



# Florida Panther National Wildlife Refuge Visitor Services Plan and Environmental Assessment **August 2021**

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# *Section A. Visitor Services Plan*

## **Summary**

The U.S. Fish and Wildlife Service (USFWS) established Florida Panther National Wildlife Refuge (FPNWR, Refuge) on June 20, 1989. The Refuge currently includes 26,609 acres of land and water in Collier County, Florida (Figure 1).

This Visitor Services Step-Down Plan (VSP) identifies program goals, objectives, and strategies to reach over the next 15-year period. The development of this proposed VSP and Environmental Assessment (EA) will revise and amend the visitor services program of the 2000 Comprehensive Conservation Plan (CCP) and will be addressed in a revised CCP which is currently being developed by the Refuge. New and proposed uses are addressed in this VSP and detailed hunt and fish plan found in Appendix A. It ensures that recreational uses on the Refuge are compatible with the National Wildlife Refuge System (NWRS) mission and the purposes of the Refuge.

This VSP addresses the following proposed, compatible, wildlife-dependent recreational uses on the Refuge: hunting, fishing, wildlife observation, photography, environmental education, and interpretation (Appendix C). Hiking, bicycling, camping, and use of ORVs are supporting uses allowed under compatible wildlife-dependent recreation. In addition, commercial uses (e.g. tours, recording), instructor-led small group activities, private ceremonies, and UAVs are forms of non-wildlife dependent recreation being proposed for permitted allowance and in designated areas that have also been determined to be compatible (Appendix C).

In 2014, the refuge began public scoping to revise the Draft CCP and received nearly 5,000 public comments. Many of the comments were directed at visitor services and recreational access. After considerable assessment, the refuge chose to develop a Visitor Services Plan and Hunt and Fish Plan that supports and expands upon the original goals of the 2000 CCP while continuing to revise and update the CCP. This document was written in 2019-2020 by the staff of the Florida Panther National Wildlife Refuge.

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# *I. Background Information*

## **A. REFUGE HISTORY, PURPOSES, AND RESOURCES**

The Florida panther (*Puma concolor coryi*) first received federal protection status in 1967 under the Endangered Species Preservation Act of 1966, the predecessor of the Endangered Species Act of 1973. This Act directed the U.S. Fish and Wildlife Service to conserve endangered and threatened species by restricting take and trafficking, developing and carrying out recovery plans, seeking land purchases or exchanges for important habitat, and providing aid to state conservation agencies.

The U.S. Fish and Wildlife Service appointed a team in 1976 to prepare a Species Recovery Plan for the Florida panther. Approved in December 1981, the plan states that in terms of the recovery of the panther "...it is vital to acquire the remainder of the Fakahatchee Strand and the prairies and cypress forests adjacent to it to insure that a unified management strategy can be affected for the area and to provide an extremely important corridor of natural habitat between the Fakahatchee Strand, the Big Cypress National Preserve, and Everglades National Park." This statement provided the purpose for development of the 1985 Fakahatchee Strand Environmental Assessment (EA): A Florida Panther Habitat Preservation Proposal (Fakahatchee Strand EA, USFWS 1985), and subsequently the establishment of the Florida Panther NWR.

The Fakahatchee Strand EA (USFWS 1985) identified 88,000 acres of important panther habitat in Collier County surrounding the Fakahatchee Strand State Preserve. The Proposed Action was a "Combination of Federal and State Acquisition and Management" which outlined actions that included third party conservation easements and fee title acquisition of various tracts by State and Federal agencies. Specifically, over 30,000 acres of the northern Fakahatchee Strand was proposed for inclusion in the NWRS, with an additional 8,000 acres adjacent to the NWRS area proposed for third party conservation easements. Additionally, 15,000 acres between State Road (SR) 29 and the Big Cypress National Preserve (BICY) was proposed for inclusion into the NPS BICY; and approximately 35,000 acres adjacent to the established Fakahatchee Strand State Preserve was proposed for inclusion into the Picayune Strand State Forest.

Lands identified for acquisition to create FPNWR were among over 1.3 million acres of Southwest Florida purchased by self-made millionaire Barron Gift Collier in the early 1920s. The Service purchased the initial 24,300 acres of the refuge from the Colliers for \$10.3 million on June 20, 1989. On November 1988, President Reagan signed into law legislation authorizing an exchange of 68 acres of Department of Interior land in Phoenix, Arizona for 108,000 acres of Collier lands in Southwest Florida. Of these 108,000 acres, approximately 2,300 acres were added to the FPNWR, 35,000 acres were conveyed to the Service to establish the Ten Thousand Islands National Wildlife Refuge (TTI), and the remaining acreage was conveyed to Big Cypress National Preserve. The actual land exchange did not occur until 1996, which completed all but 9 acres of the original FPNWR acquisition boundary established in the Fakahatchee Strand EA (USFWS 1985). In 2016, the Service acquired the 4-acre Weed Tract, leaving only 5 acres of private inholdings in the refuge's acquisition boundary. Today the refuge is 26,609 acres.

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The refuge's first CCP was completed in 2000. This plan largely focused on habitat management for Florida panther and hydrology management for habitat, with limited visitor use. The plan also proposed a major land protection effort by a combination of Fee Title and easements/agreements. These management focuses have not only provided quality habitat for Florida panthers, they have also created a more resilient landscape for humans and other wildlife species.

#### *PURPOSE OF FLORIDA PANTHER NWR*

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Endangered Species Act of 1973, to:

*"Conserve fish, wildlife, and plants which are listed as threatened and/or endangered species."*

*And under the authority of Fish and Wildlife Act of 1956 for the:*

*"Development, advancement, management, conservation and protection of fish and wildlife resources."*

More specifically, the recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the refuge was acquired for the benefit and recovery of the endangered Florida panther. Located in the core of occupied panther territory, the refuge ensures that important Florida panther habitat and corridors are protected in perpetuity.

This purpose and the mission of the NWRS is fundamental to determining the compatibility of proposed uses of the Refuge.

#### **PHYSICAL RESOURCES**

##### *AIR QUALITY*

Air quality is not perceived to be as critical a concern as water quality. However, research shows that some of the mercury in South Florida, generated from incinerators or power plants, is transported there atmospherically.

The Clean Air Act of 1970 (as amended in 1990 and 1997) required the EPA to implement air quality standards to protect public health and welfare. National Ambient Air Quality Standards (NAAQS) were established based on protecting health (primary standards) and preventing environmental and property damage (secondary) for six pollutants commonly found throughout the United States: lead, ozone, nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and particulate matter less than 10 and 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>).

The Florida Division of Air Resource Management operates National Ambient Monitoring Stations (NAMS) and State and Local Ambient Monitoring Stations (SLAMS) to measure ambient concentrations of these pollutants. In 2006, ambient air quality data were collected by 216 monitors (in 34 counties) strategically placed throughout the state (FDEP 2006). Areas that meet the NAAQS are designated attainment areas, while areas not meeting the standards are termed nonattainment areas. While no pollutant monitoring data are being collected on the Florida Panther NWR per se, air quality is monitored on a regular basis by 25 monitors in the counties within 100 miles of the refuge. Florida's 2012 monitoring results indicate that all of

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Southwest Florida continues to qualify as an attainment area for all monitored pollutants (FDEP 2012).

The refuge lies within a designated class II area under the Clean Air Act. As such, the air quality degradation from prescribed burning is considered to be temporary and minor as long as the burn is conducted under the best weather conditions to maximize pollutant dispersal. Impacts are also to be minimized on adjoining highway corridors and surrounding communities.

### *PHYSIOGRAPHY, SOILS, AND GEOLOGY*

The Florida plateau, which is the platform upon which Florida is perched, was formed about 530 million years ago by a combination of volcanic activity and marine sedimentation. Florida's geologic history begins deep beneath its surface where ancient rocks indicate that Florida was once a part of northwest Africa. As ancient supercontinents split apart, collided, and rifted again, a fragment of Africa remained attached to North America. Florida separated from the African Plate when the super-continent Pangaea rifted apart in the Triassic period (about 240 million years ago) and joined to the North American continent. This fragment formed the base for the overlying carbonate rocks which now include the Florida and Bahamas Platforms (FDEP, 2006).

The basement rocks of the Florida Platform include igneous, sedimentary, and volcanic rocks. A thick sequence of sediments lies upon the eroded surface of the basement rocks. Carbonate sedimentation predominated from mid-Jurassic until at least mid-Oligocene (186 to 38 million years ago) on most of the Florida Platform. From the mid-Oligocene to the Holocene (38 million years ago to recent time), renewed uplift and erosion in the Appalachian highlands to the north and sea-level fluctuations, resulted in deposits of quartz sand, silt, and clay sediments upon the carbonate-depositing environments of the Florida Platform. Numerous disconformities formed in response to episodic deposition and erosion resulting from sea-level fluctuations and Appalachian highland erosion.

The oldest Florida sediments exposed at the modern land surface are Middle Eocene carbonates (60 million years old), called the Avon Park Formation, which crop out on the crest of the Ocala Platform in west-central Florida. Much of the state is blanketed by quartz sand, silt, and clay-bearing sediments that were deposited in response to Pliocene to Holocene (14 million years ago to recent time) sea-level fluctuations. (Scott et al. 2001).

Florida experienced cycles of sediment deposition and erosion in response to sea-level changes throughout the last 65 million years. Florida's Cenozoic-aged sediments include two major groups. Older carbonate sediments formed due to biological activity that are mostly made up of whole or broken fossils including foraminifera, bryozoa, mollusks, corals and other forms of marine life. More recent siliciclastic sediments (quartz sands, silts, and clays) eroded from the Appalachian Mountains which encroached upon the carbonate depositing environments. Thus, the sediments more recently deposited were primarily quartz sands, silts and clays with varying amounts of limestone, dolomite, and shell. In southern Florida, carbonate sediments still predominated because most of the siliciclastic sediments, moving south with the coastal currents, were funneled offshore. The area of the modern-day Everglades was a shallow marine bank where calcareous sediments and bryozoan reefs accumulated. These sediments compacted and eventually formed the limestone that floors the Everglades today (FDEP 2006).

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The land mass that is now Southwest Florida remained shallowly submerged beneath the ocean until about fifteen million years ago when most of Collier and eastern Lee counties emerged. Not until the Pleistocene Epoch, slightly more than one million years ago, did the coastal areas from southern Sarasota County to southern Collier County emerge and begin evolving into the coastline known today. (Most of Glades and Hendry counties also emerged during this epoch.) The emergence was caused principally by declining sea levels.

The refuge lies within the Big Cypress Swamp physiographic region of Florida. The Big Cypress Swamp physiographic region covers more than 2,400 square miles of subtropical area in Southwest Florida. "Swamp" is a misnomer, for the land contains a variety of wet and dry habitat types. However, the cypress tree is the predominant tree of the area.

The Tamiami Limestone formation underlies all of the refuge and is approximately 6 million years old. The geologic platform of the refuge and surrounding lands is one of the youngest geologic platforms in North America, which has been repeatedly submerged and exposed by rising and falling seas during the last 50,000 years. Underneath the exposed surface, there are thousands of feet of horizontal carbonate rock and siliciclastic layers. Ranging from 11 to 16 feet above sea level, the refuge's topography is slightly higher in elevation than the Everglades, which is primarily due to the underlying Pliocene Tamiami Formation. The coral-rich Tamiami Formation is capped by hard rock, under which are found sand, silts and clays, shell marks, and shell-free, greenish clay. A thin layer of sand, sandy marl, clay and fine shell cover prairie and flatwood areas, while a thicker organic peat ranging in thickness to 7 feet can be found in the hammocks and strands.

More than 75 percent of the rain normally falls during the 6-month wet season of May through October. Summer rains are usually intense, frequent, and short in duration. Winter is a drier period, where rains are usually the result of large frontal systems and are longer in duration, but less intense. Rainfall averages 55 inches per year. During the summer rainy season, shallow depressions fill with water and because of the poor drainage, most of the water remains standing until it evaporates or slowly drains. Thus, as much as 90 percent of the area is inundated to depths ranging from a few inches to more than 3 feet at the height of the rainy season. During the winter dry down, water is concentrated in depressions formed by low spots in the bedrock or the deepest parts of the strands.

The refuge lies within the center of a major watershed that has importance to man and the environment. The Corkscrew Regional Ecosystem Watershed and the Okaloacoochee Slough form the two northern origins of the watershed. Water from these wetlands flows through the refuge and south through the Fakahatchee and Picayune strands into the Ten Thousand Islands coastal area. These wetlands provide flood protection to the urban and agricultural areas of Southwest Florida by filling up and holding water from the major rainfall events that frequently occur in South Florida. These wetlands also filter and cleanse these waters before they enter the aquifer and storage reservoirs that are tapped for drinking water. In addition, they provide habitat for a diverse system of plants and animals, unique to Florida and the United States.

A major agricultural area lies just north of the refuge. Large tracts of land have been cleared to produce vegetables and citrus. The quantity and quality of the water draining from these operations is undergoing long-term monitoring to determine their impacts on the refuge.

Soils are predominantly organic peats in the mixed hardwood strand areas ranging in thickness up to 7 feet. A thin layer of mineral soil, especially marl and sand, is dominant on the prairies.

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Slash pine forests grow primarily on shallow sandy soils with calcareous materials beneath, and often in association with exposed cap rock. These soils generally include Sunniland, Broward, Keni, Copeland, Matmon, Charlotte and Pompano. Cabbage palm and saw palmetto are primary associates of slash pine on these soils (Leighty et al. 1954). Hammocks are found on elevated bedrock areas, generally overlain by sandy peat (Craighead 1971). These are considered Keri-Copeland complex soils, which have organic matter mixed with fine sands overlying limestone, sometimes with a marl layer between (Leighty et al. 1954). Mixed swamp and bald cypress forests grow in organic soils as deep as seven feet, which occur in deep depressions in the mineral soil. Strands form in elongated depressions and domes in circular ones. The largest and fastest growing cypress trees grow on the deepest peat (Duever et al. 1975). Scrub and dwarf cypress grow on sand or marl soils of the Ochopee and Tucker Marl series (Leighty et al. 1954). They are approximately three to six inches deep overlying bedrock (Craighead 1971). Wet prairies grow generally from sandy soils up to three feet deep, with little peat accumulation due to a fairly frequent occurrence of fire. Because of a longer hydroperiod and less fire frequency, marshes normally grow from peat deposits over mineral soil. Deposits may be more than 13 feet deep (Duever et al. 1986).

