 17129 |
| | | | |

1.0 INTRODUCTION

1.1 Purpose

This Spill Prevention, Control, and Countermeasure (SPCC) Plan has been developed for the Big Cypress National Preserve (the Preserve)'s Oasis Ranger Station, located at 52105 Tamiami Trail E, near Ochopee, Florida. The SPCC Plan documents equipment and procedures instituted by Big Cypress National Preserve to prevent environmental damage resulting from spills of petroleum products at the Preserve. The plan describes the measures the Preserve will take to meet the requirements of the U.S. Environmental Protection Agency (US EPA) regulations contained in Title 40, Code of Federal Regulations, Part 112 (40 CFR 112).

1.2 Plan Organization

This Plan is organized to provide the Preserve personnel and other involved parties with a description of the oil storage facilities present at the Preserve, drainage patterns and potential release scenarios, procedures and equipment to prevent releases from occurring and response procedures in the event that a release were to occur. A regulatory reference table that provides users with a means to relate sections of the Plan to regulatory requirements is provided in the preface materials. Figures and supporting appendices are incorporated into this Plan.

1.3 Regulatory Thresholds & Applicability

A non transportation-related facility storing or consuming oil or oil products is subject to SPCC regulations if:

- The total aboveground storage capacity exceeds 1,320 gallons of oil; or
- The underground storage capacity exceeds 42,000 gallons of oil; and
- If, due to its location, the facility could reasonably be expected to discharge oil in harmful quantities into or upon the navigable waters of the United States or adjoining shorelines.

The Oasis Ranger Station has an oil storage capacity of approximately 8,020 gallons (see Sections 1.4 and 2.0) and is located within marshes, forested swamps, and shallow sloughs leading to the Everglades. All adjacent wetlands are used for recreational or other purposes, and would be affected by any spill. The Preserve therefore meets the criteria for requiring an SPCC Plan.

The SPCC plan is not required to be filed with US EPA. However, a copy of the plan must be available for on-site review by US EPA inspectors. Owners or operators failing or refusing to comply with Federal regulations related to SPCC planning may be liable for civil penalties, assessed by the US EPA regional administrator.

The Preserve is not required to prepare and submit a Facility Response Plan described in 40 CFR 112 because it does not meet the storage and handling criteria that triggers this requirement. A "Certification of Substantial Harm Determination Form" has been completed for the Preserve and is included as Appendix B.

1.4 Facility Information

Facility Name:

Big Cypress National Preserve

Mailing Address:

33100 Tamiami Trail E.

Ochopee, FL 34141 (Ochopee Maintenance Complex)

Physical Address:

52105 Tamiami Trail E.

Ochopee, FL 34141

Telephone: 941/695-2000

Owner:

National Park Service

Operator:

Department of the Interior

Contact Name:

Jeff Lewis, Buildings/Utilities Supervisor

Work Telephone: 239/695-2000

Alternate Contact Name:

Dennis Bartalino, Chief of Facilities Management

Work Telephone: 239/695-1178

Home (Cell) Telephone: 239/340-0055

Tiffany Fireman, Facility Operations Specialist

Work Telephone: 239/695-2000

Home Telephone: 239/304-2949

Location:

Big Cypress National Preserve is located in Collier County, Florida near the town center of Ochopee. The Preserve is in southern Florida between Miami and Naples. It extends from the Northern boundary of Everglades National Park to 7 miles north of I-75. Besides I-75, US 41 is the other major highway across the preserve. Approximate coordinates of the property are latitude 28.64409 north and longitude 46.7624 east. A site location map showing the location of the property is included in Appendix A.

Facility Description:

The Preserve consists of approximately 729,000 acres. The property has two main sites located in Ochopee and Oasis. This SPCC Plan has been developed for the Oasis Ranger Station. A separate, stand-alone plan has been developed for the Ochopee Maintenance Complex. The Preserve is relatively underdeveloped, serving as a large natural reservoir and nutrient filter. Throughout the wet season, water flows in a southwesterly direction through the estuaries of

western Everglades National Park. Ecology of the Preserve is finely tuned to seasonal flow of water, and any interference can alter this sensitive subtropical habitat. Seminole and Miccosukee Indians depend on the Preserve as a source of natural materials for housing, crafts, and other cultural and religious uses.

The Preserve includes two major producing oil fields, Bear Island and Raccoon Point. These fields have Facility Response Plans (FRPs) for their operations. The Preserve has a full time position devoted to oil exploration and production facilities. The relatively recent discoveries of oil and gas both within and adjacent to the Preserve have prompted interest in additional testing, including geophysical exploration as well as exploratory drilling. Most mineral rights and subsurface estates remain with the respective private or state interests. In-holders and hunting camps are present on the Preserve. Most of these camps have rudimentary lodgings for brief visits. Illegal hunting camps are monitored and removed upon discovery. No major petroleum storage is present on in-holdings. The Preserve has over 90 buildings. They consist mostly of recently constructed buildings and are used for interpretive purposes, visitor services, maintenance and utilities, Preserve employee residences, and Preserve offices. Some of these buildings are clustered; others are isolated.

Oasis serves as the primary maintenance/operations center for the Preserve, including the Oasis Ranger Station, Visitor's Center, and Maintenance Complex. Oasis is also where the majority of auto and equipment maintenance is performed. The Oasis Maintenance Complex includes the Auto Shop, Fire Management Equipment, Hazardous Waste Storage Building, two Pole Barns for miscellaneous equipment storage, Aviation Fueling Station, and Aviation Hanger that houses a helicopter and fixed-wing aircraft.

A site plan of the Preserve property, showing major features and drainage patterns is included in Appendix A, as Figures A-1. Figures A-2 is the site plan for the Oasis facility.