## *HYDROLOGY*

The Big Cypress Basin is a recognized physiographic region in Southwest Florida. It is a source of recharge for the shallow aquifers of South Florida and is important to the integrity of the water resources in the western Everglades. The hydrological features of the basin were recognized when Congress established the Big Cypress National Preserve in 1973. The Big Cypress Basin is a rain driven system. The refuge is flooded with a shallow sheet of surface water starting after the onset of the rainy season (usually in June) and ending in the winter dry season after the surface waters recede. Rainfall averages 54 inches per year. During the rainy season, shallow depressions fill with water. Because of poor drainage, water stands on the land until it evaporates, infiltrates to the underlying aquifer, or slowly drains off through sloughs and strands. When the dry season begins, the water level starts to recede.

The surface water hydrology in the refuge is typically characterized as a sheet flow-flooding regime due to the flat gradient and topography of the refuge and the larger Big Cypress Basin (Figure 2). Water movement is slow across the landscape. Sheet flow across the refuge is heavily influenced by upstream flows and downstream draws from canals and pumps. The upstream flows into the refuge are primarily from Camp Keais Strand and Okaloacooche Slough, both of which have been significantly altered by agriculture, ditching and transportation infrastructure.

## *WATER QUALITY AND QUANTITY*

In a multi-year study of contaminants on Florida Panther NWR, pesticides, metals, and nutrients were monitored in soil and water (Richardson and Frakes 2004). Soil pH from sample sites was generally below 6.5, except in some parts of Lucky Lake and Spoonbill Corner where it was above 7.8. Organic matter in soils was below 2%, except in the top 5 cm in Lucky Lake and Spoonbill Corner where it was about 4%. Potassium concentration in the top 5 cm soil was greater than 20 mg/kg in Lucky Lake and greater than 40 mg/kg in Spoonbill Corner. However, potassium concentrations at other soil depths from both sites were less than 20 mg/kg. At Wilson Lake and Catherine Island, soil potassium levels were below 20 mg/kg. Though soil magnesium and calcium concentrations were greater than that of potassium, the trends observed at the sampling sites were similar among all three metals. Phosphorus concentrations in soil at the sampling sites were below 4 mg/kg, except at Spoonbill Corner where it was almost

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10 mg/kg. Nitrate was only detectable in the top soil (0-5 cm) at three of the sample sites; nitrate concentration was less than 3 mg/kg at these sites. Ammonia was detected at all soil depths. Ammonia concentrations at Catherine Island and Wilson Lake were similar at all depths.

Nutrients and metals were analyzed in monthly water samples taken at the four sites on the refuge (Richardson and Frakes 2004). Total nitrogen at Catherine Island during the first three months of sampling was greater than that at the other sites and increased dramatically over the same period. Though nitrogen levels at the other sites increased in the second month of sampling, this increase was not sustained in the third month as seen on Catherine Island. Phosphorus concentrations were below 0.15 ng/L at all sites, except during the April sampling when the level at Catherine Island was about 0.7 ng/L. Copper concentrations were generally low or undetectable at all the sites. Other metals and pesticides were also analyzed for, but the data is not ready to be included in this proposal.

The refuge has no water control structures or means for water control at this time. However, the Service is involved in a water management project for the west side of the refuge. Lucky Lake Strand and Stumpy Strand are two wetland features comprised of more than 3,000 acres of cypress swamp, mixed swamp, wet prairies, marshes and ponds. The strands receive water from direct rainfall, and runoff from surrounding uplands and Camp Keais Strand to the north.

Natural drainage of these strands changed with the construction of the Golden Gate Estates east of Naples in the 1960s. This project included the excavation of 183 miles of canals to drain wetlands for residential development. South of the refuge, Merritt Canal is one of four canals which drain South Golden Gate Estates into the Faka Union system. In addition to draining large areas along the canal south of I-75, the canal's northern origin is the southern terminus of the Lucky Lake Strand. This resulted in chronic drainage of both Lucky Lake and Stumpy strands north of the highway.

The Service entered into an agreement with the SFWMD to proceed with the construction of a low-head water control structure in Merritt Canal. This control structure was supposed to be designed to slow the drainage within these two strands to closely match their original hydroperiods. However, as a settlement to a lawsuit, the weir height was mandated not to exceed 9.5 feet National Geodetic Vertical Datum. At this height, the weir was incapable of affecting upstream water levels on the refuge and the entire project was considered a failure. Vegetative transect established in Lucky Lake Strand immediately north of Merritt Canal revealed no measurable hydrologic increase on Service lands due to the weir over several years of evaluation.

## **BIOLOGICAL RESOURCES**

### **HABITAT**

The Service and other interested parties are concerned for the refuge's long-term environmental health and wildlife productivity. Nationwide studies have documented a declining status of numerous vegetative and wetland-dependent wildlife populations. These declines have been attributed to habitat loss and alteration. Since being logged 60 to 70 years ago, cypress forests have re-established, but impacts from the logging can still be found on the refuge today. Land management practices on lands surrounding the refuge have exerted influences to alter refuge habitats. Ditching for residential and agricultural development near the refuge has altered refuge

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hydrology, and has promoted generally drier soils, which has promoted an expansion of cabbage palms. The long-term ecological health of the refuge is inextricably linked to hydrology and fire, which are the two major ecosystem drivers that maintain and enhance ecosystem integrity on the refuge.

There have been numerous land cover classifications developed in the state of Florida. Due to its utility on the refuge, we have chosen to use the Florida Land Cover Classification System and Florida Cooperative Land Cover Map Version 3.0 (CLC) to highlight unique ecological communities and groupings that are found on the refuge. The CLC is a joint partnership between the FWC and Florida Natural Areas Inventory (FNAI) to develop ecologically-based statewide land cover from existing sources and expert review of aerial photography. The CLC follows the Florida Land Cover Classification System that was developed by FNAI (Florida Natural Areas Inventory 2010). Based on expert knowledge and on-the-ground reconnaissance, some ecological community boundaries, categories and descriptions were modified once the CLC was clipped in ArcGIS to fit the refuge boundary. Primary edits included separate community types for cypress domes, hardwood hammock and glades marsh. With slight modifications, ecological community descriptions are based off of those described in the 2010 Guide to the Natural Communities of Florida (FNAI 2010) and the 1999 South Florida Multi-species Recovery Plan (USFWS 1999). Eighteen ecological community types and groupings have been selected for the refuge clear-cut wetlands, cypress strand, cypress domes and other isolated wetlands, cypress/mixed hardwoods swamp, freshwater marshes, hammock, mesic pine flatwoods, other freshwater forest wetlands, rural/administrative, wet pine flatwoods, wet prairie, and lakes.

### *ECOLOGICAL CONSIDERATIONS*

A unique combination of geological history, climate, geography, and environmental forces makes the South Florida Ecosystem an important reservoir of landscape, community, and species diversity. The vegetation of the region represents a mixture of Caribbean, southern temperate, and local influences. The South Florida Ecosystem supports the only subtropical ecological communities in the continental United States: about 60 percent of the native plant species south of Lake Okeechobee originated from the tropics. As a result of this convergence of Caribbean, temperate, and endemic influences, the South Florida Ecosystem supports substantial ecological, community, taxonomic, and genetic diversity (USFWS Multi-species Recovery Plan 1999).

The South Florida Ecosystem encompasses 67,346 square kilometers (26,002 square miles) covering the 19 southernmost counties in Florida. From a watershed management perspective, South Florida can be described by further subdividing the region into the following subregions: Kissimmee River, Lake Okeechobee, Lake Wales Ridge, Peace River/Charlotte Harbor, Upper East Coast, Lower East Coast, Caloosahatchee River, Everglades, Big Cypress, and Florida Keys, including Biscayne Bay, Card Sound, and the lower southwest estuaries.

The Big Cypress subregion includes all of Collier and portions of Lee, Hendry, and Monroe counties. This subregion has two watersheds: the Corkscrew Swamp from near Lake Trafford and southwest to the coast, and the Big Cypress Swamp running southwest and perpendicular to the Tamiami Canal. The South Florida Shelf runs through the subregion and generally parallels the southwest coast. The landscape is relatively flat and underlain with an uneven bedrock surface which is usually covered by a veneer of soils. The soils are relatively modern

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and in the process of formation from surficial sediments such as sand and calcareous marl mixing with organic peat and muck components.

The more than 320,000 ha (790,720 acres) of connected wetlands feature the FPNWR, Corkscrew Regional Ecosystem Watershed (CREW), Corkscrew Swamp Sanctuary, Camp Keais Strand, Okaloacoochee Slough, Fakahatchee and Picayune Strands, Belle Meade, and a major portion of BICY. The system encompasses mostly cypress, pine, and hardwood forests, with some prairies and sloughs that drain into the Ten Thousand Islands and Rookery Bay estuarine systems and into other estuaries of the Everglades. Major ecological communities of the Big Cypress subregion include pinelands, hammocks, beach dune, coastal strand, prairies, cypress swamps, mangroves, and freshwater and saltwater marshes.

The fauna of this region is extremely young and dynamic; understanding it requires abandoning simple explanations of historical zoogeography, ecological conditions, hydrological conditions, or human disturbance alone. Three factors mostly define the nature of southern Florida's biodiversity: the recent origin of freshwater and terrestrial ecosystems; peninsula geography and habitat diversity; and subtropical wet/dry climate and productivity.

## **WILDLIFE**

The Florida Panther NWR is known for its diversity and abundance of wildlife. A total of 126 breeding and non-breeding bird species have been identified, an additional 35 species probably occur on the refuge. Forty-six species of reptiles and amphibians are known to occur on the refuge and another fifteen species are known to occur in close proximity to the refuge. Twenty-two species of mammals are known to occur on the refuge and another eleven species are known to occur in close proximity to the refuge. A variety of fish species, representing 13 families, occurs in the area. The Wildlife Inventory Plan, completed in August 1990, is in need of revision to remove ineffective or logistically impractical surveys and inventories and replace them with more accurate and cost effective techniques. Trend data from surveys is still being run and will be evaluated to assist with revisions to the inventory plan that are necessary to help meet the purposes of the refuge.

The high degree of endemism among South Florida's plants, animals, and biotic communities combined with extensive land conversion and habitat degradation by humans has imperiled many of the region's species. The South Florida Ecosystem supports over 68 federally threatened or endangered species. Six of these species are known to utilize the refuge. These species include the Florida panther, wood stork (*Mcycteria americana*), Audubon's crested caracara (*Polyborus plancus audubonii*), Everglades snail kite (*Rhostrhamus sociabilis*), Florida bonneted bat (*Eumops floridanus*), and eastern indigo snake (*Drymarchon couperi*). The bald eagle (*Haliaeetus leucocephalus*), which occurs periodically on the refuge, has been delisted. The eastern diamondback rattlesnake (*Crotalus adamenteus*), an At Risk Species, is known to occur across the refuge. Although only documented in a few locations on the refuge, the gopher tortoise (*Gopherus polyphemus*), a candidate for listing and At Risk Species, appears to occupy some habitats on the refuge.

## **CULTURAL RESOURCES**

The body of Federal historic preservation laws has grown dramatically since the enactment of the Antiquities Act of 1906. Several themes recur in these laws, their promulgating regulations, and more recent Executive Orders. They include:

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- 1) each agency is to systematically inventory the historic properties on their holdings and to scientifically assess each property's eligibility for the National Register of Historic Places;
  - 2) federal agencies are to consider the impacts to cultural resources during the agencies' management activities and seek to avoid or mitigate adverse impacts;
  - 3) the protection of cultural resources from looting and vandalism are to be accomplished through a mix of informed management, law enforcement efforts, and public education; and
  - 4) the increasing role of consultation with groups, such as Native American tribes, in addressing how a project or management activity may impact specific archaeological sites and landscapes deemed important to those groups.

The U.S. Fish and Wildlife Service, like other federal agencies, is legally mandated to inventory, assess, and protect cultural resources located on those lands that the agency owns, manages, or controls. The Service's cultural resource policy is delineated in 614 FW 1-5 and 126 FW 1-3. In the Service's Southeast Region, the cultural resource review and compliance process is initiated by contacting the Regional Historic Preservation Officer/Regional Archaeologist (RHPO/RA). The RHPO/RA will determine whether the proposed undertaking has the potential to impact cultural resources, identify the "area of potential effect," determine the appropriate level of scientific investigation necessary to ensure legal compliance, and initiates consultation with the pertinent State Historic Preservation Officer (SHPO) and federally recognized Tribes.

Several archaeological investigations have occurred within and adjacent to the FPNWR (Dean and Weisman 2007; Fay and Carr 1990; Kanaski 2004; Schwadron 2002 & 2005), and although none of the historic sites documented are considered eligible for the National Register of Historic Places, there are a few in the Florida Master Site File. Fay and Carr conducted the first systematic archaeological investigation on the Refuge in 1990. They reviewed aerial photos and topographical maps to evaluate not only the locations of proposed fire and maintenance facilities in the Roth Work Center and eight deer feeding stations, but also other likely archeological sites. The Refuge's 1990 "main office" was originally a 20th century hunting camp located at the current Roth Work Center. A house once stood on the site of the maintenance shed, but it was removed shortly after the FWS's acquisition of the tract in 1989-1990. Systematic shovel testing revealed traces of the razed structure, but evidence of earlier occupations was not encountered.

The 1990 results of the archaeological survey for the feeding stations and three targeted archeological sites (Cochran, Island and Goggin Mound) are instructive. Seven of the feeding stations were located in low-lying cypress strands, and testing did not reveal any evidence for prior human occupation. The eighth feeding station was located on southeastern edge of Cochran Island, which is situated on a hammock covered by oak, cabbage palm, and saw palmetto, surrounded by cypress lowlands, and just northwest of Cochran Lake. A black earth midden was reported, but the site was partially impacted by prior disking and a heavily used ATV trail. Surface collection from the Cochran Site assemblage, included a bone point, modified shark teeth, a perforated Busycon adze, Belle Glade Plain, St. Johns Check-stamped, Fort Drum Incised, Surfside Incised, and untyped sand-tempered plain sherds. The Island Site was discovered on the northeastern edge of Cochran Island just off the tram/buggy road. Cypress trees and shallow water surrounded this 50 cm elevated site, and the interior was comprised of cabbage palms and oaks with an understory of palmetto, air plants, wild coffee and dahoon holly. Shovel Test 1 was excavated in the approximate middle of the elevated area, and recovered materials included ceramic, bone and shell. Goggin Mound, was first described by

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John Goggin in 1949 (Goggin 1949), but was not excavated until 1990. Unfortunately, upon initial assessment of the mound, the team found a large (1.5 x 1 meter) pot hole in the crown, suggesting that it was disturbed by collectors at some point in the past. Other damage was apparent the side of the mound where it had been truncated by the adjacent tram/buggy road. However, inspection of the road cut showed marine shell and animal bones eroding from the mound.