2.0 DESCRIPTION OF STORAGE AND HANDLING

2.1 Bulk Storage and Handling Areas

Oils stored at the Oasis Ranger Station are summarized below.

Oasis Ranger Station:

- JP 8 Stored in 2 fixed ASTs;
- Aviation Gasoline stored in 1 fixed AST;
- Diesel, Jet A and Aviation Fuel stored in 4 Portable ASTs;
- Gasoline stored in 1 fixed AST;
- Used Oil stored in 1 Fixed ASTs;
- Diesel Fuel stored in 2 Generator Day Tanks;
- Various POL products stored in 4x55 Gallon Drums.

The facility also stores a varying stock of smaller quantity oil products for equipment and vehicle maintenance. The capacities of oil containers present at the site are listed below and are also indicated on the facility diagram in Table 2-1. All containers with capacity of 55 gallons or more are included.

TABLE 2-1

OASIS RANGER STATION

| | | | | |
|----------|--|----------|---------------|----------------------|
| Oasis 1 | Oasis Aviation Fuel Island | 2500 | JP-8 | AST Fixed |
| Oasis 2 | Oasis Aviation Fuel Island | 2500 | JP-8 | AST Fixed |
| Oasis 3 | Oasis Aviation Fuel Island | 1000 | AV-Gas | AST Fixed |
| Oasis 4 | Oasis Aviation Fuel Island | 250 | Jet A | Portable AST |
| Oasis 5 | Oasis Aviation Fuel Island-trailer mounted | 100 (x2) | Aviation Fuel | Portable AST |
| Oasis 6 | Generator-North Side | 250 | Diesel | Generator Belly Tank |
| Oasis 7 | Maintenance Complex-Fuel Island | 500 | Used Oil | AST Fixed |
| Oasis 8 | Maintenance Complex-Fuel Island | 100 | Gasoline | AST Fixed |
| Oasis 9 | Maintenance Complex | 250 | Diesel | Generator Belly Tank |
| Oasis 10 | Maintenance Complex-Storage Sheds | 220 | Various POL | 55 Gallon Drums |
| Oasis 11 | Pole Barn | 250 | Diesel | Portable AST |

Total Storage for Oasis**8,020 gallons**

A description of the facility's storage areas is provided in the following sections.

2.1.1 Oasis Maintenance Complex

One 500-gallon used oil AST is present at the former fuel island at the Oasis Ranger Station. A 100 gallon gasoline ASTs supplies fuel for authorized Preserve vehicles. Both tanks is constructed of steel enclosed in concrete vault and are anchored to a six-inch high concrete slab. 55 gallon drums of fuel, transmission fluid, and lubricants are stored in the flammable material sheds to the north of the maintenance complex.

2.1.2 Oasis Aviation Fuel Island - JP-8, AV Gas ASTs

Two 2500-gallon JP-8 ASTs and one 1000-gallon AV Gas AST are located at Oasis Aviation Fuel Island located next to Aviation Hanger. The double-walled ASTs were installed in 2015, anchored to a 6-inch high concrete foundation, inside a concrete secondary containment vault. The AV Gas is used for fixed-wing aircraft, and the JP-8 fuel is used for the helicopter.

The fuel dispensing system for each tank is connected to their respective dispenser pump by an underground double-walled line, with an anti-siphon valve between the tank and dispensing pump. Individual dispensing pumps are located in sealed, secondary containment near the landing strip on the approach to the hanger.

All tanks are equipped with a twelve-foot vent pipe and the fill pipes have spill and overfill protection catch basins and are locked to prevent tampering. The fuel tanks are equipped with tank monitoring software, a freeboard visual monitor and high-level liquid audible alarm located on top of tanks.

Pumps are located underground at the fueling areas and the pump switch is locked while not in use. Fuel is managed by lock and key, not with key cards like other fueling operations. Dispensers are contained within a 6-inch diked area located above pump. The emergency shut off switch is located approximately 129 feet from the dispenser on the south exterior wall of the Hanger.

2.2 Miscellaneous Petroleum Storage

The storage of miscellaneous petroleum products is limited to small quantities of oil, gasoline, and drip torch fluid that may be stored in the maintenance bay or in other storage areas. These materials are stored in containers with a capacity of less than 5-gallons.

2.3 Tank Truck Loading/Unloading Operations

For logistical planning, each fueling area will have its own designated staff. Designated Preserve staff is responsible for overseeing all filling operations from beginning to end. These

responsibilities include installing fuel transfer spill prevention and control equipment, verifying that the tank capacity is adequate to accept the fuel load, overseeing the procedures of the contractor, checking the load that was delivered, securing the site and completing bulk fuel transfer documentation. The fuels provider is responsible for meeting all fuel transport requirements under the U.S. Department of Transportation.

JP-8, AV Gas ASTs - Oasis Aviation Fuel Island

JP-8 and AV Gas are delivered to each 2,500-gallon tank upon request via tanker truck. Each fuel delivery truck is equipped with spill response equipment including absorbent mats and oil dry. The nozzle of the fuel delivery hose is equipped with an on/off valve and a rubber bushing, which provides a tight connection with the fill pipe. The Helicopter Pilot or his designee periodically inspects the fuel level in the tanks. Fuel is delivered monthly by the contractor when requested by the Helicopter Pilot. The contractor notifies the Helicopter Pilot at least two days in advance to schedule the delivery and allow the Helicopter Pilot to arrange for designated Preserve personnel to be on-hand at the facility when the delivery is made. The Fuel Delivery Contractor checks in with Oasis Maintenance Shop when they arrive on-site and the Helicopter Pilot is notified. Helicopter Pilot deploys the designated staff person to observe the filling operation. When making a delivery to the tanks, the tanker parks behind (west) of the tanks. Fuel Delivery Contractor is responsible for conducting pre-fill checks to ensure that there is adequate ullage in the tank to accept the fuel delivery. The tank gauge is checked and compared with the Preserve-provided tank volume chart. Fuel level is also checked using the Preserve's fuel measurement stick. Preserve observer verifies contractor's measurements to authorized refueling. The tank truck operator monitors the tank gauge as the tank is filled. The tank is filled to 90 % capacity to provide reserve capacity and prevent overfills. After the tank is filled, the Fuel Delivery Contractor again checks the fuel level using the measuring stick and Preserve observer completes the Bulk Transfer Checklist.