Kanaski (2004) conducted a Phase I archaeological survey for the Refuge's Florida Panther and Memorial Hiking Trails. The investigation's methodology consisted of a pedestrian walkover, systematic auger testing, and photo-documentation. The trails' alignment crossed wet prairie and the fringes of open pools. Bedrock or limestone cobbles were at or near the surface throughout most of the project area. Evidence of prior human occupation was not encountered or observed. This area was thought to have been much wetter prior to the development of the Everglades Agricultural Area south of Lake Okeechobee, construction of the water management and delivery systems in south Florida, and the development of the transportation network or corridors.

In 1925, the Atlantic Coast Line (ACL) Railroad began work on extending its Haines City Branch from Immokalee to Deep Lake, where Barron Collier owned extensive grapefruit groves and timber acreage. Service began on this segment in 1926, and soon after, the Interstate Commerce Commission approved ACL's acquisition of Collier's 14-mile long Deep Lake Line, allowing the company to eventually improve and extend service between Deep Lake and Everglades (Turner 2008). The railroad segment that passed along the eastern margin of the Refuge is labelled as the Atlantic Coast Line [under construction] on the 1926 State of Florida map for Collier County, and the ACL's abandoned railroad corridor is now occupied by a powerline and its associated maintenance access road within the eastern boundary of the Refuge.

Cutting of the virgin cypress stands in the Big Cypress and Fakahatchee Strand began in earnest in the 1940s. The Lee Tidewater Cypress Company purchased the large tract of the Fakahatchee Strand in 1913, but did not begin their timbering operations until the mid-1940s. To access the virgin cypress stands, they developed an extensive network of logging tramways (CR1016) sprawled across the Fakahatchee Strand State Preserve and the southern portion of the Refuge. These tramways tied into the ACL Railroad at Copeland, and cypress logs were shipped via the ACL to their main sawmill in Perry on a semi-weekly basis. By 1952, the company had virtually logged out all merchantable cypress on their Fakahatchee Strand tracts. It ceased operations and removed its rail lines and equipment by 1957 (Turner 2008; Dean and Weisman 2007). Today, the only visible evidence of past logging operations on site are the woods roads which crisscross the Refuge. These roads often occur on former trams that were the railbeds of the lumber railroad.

Miccosukee and Seminole bands may have utilized the refuge in the 19th and early 20th centuries. Although, no tribal sites or camps have been found or reported on the refuge, there are at least two known Seminole camps just east of Refuge, located in the Big Cypress National Preserve; and the Fort Keais site from the 2<sup>nd</sup> and 3<sup>rd</sup> Seminole Wars is located along the northern boundary of Refuge.

## **B. VISITOR SERVICES PROGRAM PURPOSE AND SCOPE OF PLAN**

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In 1997, Congress passed the National Wildlife Refuge System Improvement Act (Improvement Act) which clearly states that on national wildlife refuges, wildlife comes first. The Improvement Act identified six priority wildlife-dependent public use activities and programs that are compatible with the mission of the NWRs. These uses include hunting, fishing, wildlife observation, photography, environmental education, and interpretation.

The purpose of the visitor services program is to connect visitors with the Refuge's fish, wildlife, plants, and their habitats through safe, high quality, appropriate, and compatible wildlife-dependent recreational and educational programs and activities. This VSP was prepared based upon these guidelines. In addition to the CCP, with the adoption and implementation of this step-down plan, all visitor services activities and programs on the Refuge will adhere to national guidelines and ensure that all visitor activities are compatible with the overarching wildlife missions and purposes of the Refuge and NWRs.

The purpose of this VSP is to establish priorities and identify improvements to guide the Refuge's visitor services program over the next fifteen years. Existing goals, objectives, and strategies for visitor services have been identified on pages 24-33 the existing CCP (USFWS 2000). Additional goals, objectives, and strategies for all visitor services standards have been prepared for Table 4 within this planning document. This VSP addresses the following proposed compatible wildlife-dependent recreational uses on the Refuge: hunting, fishing, wildlife observation, photography, environmental education, and interpretation. Hiking, bicycling, camping, and use of ORVs are supporting uses allowed under wildlife-dependent recreation. In addition, commercial uses (e.g. tours, recording) and instructor-led small group activities are forms of non-wildlife dependent recreation being proposed, and in designated areas have also been proposed to be compatible (Appendix C).

## **C. HISTORY OF THE REFUGE VISITOR SERVICES PROGRAM**

### **Environmental Education and Interpretation**

Environmental education and interpretation programs at local schools, community organizations, and community events are provided by various collaborating Refuge staff, as the education Park Ranger position has been vacant since 2012. With the Refuge closed to most public access, on site education and interpretation is limited to special interest tours, interpretive hikes, interpretive trail panels, and special events. Each year the Refuge partners with Friends of the Florida Panther Refuge to celebrate Save the Florida Panther Day by offering a free environmental education field day titled Open House on the third Saturday of March. Annually attracting approximately 200 participants, Open House offers excursions into the Refuge such as swamp buggy tours and guided hay rides, guided hikes, presentations on Refuge research and management activities, and children's activities including archery lessons. Florida Panther NWR has been a leading partner in the annual, interagency, Florida Panther Festival since inauguration of the community event in 2011. Held at the Naples Zoo and attracting 3,500-5,500 participants annually, the Festival educates about the Florida panther, recovery efforts for the species, and how residents can safely coexist with Florida's native wildlife through expert speakers, safety pen displays, educational vendors, field excursions, and children's activities. The Refuge is a designated Hands On The Land field experience site. Friends of the Florida Panther Refuge members, volunteers, and collaborators from partner agencies frequently assist with Refuge programming and public education requests.

### **Wildlife Observation and Photography**

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The Leslie M. Duncan Memorial Trail and Panther Trail offer two recreational hiking opportunities on the Refuge free of charge, seven days a week, from sunrise until sunset. The Leslie M. Duncan Memorial Trail is an accessible 0.3-mile loop with a shell surface, interpretive signs, and small observation deck overlooking seasonally wet prairie habitat. The Panther Trail is a 1.3-mile unimproved loop through three primary Refuge habitats of pine flatwoods, seasonally wet prairie, and hardwood hammock. This trail offers access to Otter Pond covered observation deck with two benches. Both trails are accessible from SR 29, approximately 0.25 miles north of the I-75 junction. Wildlife observation and photography along the trails are encouraged. Seasonal wildflowers, wildlife tracks, and an array of birds and butterflies are frequently observed along the trails. Bicycles, pets, and the takeoff or landing of unmanned aerial vehicles are not allowed on the hiking trails. Trained volunteers offer interpretive tabling at the trailhead and guided walks as available.

In addition to opportunities at two public use hiking trails, the Refuge collaborates with the Friends of the Florida Panther Refuge to offer photography outings for limited special interest groups including local photography clubs. Refuge tours via guided hike or swamp buggy excursion and public events also offer excellent wildlife observation and photography opportunities while exploring the diversity of habitats found on the Refuge. Frequently encountered wildlife may include bobcat, raccoon, turkey, whitetail deer, and a variety of wading and forest birds.

The Refuge reports an annual average of over 5,000 visitors participating in special events, environmental education and interpretation programs, and wildlife observation opportunities offered by current facilities, staff, and volunteers.

### **Hunting and Fishing**

The Refuge is currently closed to both hunting and fishing.

## **D. VISITOR SERVICES ISSUES, CONCERNS, AND FACTORS TO CONSIDER**

### **Current Issues and Concerns**

A notice of intent to revise the existing CCP and prepare an EA was published in the Federal Register on April 23, 2014 (79 Federal Register 22697).

At that time, the Refuge launched an online community engagement website on Mindmixer.com under the domain [www.floridapantherplan.com](http://www.floridapantherplan.com) to start engaging the public on their ideas for future refuge management. The online engagement tool generated 71 individual ideas with 111 comments on those ideas for consideration, and generated 8,707 page views over 6 months of public scoping.

The Refuge held an informational meeting for non-profit environmental organization stakeholders on July 11, 2014. Representatives attended from the Florida Wildlife Federation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, Collier Audubon, Big Cypress Sportsmen's Alliance, Sierra Club, Everglades Coordinating Council, South Florida Wildlands Association, and Florida Sportsmen's Conservation Association.

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A separate scoping meeting was conducted with representatives from local, state, and federal agencies on July 15, 2014. Representatives attended from Big Cypress National Preserve, Collier County, Florida Fish and Wildlife Conservation Commission, Florida Department of Environmental Protection, Florida Forest Service, and South Florida Water Management District.

A public scoping meeting followed on July 16, 2014 with 51 attendees. Comments were encouraged to be written and submitted by mail and email or through the online engagement website. A subsequent notice of intent was published in the Federal Register on July 21, 2014 (79 Federal Register 42349) extending the comment period an additional 60 days.

During the 2014 public scoping effort, the Refuge received nearly 5,000 comments. Through these comments the Service identified a number of priority issues, concerns, and opportunities related to fish and wildlife protection; habitat restoration; public recreation and access; and management of threatened and endangered species. All public comments received during scoping were reviewed. Additionally, the planning team considered federal and state mandates and applicable local ordinances, regulations, and plans. Substantive comments were considered in the development of a Draft CCP and EA. However, some issues that are important to the public are beyond the scope of the Refuge's CCP and EA and therefore cannot be addressed within this planning process. The Service identified the priority issues for the Refuge to address in future management.

Public comments were separated into two main categories of concern:

- Need to address the increased demand for additional public access to the Refuge, including hunting, fishing, wildlife observation and photography, and environmental education and interpretation
- Need to address the lack of awareness and understanding of the natural functioning of the landscape, the role of the Refuge in the landscape, and the resources protected by the Refuge.

After thorough review of the comments received during the CCP revision scoping process in 2014, the Service decided to address the concerns raised about public access and recreation separate from the CCP through the development of a VSP and Hunting and Sport Fishing Plan for the refuge before revising the CCP. In 2021, the Service requested public review and comment on the draft VSP for Florida Panther NWR, including the Hunting and Sport Fishing Plan through local public notice on April 15, 2021 and through a notice in the Federal Register (86 Federal Register 23794) published on May 4, 2021 as part of the Service's annual Hunting and Sport Fishing rulemaking action for 2021-22, which included notice for the Florida Panther NWR EA and draft VSP.

## **E. THEMES, MESSAGES, AND TOPICS**

Refuge staff aims to provide visitors with an understanding that the National Wildlife Refuge System is an assemblage of protected lands and that there is an overall purpose for which each National Wildlife Refuge was established. Messaging specific to Florida Panther:

### **Messages**

- Identity and purpose of the USFWS and National Wildlife Refuge System, their historical backgrounds, and key roles they play in natural resources conservation today.
- Primary purpose of Florida Panther NWR to protect the Florida panther and its habitat.

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- Historical and ongoing recovery initiatives for the Florida panther, including natural history, current challenges, and coexistence.
  - The Greater Everglades ecosystem, its importance, and conservation challenges including connectivity and restoration of lands and waters.
  - The critical role of fire in habitat management.
  - Protection and restoration of water quality, quantity, and distribution.
  - Working with partners and neighbors to keep working lands working for sustainable economics and ecology.
  - Recreational opportunities on Florida Panther NWR, neighboring public lands, and how to safely enjoy fulfilling activities among the natural resources.

### **Topics**

- What is the U.S. Fish and Wildlife Service?
- What is the National Wildlife Refuge System?
- Florida Panther National Wildlife Refuge was established for the protection and recovery of threatened and endangered species with the primary purpose of Florida Panther habitat and recovery.
- The Greater Everglades ecosystem, wildlife, and their habitats.
- Working with neighbors to keep working lands working.
- Water quality, quantity, distribution.
- Recreational opportunities.

## **F. VISITOR FACILITIES AND SERVICES**

The Refuge has a small visitor services program that promotes priority public use activities, implementing national and regional initiatives along with refuge-specific goals.

The program's primary responsibilities are:

- Interpretive programming.
- Environmental education.
- Community outreach.
- Special events.
- Website and social media.
- Volunteer program management.
- Permits (special use & commercial use).
- Visitor facilities maintenance.

### **Public Use Infrastructure**

The following list describes public use facilities and infrastructure that are currently used by visitors as they travel throughout the Refuge.

- Buildings:
  - Visitor contact station/Headquarters office building
- Parking lots:
  - Visitor contact station/Headquarters office building

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- 30 gravel spaces
      - 1 ADA paved spaces
    - Trailhead parking lot
      - 15 gravel spaces
      - 2 ADA paved spaces
      - 1 RV/bus gravel space
  - Roads
    - Fritz road/Visitor contact station entrance
  - Kiosks and signs
    - Visitor contact station entrance
      - with open office days and hours
    - Trailhead parking lot
      - with 10 interpretive panels
  - Trails
    - Leslie M. Duncan Memorial Trail (0.3 miles)
    - Panther Trail (1.3 miles)
  - Pavilions/shelters:
    - Otter Pond pavilion at Panther hiking trail
    - McBride's Cabin
  - Restrooms:
    - 1 portable ADA restroom at trailhead.
    - 2 portable ADA restrooms at McBride's Cabin site.
    - 2 restrooms with 3 stalls each at Visitor Contact/Headquarters.
  - Four unimproved camp pads for resident volunteer recreational vehicles (RV)

### **Informational Resources**

Informational resources orient, inform, and interpret the resource to the public in a way that does not require personal interaction between Refuge staff and visitors. Informational resource services are an important aspect of the visitor services program because they facilitate a positive experience for visitors when visitors do not have the opportunity to interact with Refuge staff and volunteers.

#### Visitor Contact Station

- Brochures.
- Fact sheets.
- Threatened eastern indigo snake exhibit.
- Florida panther mounted taxidermy.

#### Signs

- Visitor contact station entrance sign (e.g. standard).
- A-Series (e.g. standard 11x14 inch signs for boundaries).
- Interpretive signs (e.g. tells a story).
- Regulatory signs (e.g. permitted and prohibited activities).
- Directional/Informational signs (e.g. orientation, maps).