3.0 FACILITY DRAINAGE

This section describes the facility surface drainage patterns for locations where oil and petroleum hydrocarbon materials are stored and handled at Preserve facilities.

3.1 General Property Drainage

The affected properties are situated near the canals and swampland that drain into Everglades National Park and eventually into Chokoloskee Bay, the Gulf of Mexico, and the Florida Bay. The general surface drainages at the Preserve properties and the specific surface drainage patterns for oil and petroleum hydrocarbon storage areas are described below.

3.2 Site-specific Drainage – Oasis Ranger Station

Drainage from the one 500-gallon used oil AST and 100 gallon gasoline AST would flow east into the grass and percolate into the soil or flow westward across the concrete drive and grass medium to pool in the gravel driveway surrounding the paved drive. Drainage would eventually flow to the grass septic field approximately 100 feet east of the tanks.

Drainage from the two 2500-gallon JP-8 ASTs, one 1000-gallon AV Gas AST, and three portable storage tanks, would flow west into the surrounding grass and percolate into the soil or flow westward across the gravel drive to the grass surrounding the lake, and eventually down to the lake. Drainage from the dispensing pumps located on the approach to the Hanger would be initially contained in the diked area, eventually flowing southward into the lake if escaped dike.

Drainage from the 55-gallon drums of used motor/ hydraulic oil would flow to a drain located at the eastside entryway. This drain leads to the septic field located on the east side of the facility.

4.0 PAST SPILL HISTORY

There are no Park records of any oil spill events occurring at Preserve within the last ten years.

5.0 POTENTIAL SPILL SCENARIOS

The following table describes potential oil spill scenarios that could occur at the Oasis Ranger Station. The scenarios represent the maximum volumes and rates that could occur without any spill control occurring.

Table 5-1

| Potential Event | Maximum Possible Release (Gallons) | Maximum Possible Discharge Rate | Direction of Flow | Secondary Containment/ Countermeasures |
|---|------------------------------------|---------------------------------|--|--|
| OASIS RANGER STATION | | | | |
| <u>Oasis Maintenance Area</u> | | | | |
| Failure of AST (full collapse or severe puncture below product level) | 500 | Gradual to instantaneous | Flow into grass and percolate into soil or flow westward across grass to pool in gravel driveway surrounding the paved drive; drainage would eventually flow to grass septic field east of the tanks | Double Walled Construction, Spill Kit |
| Dispenser hose/connection leak | 1 to 150 | 10 gal/min | Flow into grass and percolate into soil or flow westward across grass to pool in gravel driveway surrounding the paved drive; drainage would eventually flow to grass septic field east of the tanks | Drip Pan, Spill Kit |
| AST Aboveground Fill Piping Rupture or Failure | 1-500 | 10 gal/min | Flow into grass and percolate into soil or flow westward across grass to pool in gravel driveway surrounding the paved drive; drainage would eventually flow to grass septic field east of the tanks | Spill Kit |
| <u>Oasis Aviation Fuel Island</u> | | | | |
| Failure of AST (full collapse or severe puncture below product level) | 2,500 | Gradual to instantaneous | Flow into grass and percolate into soil or flow westward across gravel drive to grass surrounding lake, eventually into lake. | Double Walled Construction, Spill Kit |
| Dispenser hose/connection leak | 1 to 150 | 10 gal/min | Flow into grass and percolate into soil or flow westward across | Drip Pan, Spill Kit |

| Potential Event | Maximum Possible Release (Gallons) | Maximum Possible Discharge Rate | Direction of Flow | Secondary Containment/ Countermeasures |
|--|------------------------------------|---------------------------------|--|--|
| | | | gravel drive to grass surrounding lake | |
| AST Aboveground Fill Piping Rupture or Failure | 1-2,500 | 10 gal/min | Flow into grass and percolate into soil or flow westward across gravel drive to grass surrounding lake | Spill Kit |
| <u>Other Storage Areas</u> | | | | |
| | | | | |
| Portable Tank Failure | 100 | Gradual to instantaneous | East toward surrounding swamp | Secondary Containment, Pavement, spill kit |
| Storage drum leak/failure | 1 to 55 | Gradual to instantaneous | Flow into grass and percolate into soil or flow westward across gravel drive to grass surrounding lake | Pavement, spill kit |

6.0 POTENTIAL IMPACT TO THE ENVIRONMENT

Oil released from the Preserve property has the potential to impact both the Preserve and Everglades National Park ecosystem and associated wetland ecosystems. Within the Preserve, ten species are listed by U.S. Fish and Wildlife Service as threatened or endangered, and ten species are candidates for threatened or endangered status; an additional 14 species are listed by the State as threatened, endangered, or of special concern. With 90% of the Preserve flooded during the wet season, the impact of a petroleum spill would be significant.

7.0 SPILL RESPONSE AND NOTIFICATION PROCEDURES

This section describes the spill response command structure developed for the Preserve, spill response policy, spill notification procedures, and other post-spill actions.

7.1 Spill Response Command Structure

The Preserve's formal Oil Spill Response Team (OSRT) structure consists of an Emergency Response Coordinator (ERC), and two Alternate Emergency Response Coordinators. The Preserve Superintendent is responsible for all oil spill prevention at the Preserve. The ERC for the Preserve is Dennis Bartalino. Tiffany Fireman is designated as the Alternate ERC to substitute for the ERC when he is not available. Oil Spill Response Team Technicians include those authorized to order and monitor fueling operations at ASTs. This group includes the Roads and Trails Foreman, Oasis Auto Mechanic, and Helicopter Pilot. All Preserve staff are responsible for reporting spills to OSRT upon discovery; as such they are critical staff in the facility spill response structure.

The Preserve relies on the local emergency response agencies from Collier County for response to large spills that are beyond the capabilities of the ORST. Finally, the Fuel Delivery Contractor maintains spill response capability for incidental spills and emergency notification procedures related to spills that might occur during bulk fuel transfer operations.

7.2 Spill Response Policy

The Clean Water Act and the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) regulations dictate the appropriate response to discharges of petroleum products from ASTs and other sources into navigable waters and the environment. The obligation to report a release to a state implementing agency and/or the National Response Center resides with the person in charge of the facility having knowledge of a release.

All spills discovered on the Preserve property must be immediately reported to Dispatch, who will report the spill to the ERC, or an Alternate ERC. The ERC, Alternate ERCs, and ORST technicians are the only Preserve personnel designated to conduct oil spill response. (Refer to Appendix F for ERC and other OSRT phone numbers). For releases of oil, ORST members will conduct response actions consistent with the procedures described in Section 7.3 of this plan. For all releases, ORST personnel will undertake necessary and appropriate initial abatement measures to control further releases, and secure the site to protect human health and the environment. This response will consist of:

-
- Active response for incidental spills of oil products. Active response will consist of control and cleanup of small spills (i.e., less than one gallon) or of incidental spills that the ERC or

an Alternate ERC in their professional judgment, determines can be safely handled given the training and resources available.

- Defense response and professional spill response assistance for non-incidental spills of oil products. Defensive response will consist of stopping the source of the spill using existing mechanical means (i.e., closing valves, shutting off fuel pumps), the deployment of spill control devices to prevent the oil product from reaching the navigable waterway, and securing the site to protect human health and safety.

The Preserve ERC will notify all applicable regulatory agencies of reportable oil spills in accordance with regulatory requirements in accordance with the procedures described in Section 7.4 of this plan.

7.3 Spill Response Procedures

If a member of the Preserve's staff discovers or becomes aware of an uncontrolled release of an oil material they must follow the notification and response procedures outlined in this plan. These procedures include immediate notification of the ERC or OSRT members via Preserve Dispatch. Dispatch has access to appropriate contacts and corresponding phone numbers.

All spills will be classified as an emergency until properly contained and cleaned up. The following procedure, also discussed in the Compliance Packet, becomes effective immediately upon the report the discovery of an oil spill of any kind:

1. Any Preserve employee observing a spill of any quantity must immediately notify Dispatch. Dispatch will notify the ERC via telephone or via pager. If the ERC cannot be reached, an Alternate ERC will be contacted.
2. The Dispatch staff, will attempt to obtain the following information from the Preserve employee:
 - Time spill occurred or was first observed.
 - Where spill occurred and present location if moving.
 - Type of spill (product).
 - Estimate of amount of spill or, if still continuing, rate of release of spill.
 - Description of area likely to be affected.
 - Cause of spill, if determined.

This information will be forwarded to the ERC. Based on the information provided by the Preserve employee reporting the spill, the ERC may contact the local emergency response agency to ask for spill-response assistance without waiting to respond to the spill "in-person" if they determine that such an immediate response is necessary and appropriate.

3. The ERC may contact an Alternative ERC, if available, to provide first response to the spill if he or she is the closest to the facility and if the ERC determines it is appropriate. If this occurs, the ERC will maintain contact with the Alternate ERC throughout the response via cell phone or radio.
4. The ERC on the scene will have the following responsibilities in the event of a fuel or other petroleum hydrocarbon spill:
 - Confirm the spill, investigate its cause and basic nature.
 - Secure the scene including cordoning off the area, since fuel vapors create ideal conditions for explosion and fires.
 - Take actions within his/her scope of training and given the resources available, to contain the spill. (Spills will never be intentionally permitted to enter drainage systems.)
5. Based on the information collected on-site, the ERC will determine whether the spill is an incidental spill that can be cleaned up by Preserve or whether the off-site emergency response agencies must be contacted to further respond and clean up the spill.
6. If the ERC determines that the spill is not an incidental spill, and the spill is not adequately contained, the emergency response agency will be contacted.
7. If the ERC determines that the spill is not an incidental spill, but the spill is contained, an emergency clean up contractor will be contacted to conduct the cleanup.
8. If the ERC determines that the spill is incidental, Preserve will clean up the spill using appropriate procedures and equipment. The ERC will arrange for proper disposal of spill materials and decontamination of spill equipment.

7.4 Spill Notification Procedures

This section outlines the regulatory agency spill notification and reporting procedures for the facility.

7.4.1 Preserve Environmental Notifications

An "Oil Spill Report Form," included in Section 8 of the Compliance Packet, will be completed by the ERC for all spills occurring at the Preserve. This record must be maintained for as long as the Preserve is in operation. Preserve Environmental Coordinator, if different than the ERC, must be included in any spill notification to local, state, or federal agencies.