- 
- Traffic signs (e.g. stop signs, speed limit, and parking areas).

#### Educational and Interpretive Resources

- Wildlife tracks activity
- Wildlife detectives activity
- Enviroscope watershed activity
- Creative naturalists activity
- Identifying invasive species activity
- Florida panther capture slides
- Maps

#### Community Outreach

- Brochures.
- News releases.
- Presentations.

#### Web-based Media

- Website: [https://www.fws.gov/refuge/florida\\_panther/](https://www.fws.gov/refuge/florida_panther/).
- Facebook: <https://www.facebook.com/Floridapanthernwr/>.

#### Volunteer Program Management

- Volunteer opportunities.
- Recognition and appreciation.
- Position descriptions.
- Recruitment announcements via Facebook, website, and email interest list.
- Partnership with Florida Gulf Coast University service learning program.

#### Permits

- General Special Use Permits.
- Commercial Activities Special Use Permit.
- Scientific Research Special Use Permits

### **Staff-based Services**

Staff-based services orient, inform, and interpret the Refuge's resources to the public through personal interaction with Refuge staff, Friends, and volunteers.

#### Visitor Contact Station/Headquarters Office

The current visitor contact station/headquarters office was opened October 2014. In addition to 15 staff office spaces, the entrance lobby serves as a visitor contact station to greet and orient visitors. The lobby includes informational brochures and fact sheets, an eastern indigo snake exhibit, and mounted Florida panther taxidermy. Visitors are encouraged to view photographs of the Refuge's habitats and wildlife that adorn the lobby and all hallways. A full kitchen facility and restrooms are available. A central conference room with audiovisual capabilities provides space for meetings and programs.

#### Interpretive Programming

A variety of interpretive programming is provided dependent on special requests and availability of volunteers or seasonal staff. Offered programming includes swamp buggy tours, guided

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hikes, and guided swamp wet walks with educational messages about native flora and fauna, the role of fire in the ecosystem, and hydrologic resources.

#### Environmental Education

A variety of environmental education programs and activities are provided dependent on special requests and availability of volunteers or seasonal staff. Offered programming typically focuses on natural history of, recovery of, and coexistence with the Florida panther.

#### Community Outreach

Community outreach focuses on relevancy within the local communities and engagement with urban and underserved communities (who we are, what we do, why it is important to support). Community outreach frequently includes messaging about local wildlife and coexistence with local communities, complexes, and housing developments. The Refuge is represented by staff, volunteers, or Friends members at several community opportunities including Collier County Sheriff's Office, Collier County Libraries, Conservancy of Southwest Florida, Everglades Day, Festival in the Woods, Florida Gulf Coast University, Habitat for Humanity, Naples Botanical Garden, Naples Orchid Society, Naples Preserve, Naples Zoo, and Seacrest Science Saturday.

#### Special Events

The Refuge hosts Open House annually on the third Saturday of March. Open House is a free, family friendly, environmental education field day to see closed areas of the Refuge and learn about Refuge management activities through activities such as swamp buggy tours, hayrides, hikes, wet walks, research presentations, archery lessons, and children's activities. The annual event is financially sponsored by Friends of the Florida Panther Refuge. Open House annually attracts an average of 200 visitors.

The Refuge is a leading partner in the collaborative Florida Panther Festival. Since 2016, the event is hosted at the Naples Zoo on the first Saturday of November. The Florida Panther Festival is a family-friendly environmental education festival focusing on the endangered Florida panther, local wildlife, and coexistence. The event includes interactive tables from educational partners, wildlife expert talks, meet the keeper husbandry talks, predator exclusion pen displays, and children's activities. Florida Panther Festival annually attracts an average of 4,500 visitors.

#### Website and Facebook

Information is updated on the Refuge's website quarterly or as needed. The Refuge's official Facebook is updated a minimum of 3-5 times per week.

#### Volunteer Program Management

Staff manage the volunteer program through recruitment, training, project opportunities, and an annual recognition event to honor all volunteers who have donated their time to the Refuge.

#### USFWS Liaison to Non-Profit Friends Group

Staff attend monthly board meetings, provide advice regarding USFWS policy, assist with strategic planning, and assist with Friends educational or volunteer events.

#### Visitor Services Facilities Maintenance

Staff, resident volunteers, and general volunteers manage and maintain a variety of facilities that enable visitors to experience the Refuge in a safe and accessible environment. This includes maintenance of visitor contact station, kiosks and signs, walking trails, landscaping, parking areas, and other general housekeeping and cleaning task

## G. VISITOR SERVICES MAPS

Figure 1. Refuge Overview

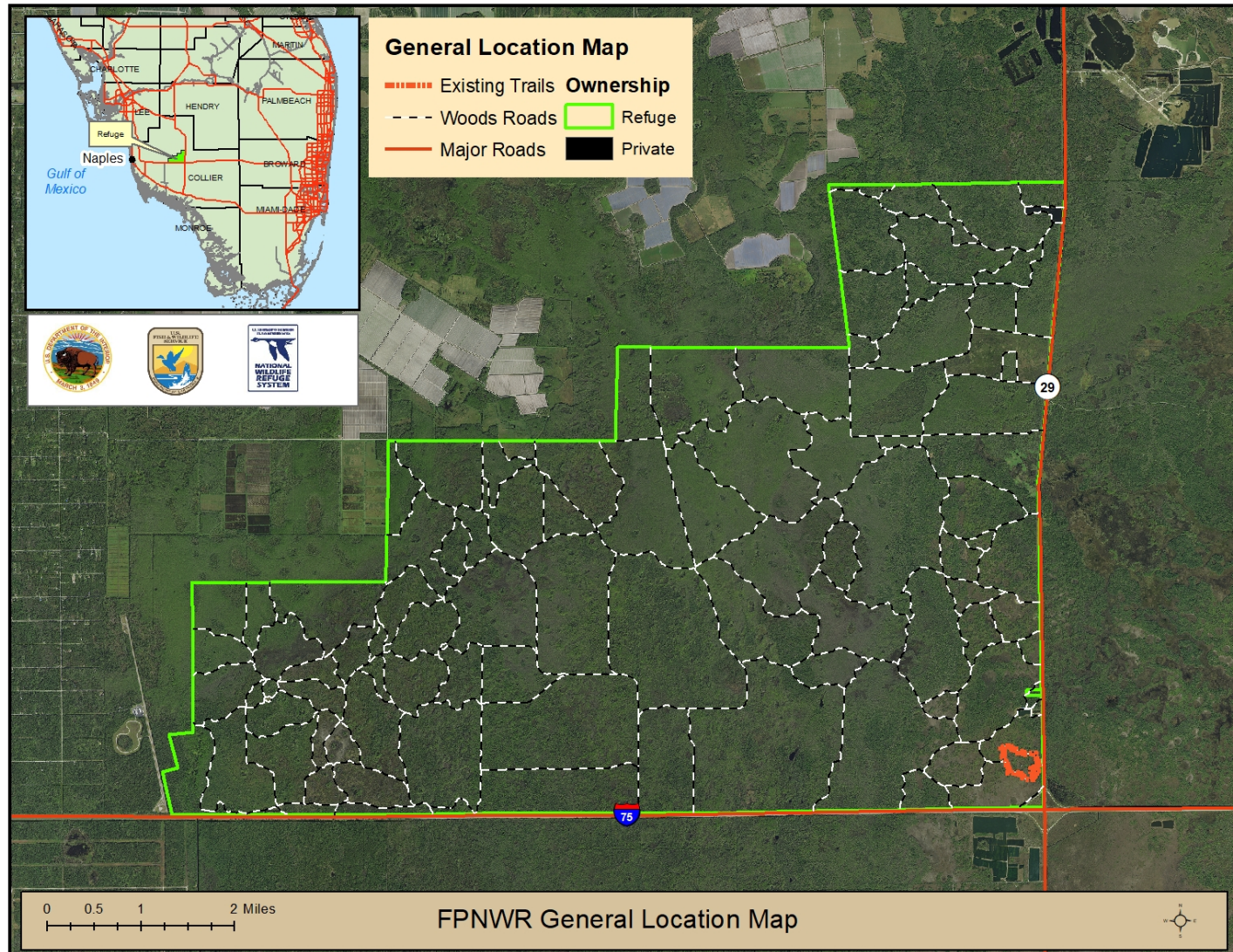
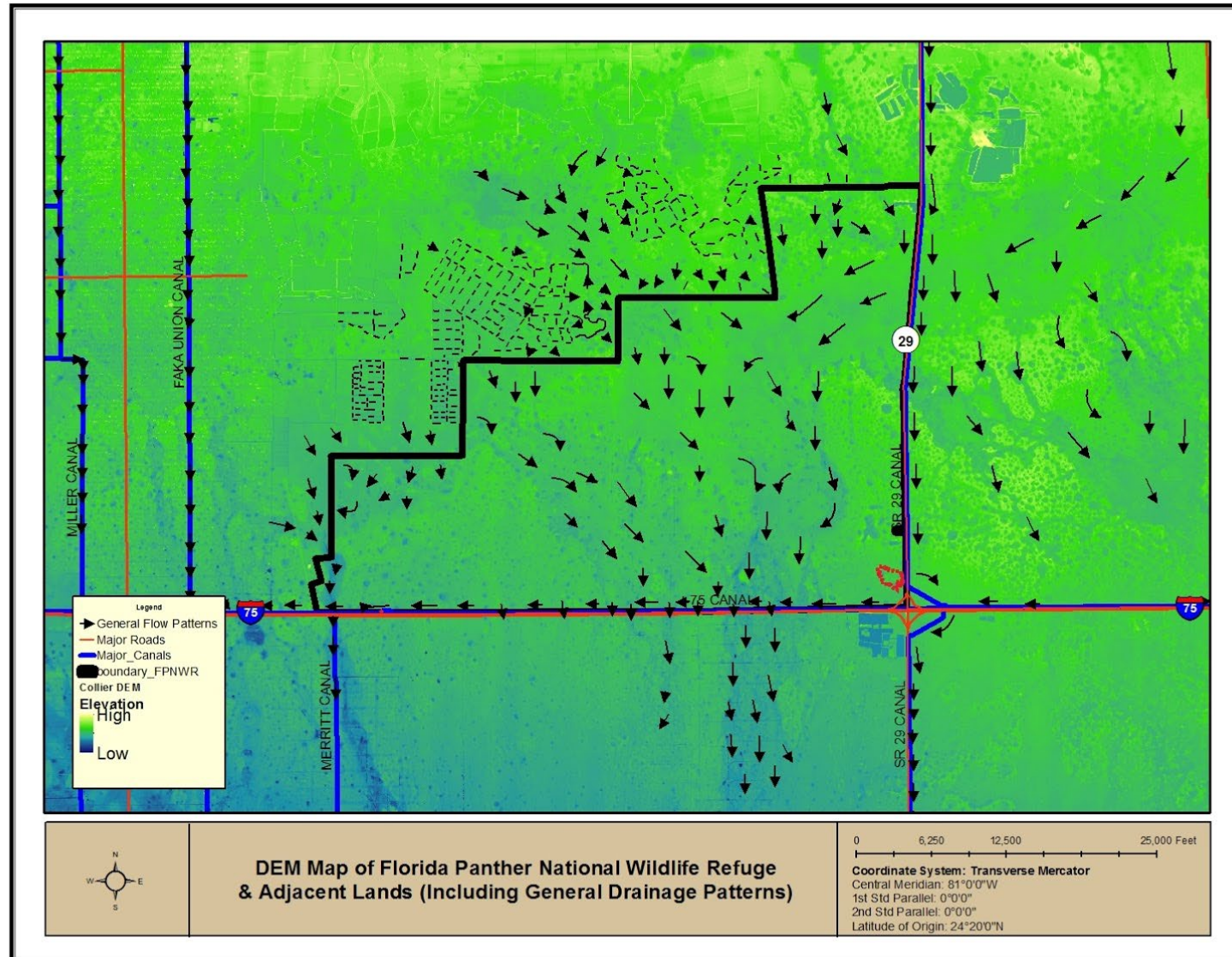


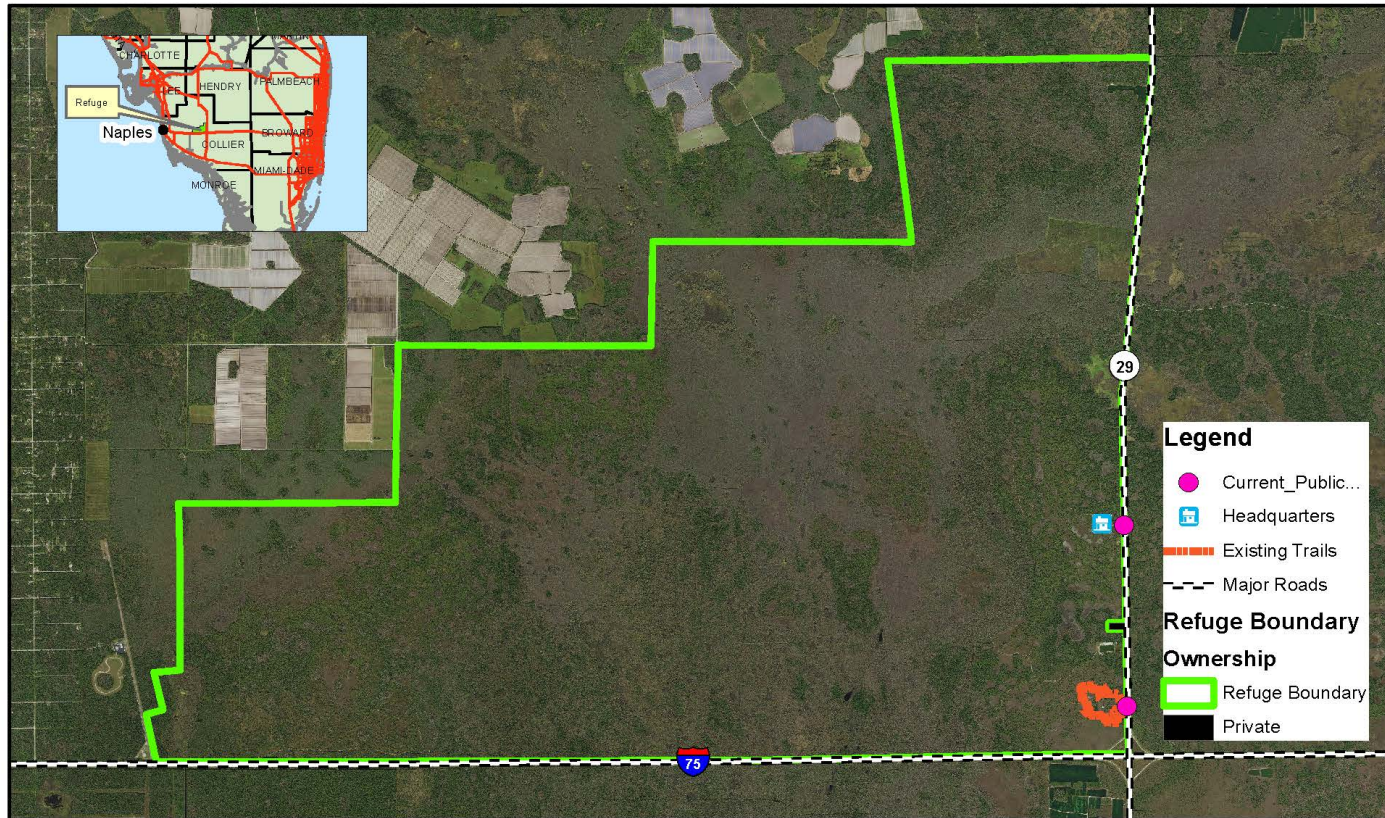
Figure 2. General hydrological sheet flow drainage patterns in and around Florida Panther NWR.