7.4.2 Regulatory Agency Notifications

The "Discharge Notification Form and Agency Notification Standard Reports," included in Appendices H and I, outline the reporting protocols necessary for agency spill reporting. The ERC will follow the procedures outlined in this document when determining appropriate release reporting requirements for each incident. The State of Florida requires notification in the event of a release of "any contaminating substance" to groundwater, soil or surface water if the spill is not contained to prevent discharge to water or is 25 gallons or more on land.

If Preserve discharges more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharges oil in harmful quantities, as defined in 40 CFR 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, within any twelve month period, the Preserve will submit to the U.S. EPA Region IV Administrator, within 60 days from the time the facility becomes subject to this requirement, the information listed in Appendix G. These reporting requirements include submitting a complete copy of the SPCC plan with all amendments.

7.5 Resumption of Activities

Before resuming operations after a spill incident has occurred, ERC must complete the following activities:

- Restock emergency supplies;
- Test emergency equipment;
- Properly decontaminate equipment and impacted area; and
- In the event of a reportable quantity (RQ) event, notify the U.S. EPA, State of Florida, and local agencies that Preserve is in compliance with applicable regulations.

The ERC and appropriate personnel must review the cause of the incident and identify procedures and practices that must be changed in order to prevent the incident from reoccurring.

7.6 Amendments to Plan

Preserve is required to amend the SPCC plan within six months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the potential for spill. The plan must be reviewed at least once every three years and amended to include more effective prevention and control technology, if such technology will significantly reduce the likelihood of a spill event and has been proven in the field. A professional engineer must certify all changes.

8.0 EMERGENCY RESPONSE EQUIPMENT

8.1 Personnel Protective Equipment

The following personnel protective equipment (PPE) will be available to ERC members:

- Rubber gloves with forearm protection;
- Rubber boots that provide adequate protection below knee;
- Safety goggles; and
- Tyvek TM coveralls.

All PPE must be well maintained and accessible in case of an emergency. Items used during a spill response event must be properly decontaminated or replaced.

8.2 Spill Response Equipment

Oil Spill response kits are maintained at the following locations on Preserve property:

8.2.1 Oasis Ranger Station

Two weatherproof kits will be stored next to tanks. Each kit will contain the following:

- 100 Absorbent pads;
- 18 one-foot absorbent socks;
- Eight one-foot pillows;
- Oil-compatible plastic bags; and
- 75-gallon spill containment drum.

8.2.2 Contracted Fuel Delivery Tanker Trucks

Fuel delivery trucks also maintain spill response materials including absorbent materials, and plastic bags.

9.0 SPILL PREVENTION PROCEDURES

The Preserve has installed equipment and established a number of procedures to prevent spills from occurring. These equipment and procedures are described in this section.

9.1 Spill Prevention Equipment

The equipment associated with the ASTs and portable fuel tanks for bulk fuel storage at the Preserve is described in detail in Section 2.0 for this plan. Key spill prevention equipment includes:

- All tanks are provided with secondary containment;
- Outdoor bulk fuel storage tanks are provided with tank gauges so that the tank volume can be readily observed;
- Fixed ASTs are equipped with fill overfill catch basins; and
- Two dispensers of aviation fuel are enclosed in a diked area.

9.2 Tank Truck Loading/Unloading Procedures

To prevent spills from occurring during bulk fuel transfer, the Preserve has established specific procedures for Preserve staff and the Fuel Delivery Contractor. These procedures are described in detail in Section 2.3 of this plan. Key spill prevention procedures include:

- SPCC trained Preserve staff are present for all deliveries;
- Tank is gauged and sticked prior to filling to ensure there is adequate ullage in the tank to accept the fuel load;
- Preserve staff and the Fuel Delivery Contractor are present to observe the entire filling operation; and
- The tanks are filled to 90% capacity to prevent overfilling.

9.3 Inspections

SPCC-trained Preserve staff will perform monthly inspections of the oil storage facilities. These inspections include an assessment of equipment integrity, secondary containment, and an inspection of surrounding pavement and soils for indications of possible releases. Inspections will also include a check of the spill kit and emergency notification signs. A copy of the inspection logs that is completed by Facility employees during these inspections is included as Appendix C.

The ERC will also conduct bi-annual reviews of the SPCC documentation (i.e., bulk fuel transfer check sheets and inspection logs) to ensure that procedures and record keeping requirements are being met.

9.4 Personnel Training

This section describes the training that is provided for the facility.

9.4.1 Training for All Oil Handling Employees

Preserve personnel have been instructed by management in the operation and maintenance of oil pollution prevention equipment and pollution control laws and regulations. The Preserve Superintendent is responsible approving oil spill prevention at the Preserve. Yearly spill prevention briefings are provided by management for operating personnel to ensure adequate understanding of the SPCC plan. These briefings highlight any past spill events or failures and recently developed precautionary measures. Training is held on oil spill prevention, containment, and retrieval methods. A simulation of an on-site vehicular spill is conducted and exercises are periodically held to prepare for possible spill response. Records of these briefings and spill prevention training are kept on the form provided in Appendix D. This information is also publicized and posted in all Maintenance Shops, Ranger Stations, Dispatch and Aviation Hanger. Completed training logs are maintained in Appendix D of this plan.

10.0 RESPONSIBILITIES AND RECORDKEEPING

According to State and Federal regulations, the responsibility for the control of oil spills or releases rest with the "Plan Coordinator", Dennis Bartalino has been designated as the "Plan Coordinator". A list of the other responsible Preserve personnel is located on the Emergency Contact List provided in Appendix F

In the event of an oil spill, one of Preserve's emergency response contacts listed in Appendix F must be contacted immediately, beginning with the ERC. During a spill incident the ERC or a designated Alternate is responsible for:

- Performing as the on-scene ERC;
- Coordinating emergency response efforts with off-site contractors or services;
- Implementing the appropriate spill response operations, and ensuring the use of appropriate PPE;
- Contacting the appropriate agencies and making initial and follow-up notifications; and
- Ensuring the proper permitting and disposal of contaminated material.