**Figure 3. Current Public Use Refuge Map**



U.S. Fish & Wildlife Service  
Current Public Access Points and Trails



Produced by Mark Danaher/USFWS/Florida Panther NWR  
Immokalee, FL  
Produced September 16, 2020  
Base map: 2020 Collier County Aerial Imagery  
File: VSP Alternative B.mxd

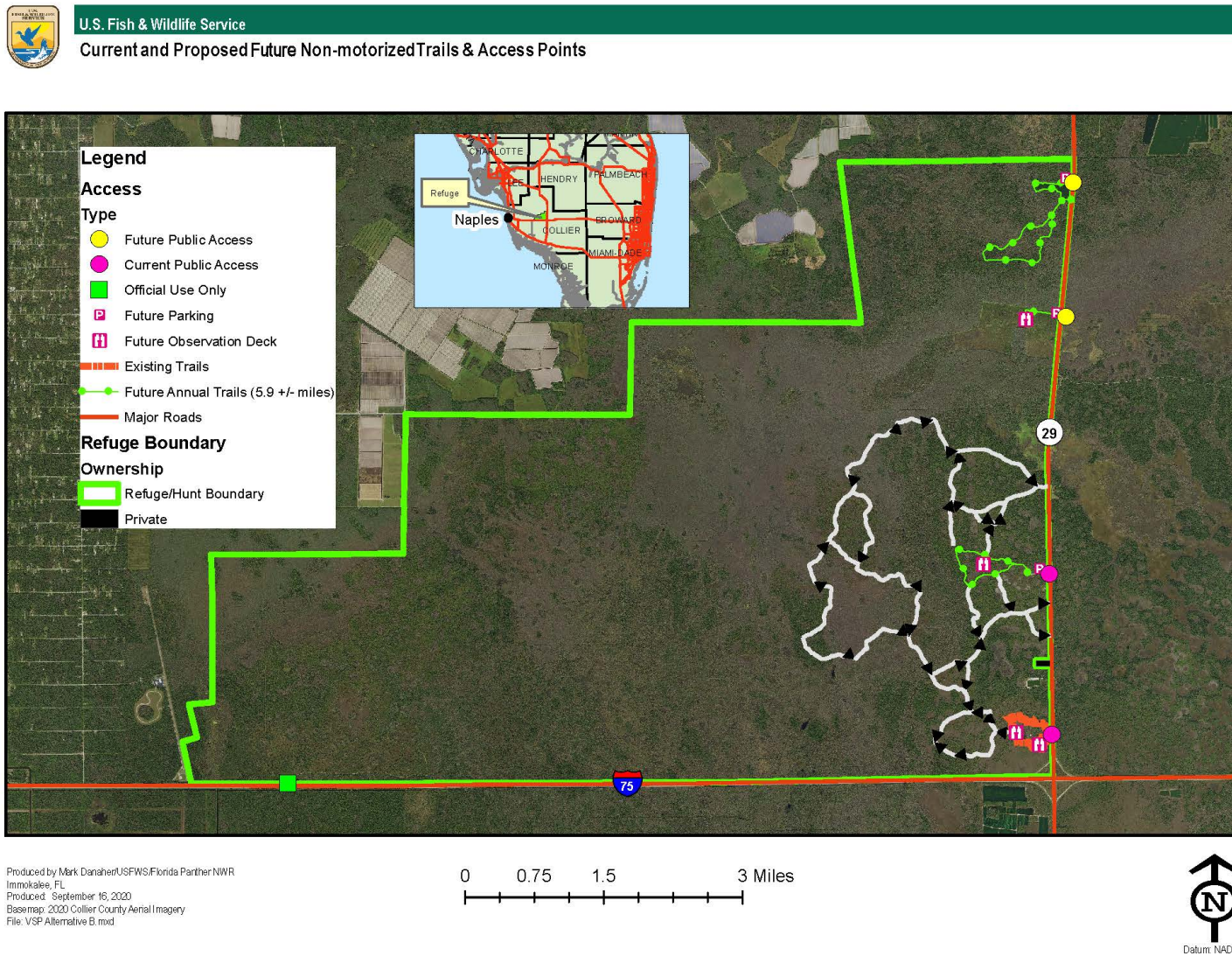
0 0.75 1.5 3 Miles



The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

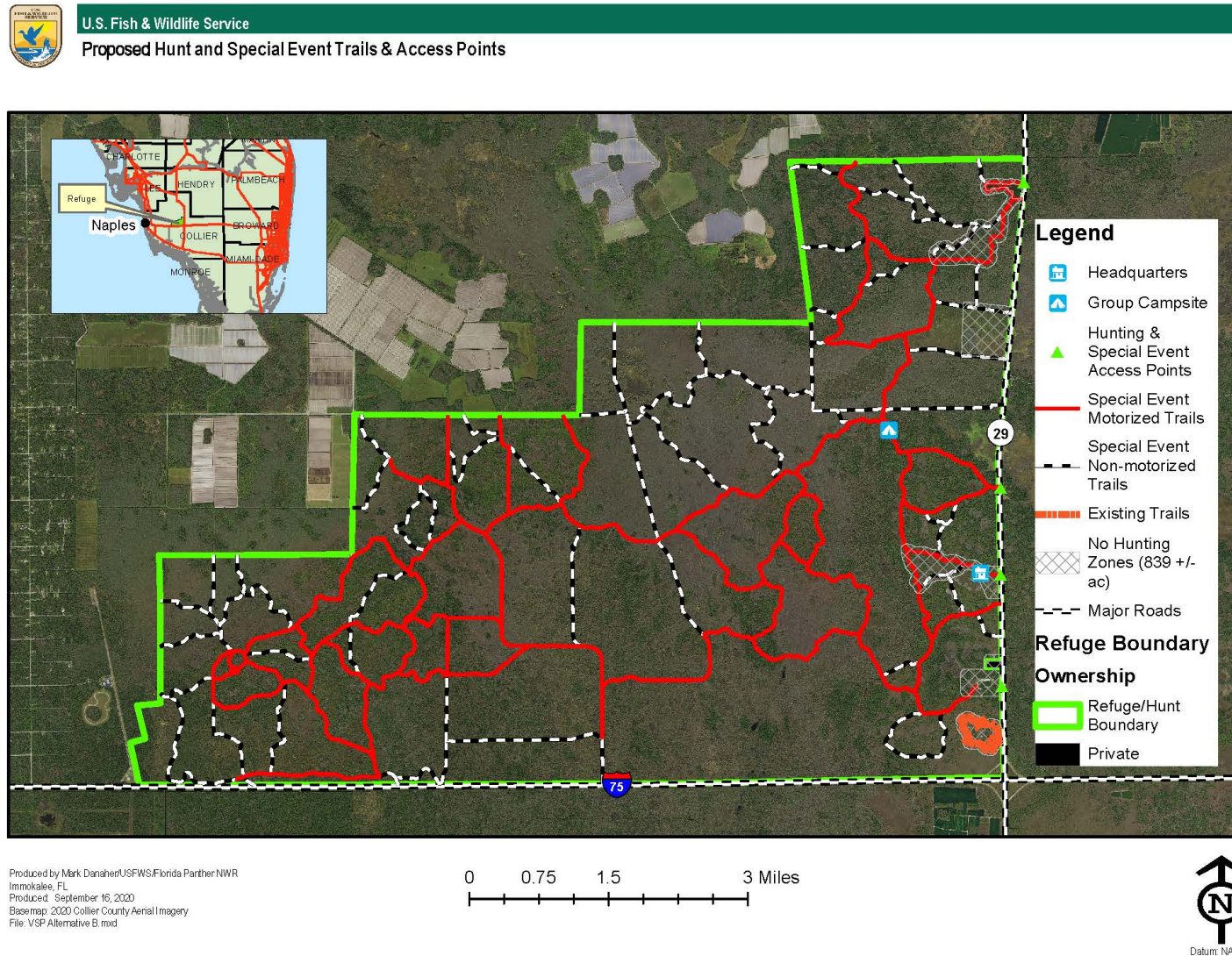
**Figure 4. New Non-Motorized Trails and Access Points**



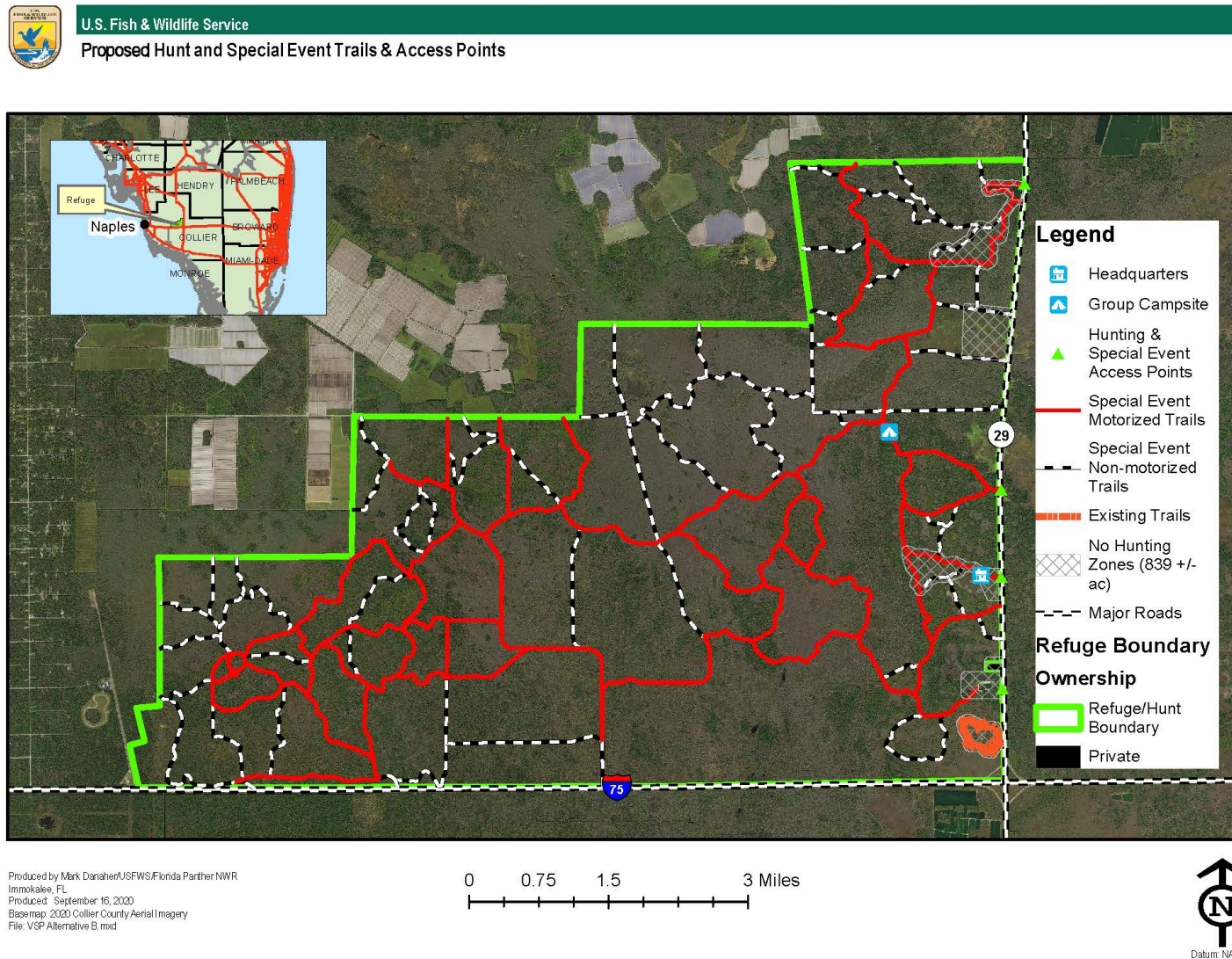
The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

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**Figure 5. Special Events Motorized Trails Access**



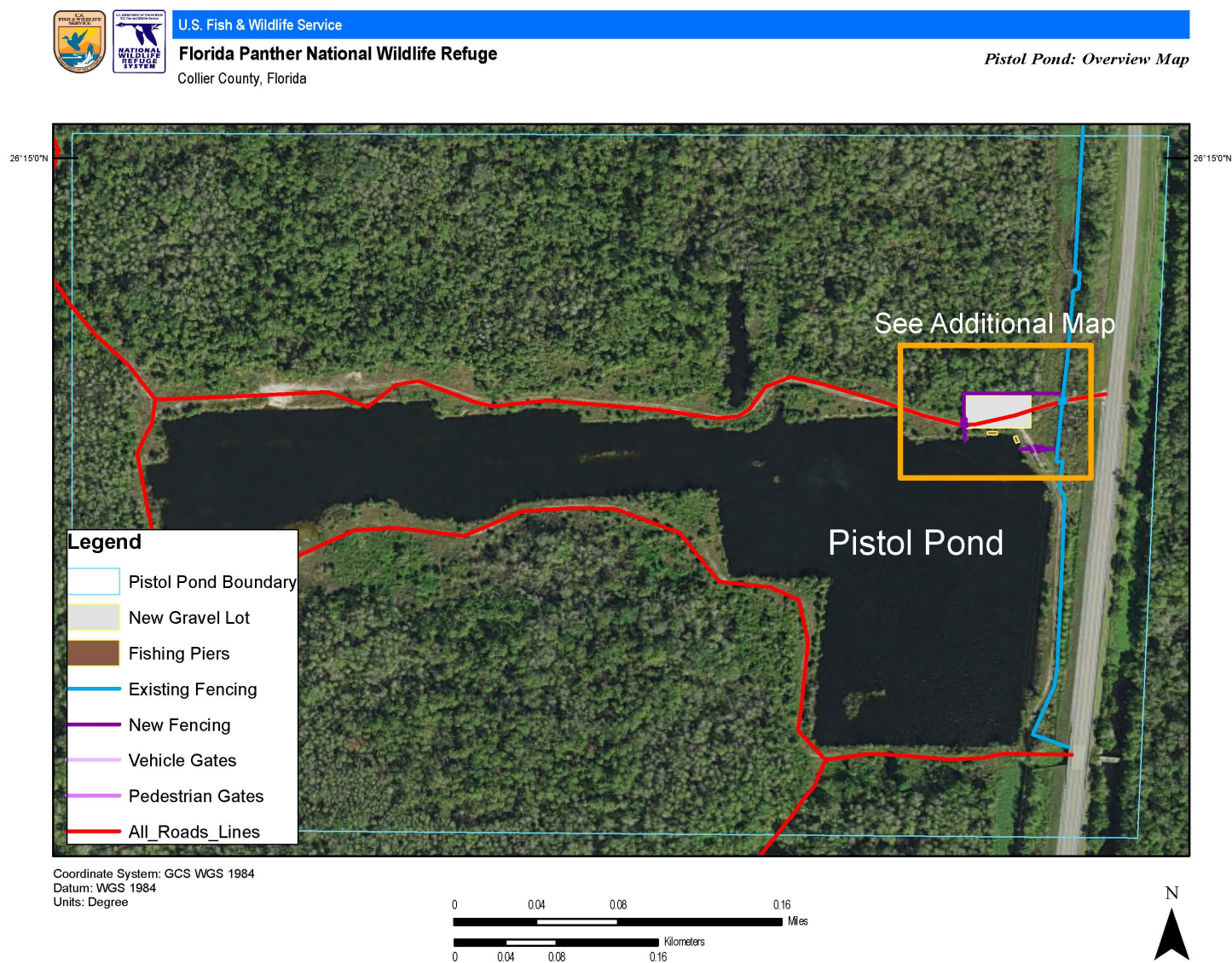
**Figure 6. Spring Turkey Hunting Access**



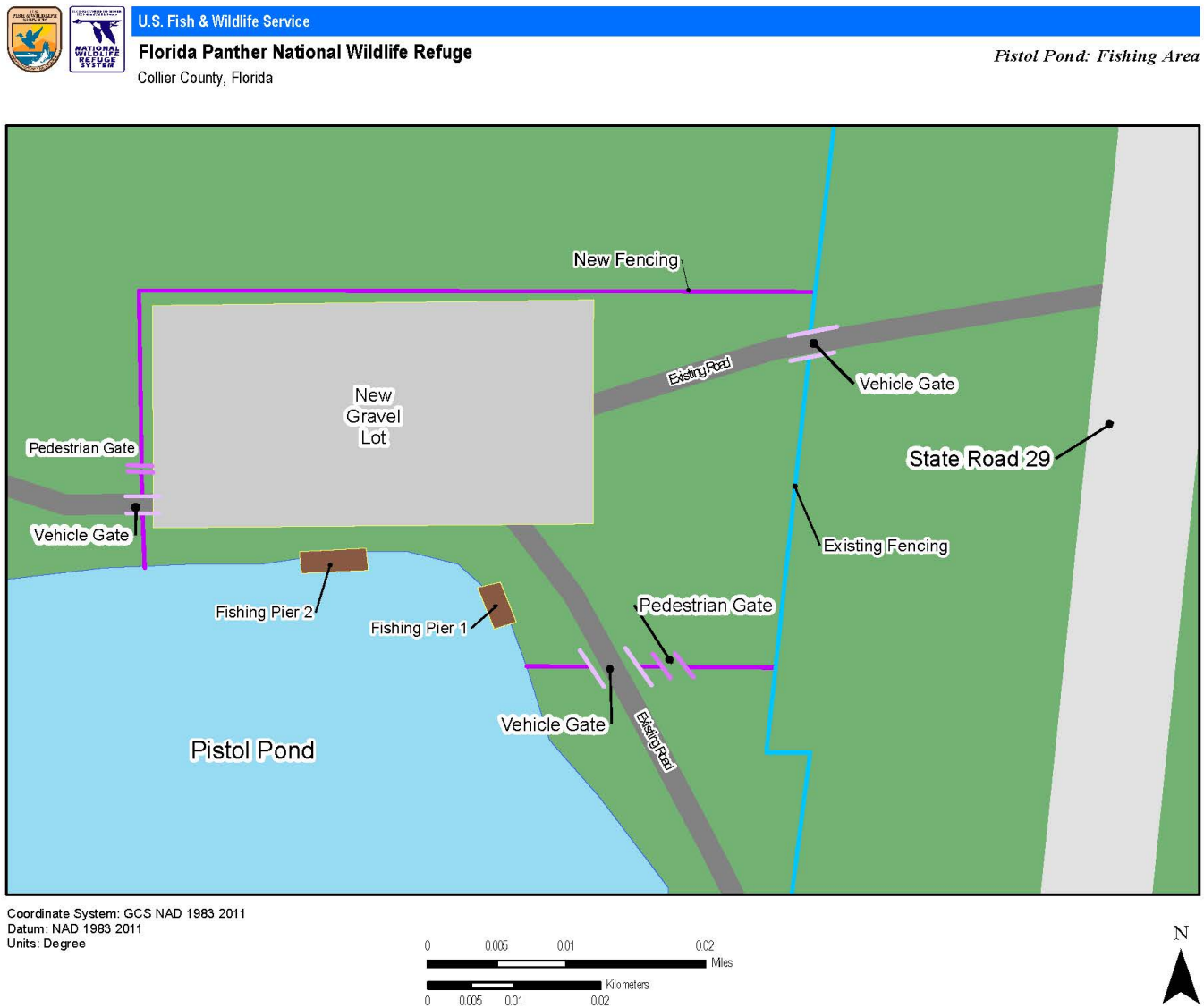
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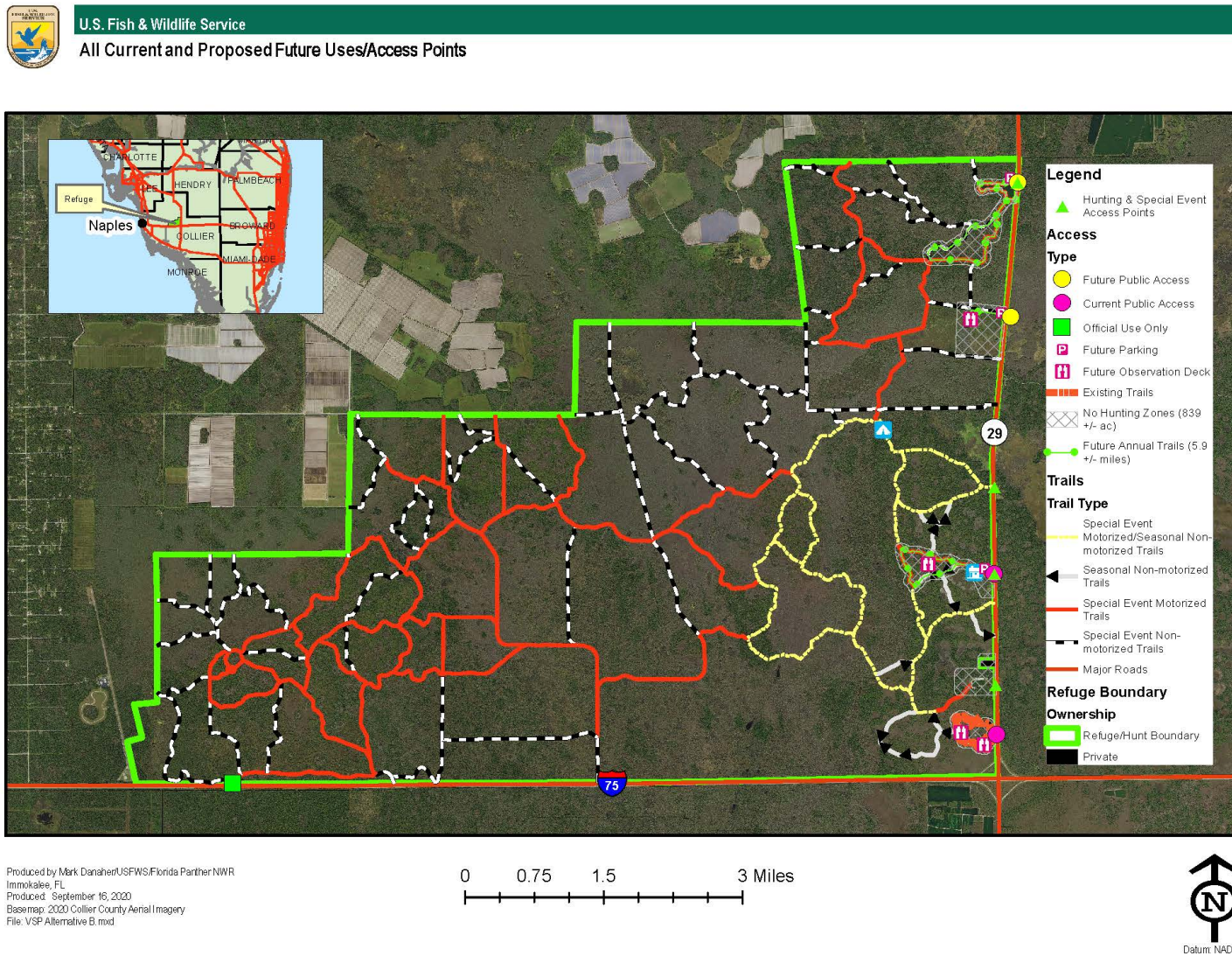
### Figure 7. Pistol Pond Fishing Access



**Figure 8. Pistol Pond Fishing Access Additional Map**



**Figure 9. All Public Access**



The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

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## H. REFUGE VISITATION TRENDS AND IDENTIFYING AUDIENCES

### ***REFUGE VISITATION TRENDS***

Visitors are recorded by staff and volunteers manually at special events and the Visitor Center, and automatically using traffic counters for vehicles, entering the Refuge and using trails. The Refuge visitation trends are reported annually in both Annual Narratives and the Refuge Annual Performance Plan. (Table 1)

**Table 1. Refuge Visitation, Years 2009-2019**

YEAR	# OF VISITORS
2009	1519
2010	2677
2011	2954
2012	3325
2013	3315
2014	3108
2015	5350
2016	6055
2017	6300
2018	5500
2019	6400

The Refuge hosts about 5,000 visitors annually, encompassing both local individuals and visitors to South Florida from around the United States and the world. The highest visitation period is from November-April.

### ***SOCIOECONOMIC ENVIRONMENT***

Collier County was established in 1923 by the Florida State Legislature from a portion of Lee and Monroe counties. It is located on the southern Gulf coast of the Florida peninsula due west of the Miami-Ft. Lauderdale area. Naples, located in the western coastal area of Collier County, is the largest incorporated city and serves as the county seat. Everglades City, the only other incorporated city within the county, lies south and east of Naples. Modern-day settlement of the county evolved in isolated pockets during the 1870s while the region was still a part of Monroe County. In 1887, it became part of Lee County and remained such for 36 years until July 7, 1923, when Collier County was established.

Settlement began in the county in the middle 1870s, and in 1995, the county's population was 186,504. According to the Growth Management Plan, Collier County contains approximately 2,025.45 square miles of land area, and is one of the largest counties east of the Mississippi River. It is larger than the State of Rhode Island and the State of Delaware.

With the exception of Naples and Immokalee, the communities are widely scattered in sparsely populated pockets along the coast and interior. Only the extensive development of Marco Island and North Naples in recent years has altered the established pattern of growth, which has

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evolved in the rural and island settlements over the last century and a half. However, this rural lifestyle is destined to change in the coming years, as the region experiences astounding urban growth, and more communities expand and others develop to meet the needs of an increased residential, seasonal and tourist population. While there were only 16,000 people living in the county in 1960, the population is expected to increase to nearly 350,000 by the year 2020 (Enterprise Florida 2017), with a current annual growth rate of 68.60 percent compared to a state growth rate of only 27.95 percent.

Collectively, the entire Southwest Florida region is, and will continue to be, one of the fastest growing regions in the United States. For business owners and employees alike, Collier County offers an opportunity without comparison. For residents and tourists, the unspoiled Southwest Florida coast offers a myriad of living and recreational opportunities. Unfortunately, the very growth and development which makes Southwest Florida such an alluring place for so many also threatens the natural habitat mosaic of the region. Special, coordinated efforts from all stakeholders involved with South Florida issues will be necessary to not only preserve the quality of the natural environment in the region, but the quality of life for Southwest Florida's residents and visitors as well.

### **DEMOGRAPHIC INFORMATION**

By 2010, Florida's population had soared to 18 million, with 77% living in Florida's 35 coastal counties (U.S. Department of Commerce, U.S. Census Bureau 2010). By 2017, this number had reached over 20 million (U.S. Department of Commerce, U.S. Census Bureau 2017). The projected population of the State of Florida is expected to increase by 44% from 2000 to 2030 to over 28 million (U.S. Department of Commerce, U.S. Census Bureau 2017) and almost double from 2010 to 2060 to nearly 36 million (Zwick and Carr 2006).

Table 2 compares the 1960 and 2018 U.S. Census population figures and provides 2060 population estimates for Collier County.