The ERC is also responsible for maintaining records concerning oil releases and prevention efforts. These records must be kept on file at Headquarters and include the following:

- Completed inspection checklists and logs;
- Meeting minutes;
- Training logs;
- Documentation of spill reports;
- Correspondence to and from regulatory agencies;
- Records of changes made to the SPCC plan; and
- Documentation of spill response and remediation efforts.

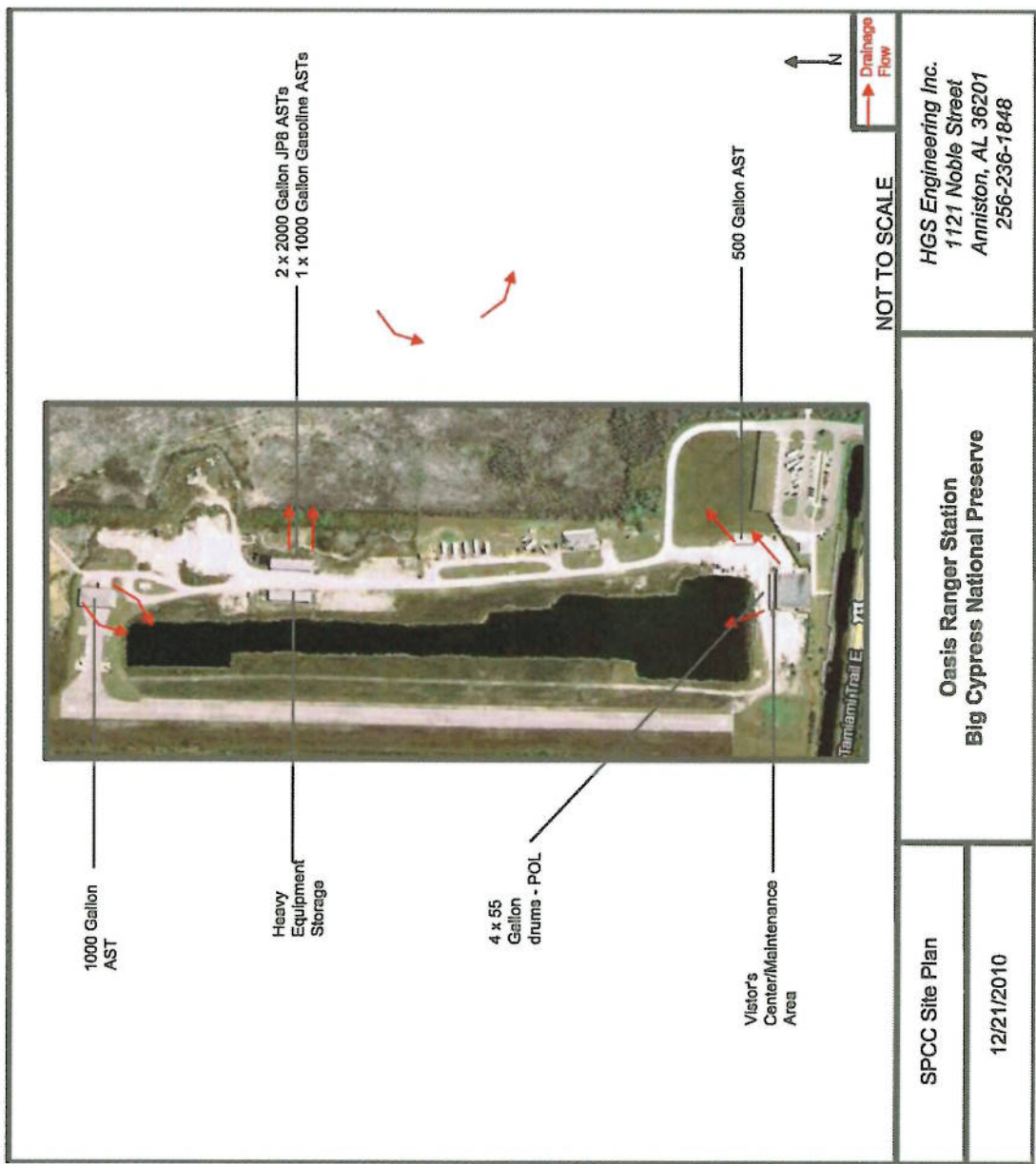
11.0 SECURITY

Preserve property is under 24-hour security surveillance by law enforcement rangers. Oasis Maintenance Shop is secured by a perimeter chain-linked fence with a key coded locked gate. A motion detector lamp is installed at the Oasis Fuel Island. All AST fill pipe overfill catch basins are normally locked. Fueling dispensers may not be operated unless an authorized vehicle activates the pumps; Aviation fuel dispensers are padlocked.

Appendix A: Site Plan and Facility Diagram

Figure A-1: PRESERVE MAP.

Figure A-2: OASIS RANGER STATION.



Appendix B: Substantial Harm Determination

Facility Name: Big Cypress National Preserve, Oasis Ranger Station
Facility Address:

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons? NO
2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area? NO
3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? NO
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake? NO
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years? NO

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Title

Name (type or print)

Date

Appendix C: Facility Inspection Checklists

The following checklists are to be used for monthly and annual facility-conducted inspections. Completed checklists must be signed by the inspector and maintained at the facility, with this SPCC Plan, for at least three years.

Monthly Inspection Checklist

This inspection record must be completed *each month* except the month in which an annual inspection is performed. Provide further description and comments, if necessary, on a separate sheet of paper and attach to this sheet. *Any item that receives "yes" as an answer must be described and addressed immediately.