**Table 2. County and State Population Comparison**

<b>County</b>	<b>1960 Total</b>	<b>1970 Total</b>	<b>1980 Total</b>	<b>1990 Total</b>	<b>2000 Total</b>	<b>2018 Total</b>	<b>Increase 1960-2018</b>
Collier	15,753	38,040	85,971	152,099	251,377	378,488	362,735

Data derived from U.S. Census Bureau QuickFacts website at <http://census.gov/quickfacts>

Table 3 compares demographic data from the 2018 Census, showing that compared to the State of Florida, Collier County has a higher percentage of the population over the age of 65, a higher percentage of the population identified as white, a lower percentage of the population identified as black or African American, and a higher percentage of the population identified as Hispanic or Latino (U.S. Department of Commerce, U.S. Census Bureau 2018).

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**Table 3. County and State Demographic Comparison**

	<b>Collier County</b>	<b>State of Florida</b>
Percent of Population >65 years old	32.2%	20.5%
Percent White	62.5%	53.5%
Percent Black or African American	7.4%	16.9%
Percent American Indian or Alaska Native	0.5%	0.5%
Percent Asian	1.6%	3.0%
Percent Hawaiian and Other Pacific Islander	0.1%	0.1%
Percent of Total Population Also Identified as Hispanic	28.2%	26.1%

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## **I. VISITOR CAPACITY**

Balancing the needs of visitors and the goal of protecting and managing resources can be challenging. In addition to resource protection, visitor capacity also impacts the quality of the experience for visitors. Visitor capacity is not always about limiting the numbers of visitors, but also about the visitor's experience and limiting impacts to resources. Negative impacts of high visitation include crowding, traffic, litter, trail degradation, vegetation trampling, and disturbance of wildlife. These impacts take away from the visitor experience and put additional pressure on staff to maintain safe public facilities and infrastructure.

The current visitor experience at the Refuge is good to excellent, based on verbal feedback to staff and volunteers, in addition to online feedback opportunities including a 4.6 star rating on Google Reviews and 4.7 star rating on Facebook in 2019. Currently there are only 1.6 miles of trails open for hiking, wildlife observation, and photography. These trails also provide opportunities for environmental education and interpretation opportunities.

This plan proposes additional visitor facilities to increase access for priority public uses such as the construction of additional interpretive kiosks, observation towers, fishing platforms, trails, boardwalks, photography blinds, and visitor contact station/headquarters office.

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## II. Implementation Strategies

This section uses the format of the USFWS' 14 Visitor Services Standards in correlation with the relevant goals and objectives. Visitor Services related objectives may be found within other CCP goals (i.e. Fish and Wildlife Populations, Habitat Management, Resource Protection, and Refuge Administration). This process identifies existing strategies and develops additional strategies that form the basis of the VSP.

Table 4 lists the goals and objectives that are relevant to Visitor Services at Florida Panther NWR. The following acronyms are used within the table: Comprehensive Conservation Plan (CCP), Visitor Services Plan (VSP), Hunting and Fishing Plan (HFP).

**Table 4. Goals and Objectives Summary**

MANAGEMENT GOALS	OBJECTIVES
<b>CCP GOAL 4-</b> Provide opportunities for compatible public use in accordance with the National Wildlife Refuge System Improvement Act of 1997 (USFWS 2000).	<b>Comprehensive Conservation Plan (CCP) Objectives 4.1-4.3</b> can be found below as they relate to visitor services standards, or on pages 29-30 of the CCP.
<b>CCP GOAL 5-</b> Develop and implement outreach and education programs that will promote conservation and provide an understanding and appreciation of the Florida panther, fish and wildlife ecology, and human influences on the ecosystems of South Florida	<b>Comprehensive Conservation Plan (CCP) Objectives 5.1-5.3</b> can be found below as they relate to visitor services standards, or on pages 30-31 of the CCP.
<b>VSP GOAL 1- Visitor Services Plan</b> Meet or exceed the standard set by policy and develop a Visitor Services Plan (VSP) that addresses all compatible wildlife-dependent recreational uses on the Refuge.	<b>Visitor Services Plan (VSP) Objective 1.1:</b> Develop a Visitor Services Plan that sets goals, objectives, strategies, and establishes evaluation criteria.

<p><b>VSP GOAL 2- Welcome and Orient Visitors</b> Provide visitors with a safe, welcoming, and accessible experience by providing clear information so they can safely and ethically engage in wildlife-dependent recreational activities during their visit.</p>	<p><b>VSP Objective 2.1:</b> Ensure all public use infrastructure, informational resources, and staff-based services are welcoming, safe, accessible, and provide current orientation information.</p>
<p><b>VSP GOAL 3- Hunting</b> Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads to greater understanding and appreciation of wildlife resources; and 3) aids in the conservation of wildlife populations and their habitats.</p>	<p><b>VSP Objective 3.1:</b> Provide opportunities for quality recreation and educational hunting experiences</p>
	<p><b>VSP Objective 3.2:</b> Promote public understanding of and increase public appreciation for the area's natural resources</p>
	<p><b>VSP Objective 3.3:</b> Ensure all informational resources, staff-based services, and public use infrastructure support quality hunting opportunities.</p>
	<p><b>VSP Objective 3.4:</b> Maintain viable, diverse populations of wildlife based on sound biological principles and data that seek to maintain wildlife populations at sustainable levels.</p>
	<p><b>VSP Objective 3.5:</b> Implement a spring turkey hunt program on 25,560 acres of the Refuge as outlined in the Hunting and Fishing Plan (HFP) (Appendix A) as a limited quota, spring turkey hunt to span three weekends in March of each year, including a youth/family camping weekend at the Refuge's Conservation Club.</p>
<p><b>VSP GOAL 4- Fishing</b> Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads</p>	<p><b>VSP Objective 4.1:</b> Provide opportunities for high-quality recreational and educational fishing experiences</p>
	<p><b>VSP Objective 4.2:</b> Open Pistol Pond to bank fishing, submit a fishing opening package to the Service's Southeast Region and Headquarters for publication in the annual Refuge-specific Hunting and Sport Fishing Regulation Rule</p>

to greater understanding and appreciation of aquatic resources; and 3) aids in the conservation of fish populations and their habitats.	<b>FP Objective 4.3:</b> Maintain viable, diverse populations of fish based on sound biological principles and data that maintain fish populations at sustainable levels.
<b>VSP GOAL 5- Wildlife Observation and Photography</b> Provide visitors of all ages and abilities an opportunity to observe and photograph key wildlife and habitat resources of the Refuge.	<b>VSP Objective 5.1:</b> Expand wildlife observation and photography opportunities at the Headquarters/Visitor Contact Station, including an approximately 2-mile loop hiking trail and observation deck
	<b>VSP Objective 5.2:</b> Ensure all public use infrastructure, informational resources, and staff-based services support quality wildlife observation and wildlife photography opportunities.
	<b>VSP Objective 5.3:</b> Open approximately 20 miles of existing fire breaks and interior roads for seasonal day use hiking.
	<b>VSP Objective 5.4:</b> Develop additional year round trails and boardwalks at the Unit 44 Clear cut and pistol pond area of the refuge
<b>VSP GOAL 6- Environmental Education</b> Facilitate curriculum-based environmental education opportunities that advance public awareness, understanding, appreciation, and knowledge of key fish, wildlife, plant, and resource issues.	<b>CCP Objective 5:</b> develop facilities and associated amenities to promote public education of the ecosystem, the panther, and the refuge program.
	<b>VSP Objective 6.1:</b> Ensure all public use infrastructure, informational resources, and staff-based services support a quality environmental education program.
	<b>VSP Objective 6.2:</b> Work with the Florida Fish and Wildlife Conservation Commission and other partners to facilitate outdoor skills education programs on the Refuge for the public to participate in outdoors and wildlife education.
	<b>VSP Objective 6.3:</b> Work with partners to advance and distribute Living With Wildlife curriculum and programming for use in schools, organizations, and rural residence areas to educate all ages about coexistence with Florida wildlife including the Florida panther, Florida black bear, and American alligator.  <b>VSP Objective 6.4:</b> Coordinate with Collier County Public Schools to offer onsite Refuge environmental education programming to students to promote awareness of the Refuge and its resources as well as human interactions with the ecosystem, upon staff availability.

<b>VSP GOAL 7- Interpretation</b> Communicate the most important fish, wildlife, habitat, and natural resource issues to visitors of all ages and abilities through effective interpretation.	<b>VSP Objective 7.1:</b> Upgrade and expand the interpretive program, portraying the significance of the Refuge and threats affecting the Refuge and the South Florida ecosystem and Recovery of the Florida panther.
<b>VSP GOAL 8- Other Recreational Uses</b> Ensure all public uses are appropriate and compatible while supporting or enhancing one of the wildlife dependent recreational uses.	<b>VSP Objective 8.1:</b> Ensure all public use infrastructure, informational resources, and staff-based services support appropriate and compatible recreational use opportunities that support or enhance one of the wildlife-dependent recreational uses.
<b>VSP GOAL 9- Outreach</b> Engage off-site public in effective outreach.	<b>CCP Objective 5.2:</b> Increase local awareness of the south Florida ecosystem, the refuge, and the panther through the development and implementation of an outreach program.
	<b>VSP Objective 9.1:</b> Ensure all informational resources and staff-based services promote an understanding and appreciation of the Refuge's fish, wildlife, habitat conservation, along with the mission of the National Wildlife Refuge System.
<b>VSP GOAL 10- Volunteers, Friends, and Partnerships</b> Ensure Refuge staff initiate and nurture relationships with volunteers and Friends organizations.	<b>VSP Objective 10.1:</b> Develop and maintain a cadre of volunteer interpreters to provide on- and off-site interpretive programs and to deliver key interpretive messages of Florida Panther NWR to increase awareness and appreciation of the Refuges, its management, and its resources.
	<b>VSP Objective 10.2:</b> Improve and increase the number of existing RV volunteer campsites from 4 to at least 6 in a more functional and easily accessed area.
<b>VSP GOAL 11- Recreation Fee Program</b> Establish a Recreational Fee Program for Hunting Permits	<b>VSP Objective 11.1:</b> Institute an effective Recreation Fee Program under the guidance of the Federal Lands Recreation Fee Program or as mandated by Congress for sustaining resources for the operation and maintenance of recreation areas, visitor services improvements, including seasonal staffing, and habitat enhancement projects of Federal lands.
<b>VSP GOAL 13- Commercial Recreational Uses</b> Institute an effective Commercial Recreational Use	<b>VSP Objective 13.1:</b> Ensure all public use infrastructure, informational resources, and staff-based services support an effective Commercial Use Program

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Program that contributes to the achievement of the Refuge purpose or the mission of the Refuge System.	
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The following section addresses current program discussions, goals, objectives, strategies, proposed program changes, and monitoring information for the 14 Visitor Services Standards.

## **STANDARD 1: DEVELOP A VISITOR SERVICES PLAN**

### **Policy (605 FW 1.14 A)**

Refuge Managers will develop a Visitor Services Plan (VSP) that addresses all compatible wildlife-dependent recreational uses on their refuge (Appendix E).

### **Current Program Discussion**

The Refuge does not have a current VSP.

This VSP and Environmental Assessment (EA) will be used to inform a revision to the 2000 CCP, which is ongoing at the time this VSP is being considered. This management plan will identify resource needs and establish visitor service programs based on goals, objectives, and strategies identified through public scoping and planning and will serve as the visitor services strategic plan for the next 15 years.

### **Visitor Services Staff**

Permanent staffing for visitor services are:

- Wildlife Refuge Specialist GS-09
  - (60% of time dedicated to Visitor Services Programs)

Seasonal and temporary staffing for visitor services are:

- Outreach Ranger GS-4

The visitor services program is also supported by local, seasonal, and resident volunteers, including Friends of the Florida Panther Refuge members.

## **STANDARD 1: GOALS, OBJECTIVES, AND STRATEGIES**

### **VISITOR SERVICES PLAN GOAL 1**

*Meet or exceed the standard set by policy and develop a Visitor Services Plan that addresses all compatible wildlife-dependent recreational uses on the Refuge. This plan should be completed in 2021.*

### **Visitor Services Plan Objective 1**

Develop a Visitor Services Plan that sets goals, objectives, strategies and evaluation criteria.

#### **Strategies**

- Develop a Visitor Services Plan through collaborative involvement of Refuge staff, partners, stakeholders, and the public.
- Annually update the Visitor Services Plan as strategies are completed and new needs are recommended.

#### **Monitor and evaluate:**

- Incorporate public input from planning meetings and written input.

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## STANDARD 2: WELCOME AND ORIENT VISITORS

### Policy (605 FW 1.14 B)

We will assure that our refuges are welcoming, safe, and accessible. We will provide visitors with clear information so they can easily determine where they can go, what they can do, and how to safely and ethically engage in recreational and educational activities. Facilities will meet the quality criteria defined in 605 FW 1, Section 1.6 of the Service Manual. We will treat visitors with courtesy and in a professional manner (Appendix E).

### Current Program Discussion

Visitors can access Refuge property at two designated entrances: Visitor Contact Station/Headquarters Office and Hiking Trails. The Refuge welcomes and orients visitors through the visitor contact station/Headquarters office, staff, volunteers, website, Facebook page, signs, brochures, and other publications. The visitor contact station is open Monday-Friday from 8:00 am-4:00 pm and is closed on Federal Holidays. Two hiking trails are open sunrise-sunset. Two kiosks with 9 interpretive panels at the trailhead and three interpretive panels along the 0.3-mile Leslie M. Duncan Memorial Trail were updated in 2019. Improvements are needed at the Visitor Contact Station to include Refuge maps and posted regulations.

Below is a list of current public use infrastructure, informational resources, and staff-based services as they apply to welcoming and orienting visitors:

### Public Use Infrastructure

#### Buildings

- Visitor contact station/headquarters office building

#### Parking lots

- Visitor contact station/headquarters office building
  - 30 gravel spaces
  - 1 ADA paved space
- Trailhead parking lot
  - 15 gravel spaces
  - 2 ADA paved spaces
  - 1 RV/bus gravel space

### Informational Resources

#### Visitor Contact Station

- Brochures.
- Fact sheets.
- Threatened eastern indigo snake exhibit.
- Florida panther mounted taxidermy.

#### Signs

- Visitor contact station entrance sign (e.g. standard).
- A-Series (e.g. standard 11x14 inch signs for boundaries).
- Interpretive signs (e.g. tells a story).
- Regulatory signs (e.g. permitted and prohibited activities).
- Directional/Informational signs (e.g. orientation, maps).
- Traffic signs (e.g. stop signs, speed limit, and parking areas).