Tank Monthly Report of Inspection

| | |
|-------------------|-----------|
| Inspectors Name : | Date: |
| Type | Location: |

| | | (Y/N/NA) | Notes |
|------------------|---|----------|-------|
| General | The tank appears to be in good external condition, free of typical aging weathering and wear. | | |
| Tank Condition | The area is free of trash, weeds, and combustibles. | | |
| | No Water is present which could reduce the secondary containment holding capacity. | | |
| | Secondary containment structure is secure and free of cracks or potential leaks. | | |
| | No evidence of tank settlement. | | |
| | No evidence of leaks or releases. | | |
| | Stick testing interstitial spaces does not suggest the presence of fluids. | | |
| Tank Security | The tank is in a fenced area and secured during non-working hours. | | |
| | Lighting is provided and functional. | | |
| | Collision barriers are in place. | | |
| Labels and signs | Name of product and hazard warnings prominently displayed. | | |
| | Operating Instructions displayed. | | |
| | Emergency Instructions displayed. | | |
| | "No smoking" signs displayed. | | |
| Catchment Basin | Spill catchment basins are clean and empty. (No water, product, debris). | | |
| | Catchment Basin Integrity- No leaks, cracks, bulges, holes. | | |
| Piping | Vent Pipe visible, unobstructed. | | |

| | | | |
|----------------------|---|--|--|
| | No evidence of corrosion. | | |
| | No evidence of leaks. | | |
| Fill Gauge | The gauge is functional, clear view. | | |
| Fuel Delivery | Fill cap and external openings are tight. | | |
| Port | Sealed and locked. | | |
| Overfill Protection | An audible alarm sounds at 90% Capacity. | | |
| | Overfill prevention devices, such as shut-offs are functioning properly. | | |
| | Overfill sumps are free of water and product. | | |
| Manual Inventory | The increments on the measuring stick are readable and accurate to 1/8". The bottom end has not been worn or cut off. | | |
| | Product dispensers are properly calibrated. | | |
| | Inventory reconciled. | | |
| Fuel Delivery | Method to stop flow of liquid at 98% of tank capacity. | | |
| | Delivery truck parked more than 15ft from diesel and 25ft from gasoline AST's. | | |
| Fuel Dispensing Unit | Area is free of visible leaks, debris, And vegetation. | | |
| | There is no evidence of cracks, dents, ruptures, or visible corrosion on the hoses, pipes, or equipment. | | |
| | Equipped with and automatic shutoff. | | |
| | Hoses are compliant, UL or ANSI. | | |
| | Breakaway devices in good condition. | | |
| | Warning signs posted in dispensing area. | | |

GENERATOR MONTHLY INSPECTION CHECKLIST

INSPECTION REPORT

LOCATION

DATE

Prop. #

INSP BY: _____

SWO #

OIL SYSTEM

Check Oil _____

Inspect for Leaks _____

COOLING SYSTEM

Check radiator _____

Check hose clamps _____

Check for Leaks _____

EXHUAUST SYSTEM

Check raincap _____

Inspect for leaks _____

FUEL SYSTEM

Check fuel level _____

Inspect for leaks _____

Check for water in fuel _____

BATTERY

Check water level _____

Clean terminals & posts _____

ENGINE RUNNING

Check for noises or leaks _____

Runs properly _____

Under load _____

COMMENTS

Annual Facility Inspection Checklist

This inspection record must be completed *each year*. If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. *Any item that receives "yes" as an answer must be described and addressed immediately.

| | Y* | N | Description & Comments |
|---|----|---|------------------------|
| Oil Storage | | | |
| <i>Tanks</i> | | | |
| <i>Tank surfaces show signs of leakage</i> | | | |
| <i>Tank is damaged, rusted or deteriorated</i> | | | |
| <i>Bolts, rivets or seams are damaged</i> | | | |
| <i>Tank supports are deteriorated or buckled</i> | | | |
| <i>Tank foundations have eroded or settled</i> | | | |
| <i>Level gauges or alarms are inoperative</i> | | | |
| <i>Vents are obstructed</i> | | | |
| <i>Tank fill ports are open or not locked</i> | | | |
| <i>Storage Drums</i> | | | |
| <i>Container shows signs of leakage</i> | | | |
| <i>Drum is damaged, rusted, or deteriorated</i> | | | |
| <i>Drum seams are damaged</i> | | | |
| <i>Excessive dents or bulges are present</i> | | | |
| <i>Spill pallets are not present and serviceable</i> | | | |
| <i>Spill pallets are not free of oil</i> | | | |
| <i>Spill kits are not present and/or complete</i> | | | |
| Containment | | | |
| <i>Area is excessively stained</i> | | | |
| <i>Floor drain is open or not sealed</i> | | | |
| <i>Dike walls or floors are cracked or are separating</i> | | | |
| Piping | | | |
| <i>Valve seals or gaskets are leaking</i> | | | |
| <i>Pipelines or supports are damaged or deteriorated</i> | | | |
| <i>Joints, valves and other appurtenances are leaking</i> | | | |
| <i>Buried piping is exposed</i> | | | |
| Loading/unloading and transfer equipment | | | |
| <i>Loading/unloading area is damaged or deteriorated</i> | | | |
| <i>Fire extinguisher is not present or operable</i> | | | |
| <i>Secondary containment is damaged or stained</i> | | | |
| <i>Spill kit is not present or complete</i> | | | |
| <i>Drip pans have accumulated oil or are leaking</i> | | | |
| Security | | | |
| <i>Fencing, gates, or lighting is non-functional</i> | | | |
| Response equipment | | | |
| <i>Response equipment inventory is incomplete</i> | | | |

Annual reminders:

- < Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
- < Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

Additional Remarks:

Date/Time: _____

Signature: _____

BULK TRANSFER CHECKLIST

| Stage | Tasks | Checklist |
|----------------------------|--|---|
| Prior to loading/unloading | <p>Visually check all hoses for leaks and wet spots. Verify that sufficient volume (ullage) is available in the storage tank or truck.</p> <p>Secure the site vehicle or mobile equipment with wheel chocks, if applicable.</p> <p>Ensure that the site vehicle's parking brakes are set.</p> <p>Turn off cell phone.</p> | <p>Y/N</p> <p>Difficulties Encountered</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Time _____</p> |
| During loading/unloading | <p>Personnel must stay with the site vehicle or equipment at all times during loading/unloading activities.</p> <p>Periodically inspect all systems, hoses and connections.</p> <p>Ensure that equipment being refueled is shut off.</p> <p>Monitor the liquid level in the receiving container to prevent overflow.</p> <p>Use a drip pan.</p> | <p>Y/N</p> <p>Difficulties Encountered</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Time _____</p> |
| After loading/unloading | <p>Insure that all transfer hoses are drained to remove the remaining oil before moving them away from the connection. Use a drip pan.</p> <p>Cap the end of the hose and other connecting devices before moving them to prevent uncontrolled leakage.</p> <p>Remove wheel chocks, if used.</p> <p>Inspect all dispensing equipment prior to departure. If necessary, tighten, adjust, or replace caps, valves, or other equipment to prevent oil leaking or report unsafe or unusual conditions to the ERC.</p> | <p>Y/N</p> <p>Difficulties Encountered</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Time _____</p> |

Appendix D: Record of the Annual Discharge Prevention Briefing and Training

Briefings will be scheduled and conducted by the Plan Coordinator for oil-handling personnel at regular intervals to ensure adequate understanding of this SPCC Plan. The briefings will also highlight and describe past discharge events or failures, known malfunctioning components, if any, and recently implemented precautionary measures and best practices. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable pollution laws, rules, and regulations. Personnel will have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

| Date | Subject(s) Covered | Employees in Attendance | Instructor(s) |
|------|--------------------|-------------------------|---------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
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| | | | |
| | | | |

Appendix E: Records of Tank Integrity and Pressure Tests

Attach copies of official records of tank integrity and pressure tests, if any.

Appendix F: Emergency Contacts

Designated person responsible for spill prevention: **Jeff Lewis-Emergency Response Coordinator**

EMERGENCY TELEPHONE NUMBERS:

Big Cypress National Preserve

Jeff Lewis-ERC 239-695-2000

Dennis Bartalino-Alt ERC 239-695-1178

Tiffany Fireman-Facilities Operations Specialist 239-695-2000

Local Emergency Response

Ochopee Fire Department 911 or 239-695-4114

Collier County Police Department 911 or 239-695-2301

Naples Community Hospital 239-436-5000

Response/Cleanup Contractor

CHEMTREC 1-800-424-9300

Permafix of Orlando 1-407-859-4441

Notification

National Response Center 1-800-424-8802

State Hazardous materials Spill Contact, Phil Snyderburn-FDEP 1-239-732-2502

US EPA, Region IV 1-404-562-8700

Appendix G: Discharge Notification Form

| | | |
|---|--|-------------------------------|
| <i>Part A: Discharge Information</i> | | |
| General information when reporting a spill to outside authorities: | | |
| Name: | Big Cypress National Preserve | |
| Address: | 52105 Tamiami Trail East Ochopee, Florida 34141 | |
| Telephone: | 239-695-2000 | |
| Owner/Operator: | Department of the Interior-National Parks Service | |
| Primary Contact: | Jeff Lewis | |
| Type of oil: | Discharge Date and Time: | |
| Quantity released: | Discovery Date and Time: | |
| Quantity released to a waterbody: | Discharge Duration: | |
| Location/Source: | | |
| Actions taken to stop, remove, and mitigate impacts of the discharge: | | |
| Affected media (air/water/soil): | | |
| Notification person: | Telephone contact: Business: 24-hr: | |
| Nature of discharges, environmental/health effects, and damages: | | |
| Injuries, fatalities or evacuation required? | | |
| Part B: Notification Checklist | | |
| | Date and time | Name of person receiving call |
| Discharge in any amount | | |
| | | |
| | | |
| Discharge in amount exceeding 25 gallons and <i>not affecting a waterbody or groundwater</i> | | |
| | | |
| | | |
| <i>Discharge in any amount and affecting (or threatening to affect) a waterbody</i> | | |
| | | |
| | | |

Appendix H: Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 4 Regional Administrator, and to the Southwest District Office of the Florida Department of Environmental Protection, within 30 days of the qualifying discharge incident.

| | |
|---|---|
| Facility: | Big Cypress National Preserve, Oasis Ranger Station |
| Owner/operator: | Department of the Interior-National Parks Service |
| Name of person filing report: | |
| Location: | |
| Maximum storage capacity: | 8,020 gallons |
| Nature of qualifying incident(s): | |
| Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons or Second discharge exceeding 42 gallons within a 12-month period. | |
| Description of facility (attach maps, flow diagrams, and topographical maps): | |
| Agency Notification Standard Report (cont'd) | |
| Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred: | |
| | |
| Corrective actions and countermeasures taken, including a description of equipment repairs and replacements: | |
| | |
| Additional preventive measures taken or contemplated to minimize possibility of recurrence: | |
| | |
| Other pertinent information: | |
| | |



As the nation's principal conservation agency, the Department of the Interior has responsibilities for most of our nationally owned public lands and natural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historic 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. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for American Indian reservation communities and for people who live in island territories under US administration.

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