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#### Web-based Media

- Website: [https://www.fws.gov/refuge/florida\\_panther/](https://www.fws.gov/refuge/florida_panther/).
- Facebook: <https://www.facebook.com/Floridapanthernwr/>.

#### **Staff-based Services**

##### Visitor Contact Station/Headquarters Office

The current visitor contact station/headquarters office was opened October 2014. In addition to 15 staff office spaces, the entrance lobby serves as a visitor contact station to greet and orient visitors. The lobby includes informational brochures and fact sheets, an eastern indigo snake exhibit, and mounted Florida panther taxidermy. Visitors are encouraged to view photographs of the Refuge's habitats and wildlife that adorn the lobby and all hallways. A full kitchen facility and restrooms are available. A central conference room with audiovisual capabilities provides space for meetings and programs not exceeding 25 persons.

#### **STANDARD 2: GOALS, OBJECTIVES, AND STRATEGIES:**

##### **COMPREHENSIVE CONSERVATION PLAN GOAL 4**

*Provide opportunities for compatible public use in accordance with the National Wildlife Refuge System Improvement Act of 1997 (USFWS 2000)*

##### **VISITOR SERVICES PLAN GOAL 2**

*Provide visitors with a safe, welcoming, and accessible experience by providing clear information so they can safely and ethically engage in wildlife-dependent recreational activities during their visit.*

##### **Visitor Services Plan Objective 2.1**

Ensure all public use infrastructure, informational resources, and staff-based services are welcoming, safe, accessible, and provide current orientation information.

#### **Strategies**

##### Public Use Infrastructure

- Construct a Visitor Center integrated into the Headquarters office
- Construct accessible facilities for visitors, such as trails, boardwalks, fishing platforms, and observation platforms
- Construct parking areas
- Develop safe egress and ingress turn lanes along SR29

##### Informational Resources

- Work with DOT to install directional signs
- Develop interpretive trail signs and wayside exhibits
- Develop visitor maps and brochures
- Develop and keep relevant visitation information on Refuge website

##### Staff-based Services

- Provide customer services training to all staff and volunteers.
- Provide interpretive training to visitor services staff and volunteers.
- Provide environmental education training to visitor services staff and volunteers.
- Provide diversity training to all staff and volunteers.
- Provide conflict resolution training to visitor services staff.
- Provide web-based media training to visitor services staff.
- Develop a staff/volunteer "roving" presence to welcome and orient visitors.

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- Update the phone greeting to allow visitors to connect with the Visitor Center.
  - Train staff on troubleshooting Visitor Center exhibits.

### **Proposed Program Changes**

#### Refuge Hours

- Expand Refuge hours to include weekend visitation as staffing allows.

#### Signs and Kiosks

- Update and replace all kiosks consistent with USFWS Sign Standards.

#### Publications

- Update all publications consistent with USFWS Graphic Standards.

#### Access-Designated Entry Points

- Update roadway infrastructure for safe ingress and egress.
- Update traffic signage.
- Update and/or maintain all access point gates for appropriate public use.
- Maintain road and parking infrastructure.

### **Monitor and evaluate**

- Incorporate public input from planning meetings.
- Incorporate written input from interested parties and visitors, maintain list of FAQs and phoned issues to addressed.
- The visitor services program should have a periodic review by regional and local visitor services staff to assess if the VSP goals and objectives are being met.

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## STANDARD 3: HUNTING

### Policy (605 FW 2)

Hunting is an appropriate use of wildlife resources of the NWRS, when compatible. Hunting programs will be of the highest quality, conducted in a safe and cost-effective manner, and to the extent practicable, carried out in accordance with State regulations (Appendix E).

### Current Program Discussion

The Refuge is currently closed to all hunting opportunities.

## STANDARD 3: GOALS, OBJECTIVES, AND STRATEGIES

### **COMPREHENSIVE CONSERVATION PLAN GOAL 4**

*Provide opportunities for compatible wildlife-dependent public use in accordance with the National Wildlife Refuge Improvement Act of 1997.*

### **VISITOR SERVICES GOAL 3: HUNTING**

*Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads to greater understanding and appreciation of wildlife resources; and 3) aids in the conservation of wildlife populations and their habitats.*

### **Visitor Services Plan Objective 3.1**

Ensure all informational resources, staff-based services, and public use infrastructure support quality hunting opportunities.

### **Visitor Services Plan Objective 3.2**

Promote public understanding of and increase public appreciation for the area's natural resources.

### **Visitor Services Plan Objective 3.3**

Ensure all informational resources, staff-based services, and public use infrastructure support quality hunting opportunities.

### **Visitor Services Plan Objective 3.4**

Maintain viable, diverse populations of wildlife based on sound biological principles and data that seek to maintain wildlife populations at sustainable levels.

### **Visitor Services Plan Objective 3.5**

Implement a spring turkey hunt program on 25,560 acres of the Refuge as outlined in the Hunting and Fishing Plan (HFP) (Appendix A) as a limited quota, spring turkey hunt to span three weekends in March of each year, including a youth/family camping weekend at the Refuge's Conservation Club.

### **Visitor Services Plan Objective 3.6**

Work with FWC, partners and volunteers to begin providing archery skills programming on an annual basis to increase awareness of and build experience with archery hunting, promote ethical outdoor behavior, and foster the next generation of hunters.

## Strategies

### Public Use Infrastructure

- 
- Maintain current hunting information and regulations at the Visitor Contact Station.
  - Establish designated parking areas Maintain parking lots.
  - Provide safe egress and ingress of State Road 29.
  - Minimize wildlife disturbance by implementing time and space restrictions.

#### Informational Resources

- Maintain current hunting information on Refuge web site.
- Publish posts on Facebook to notify the public of Refuge hunting activities and seasons.
- Maintain current hunting information and regulations on kiosks and signs.
- Maintain and annually update the hunting brochure.
- Promote understanding about how the Federal Aid in Wildlife Restoration Act funds conservation programs through an excise tax on firearms, ammunition and other related equipment to state wildlife agencies to be used for wildlife conservation projects, hunter education, and outdoor recreation access.

#### Staff-based Services

- Provide hunt program training to all visitor services staff and volunteers.
- Expand hunter skills workshops as resources allow.
- Collaborate with partner wildlife management agencies to study and analyze game population data.
- Base harvest decisions on sound biological principles.
- Collaborate between workgroups to ensure accurate and efficient information can be disseminated to the public.

### **Proposed Program Changes**

A Hunting and Fishing Plan for the Refuge (Appendix A) is being proposed with this VSP. Specifically a limited spring turkey hunt is being proposed in which season dates, bag limits, and weapon restrictions will follow the FWC's regulations for nearby Wildlife Management Areas, and will be coordinated with FWC annually. More restrictive regulations will be implemented as necessary, to conserve wildlife populations and provide for safe, quality wildlife-dependent recreation, and to avoid user conflicts depending on staff level available to support. Designation of season dates will be set by the State of Florida and in coordination with adjacent state Wildlife Management Areas.

A spring turkey hunt helps meet CCP goal 4 and develops a broad, connected, conservation community by opening access for traditional users for the first time since the Refuge's establishment. Allowing hunting access also fits the NWRS's vision spelled out in Conserving the Future and the Service's strategy to increase the quality of hunting and fishing on NWRs and Secretarial Order 3356 issued in 2017.

- Quota hunting permit for Spring Turkey will be authorized.
- Persons possessing, transporting, or carrying firearms on national wildlife refuges must comply with all provisions of Federal, State, and local law. Persons may only use (discharge) firearms in accordance with Refuge regulations.
- Hunting will be allowed on designated areas of the Refuge in accordance with State law, except where Federal regulations have been set as found in Title 50, Code of Federal Regulations, Section 32.
- All applicable State Hunting licenses, State permits, and a signed Refuge hunt brochure must be in the possession of the hunter.

- 
- Hunters under the age of 16 must be accompanied by an adult 21 years of age or older. Hunters under the age of 16 must also have completed a Hunter Education Course.
  - No hunting from Refuge structures or within 100 yards of trails.
  - Taking or herding wildlife from any motorized vehicle is prohibited.
  - Only temporary blinds will be allowed. We will prohibit the taking, removing, manipulation, or destroying of Refuge vegetation.
  - Taking of any plants or other wildlife will be prohibited.

## **MONITOR AND EVALUATE**

- Incorporate public input from planning meetings and written input.
- Monitor turkey populations in collaboration with Florida Fish and Wildlife Conservation Commission.
- Utilize FWC's Turkey brood rearing success monitoring system to upload refuge data and public citizen science reports.
- Require all hunters to report take.
- Analyze existing trail camera grid for relative population abundance calculations.

## **STANDARD 4: FISHING**

### **Policy (605 FW 3)**

Fishing is an appropriate use of the NWRS, when compatible. Fishing programs will be of the highest quality, conducted in a safe and cost-effective manner, and to the extent practicable, carried out in accordance with State regulations (Appendix E).

### **Current Program Discussion**

The Refuge is currently closed to all fishing opportunities.

## **STANDARD 4: GOALS, OBJECTIVES, AND STRATEGIES**

### **VISITOR SERVICES PLAN GOAL 4**

*Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads to greater understanding and appreciation of aquatic resources; 3) aids in the conservation of fish populations and their habitats.*

### **Visitor Services Plan Objective 4.1**

Provide opportunities for high quality recreational and educational fishing experiences.

### **Visitor Services Plan Objective 4.2**

Open Pistol Pond to bank fishing, submit a fishing opening package to the Service's Southeast Region and Headquarters for publication in the annual Refuge-specific Hunting and Sport Fishing Regulation Rule.

### **Visitor Services Plan Objective 4.3**

Maintain viable, diverse populations of fish based on sound biological principles and data that maintain fish populations at sustainable levels.

### **Strategies**

- Opening of Pistol Pond to bank fishing.

- 
- Improve upon and construct infrastructure to support fishing at Pistol Pond including at least two ADA accessible fishing platforms, parking area, wildlife fencing, automatic gate, interpretive panels, and fishing line and trash disposals
  - Submit a fishing opening package to the Service's Southeast Region and Headquarters for publication in the annual Refuge-specific Hunting and Fishing Regulation Rule.
  - Expand areas open to fishing where compatible.

### **Proposed Program Changes**

Opening of Pistol Pond to fishing.

#### **Fishing Facilities, Pistol Pond Improvements**

- Construct parking area
- Add wildlife diversion fencing around the parking area with appropriate access gates
- Install automatic gate at parking area
- Construct at least two ADA accessible fishing platforms
- Construct kiosk with at least one interpretive panel
- Install monofilament recycling bins and bear-proof trash receptacles

#### **Staff based Services – Fishing**

- Host youth fishing and invasive species roundup events
- Restore Pistol Pond littoral zones to improve fish habitat quality

### **Monitor and evaluate**

- Analyze fisheries sampling data from methods such as electrofishing surveys and creel surveys to make sound scientific assessment of Refuge fisheries conditions. Sampling will occur when available based on funding and resources.
- Assess visitor use levels, trends, and needs with auto traffic counters, angler contact in the field, comments during agency and public meetings, and emails or letters.
- Review any unforeseen future conflicts and update the Hunt and Fish Plan and/or Special Use Permits as necessary.
- Incorporate public input from planning meetings and written input.

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## STANDARD 5: WILDLIFE OBSERVATION AND WILDLIFE PHOTOGRAPHY

### Policy (605 FW 4 and 604 FW 5)

Wildlife observation and wildlife photography are appropriate wildlife-dependent recreational uses of Refuge System lands, when compatible. Visitors of all ages and abilities have an opportunity to observe and photograph key wildlife and habitat resources of the Refuge. Viewing and photographing wildlife in natural or managed environments will foster a connection between visitors and natural resources (Appendix E).

### Current Program Discussion

The Leslie M. Duncan Memorial Trail and Panther Trail offer two recreational hiking opportunities on the Refuge at no charge, seven days a week, from sunrise until sunset. The Leslie M. Duncan Memorial Trail is an accessible 0.3-mile loop with a shell surface, interpretive signs, and small observation deck overlooking seasonally wet prairie habitat. The Panther Trail is a 1.3-mile unimproved loop through three primary Refuge habitats of pine flatwoods, seasonally wet prairie, and hardwood hammock. This trail offers the Otter Pond covered observation deck with two benches. Both trails are accessible from SR 29, approximately 0.25 miles north of the I-75 junction. Wildlife observation and photography along the trails are encouraged. Seasonal wildflowers, wildlife tracks, and an array of birds and butterflies are frequently observed along the trails. Bicycles, pets, and the takeoff or landing of unmanned aerial vehicles are not allowed on the hiking trails. Trained volunteers offer interpretive tabling at the trailhead and guided walks as available.

In addition to opportunities at two public use hiking trails, the Refuge collaborates with the Friends of the Florida Panther Refuge to offer photography outings for limited special interest groups including local photography clubs. Refuge tours via guided hike or swamp buggy excursion and public events also offer excellent wildlife observation and photography opportunities while exploring the diversity of habitats found on the Refuge. Frequently encountered wildlife may include bobcat, raccoon, turkey, whitetail deer, and a variety of wading and forest birds.

## STANDARD 5: GOALS, OBJECTIVES, AND STRATEGIES

### **VISITOR SERVICES PLAN GOAL 5**

*Provide visitors of all ages and abilities an opportunity to observe and photograph key wildlife and habitat resources of the Refuge.*

### **Visitor Services Plan Objective 5.1**

Ensure all public use infrastructure, informational resources, and staff-based services support quality wildlife observation and wildlife photography opportunities.

### **Strategies**

#### Public Use Infrastructure

- Maintain all existing Refuge trails for visitor use.
- Expand vistas/habitat windows at existing trails.
- Construct restroom facility at existing trails.
- Construct refuse facility at existing trails.

#### Informational Resources

- 
- Maintain seasonal wildlife and resource information in brochures and publications, including bird checklist, blooming flora, and wildlife identification.
  - Update photography events and opportunities on Refuge media.
  - Conform Refuge signage to USFWS Signs and Graphics standards.

#### Staff-based Services

- Provide wildlife observation and photography training to visitor services staff and volunteers.

### **Visitor Services Plan Objective 5.2**

Expand wildlife observation and photography opportunities at the Visitor Contact Station/Headquarters Office, including an approximately 2-mile loop hiking trail and observation deck.

#### **Strategies**

##### Public Use Infrastructure

- Establish additional day-use hiking trail using existing fire breaks/woods roads at Visitor Contact Station/Headquarters office.
- Construct new Visitor Center/Headquarters building northerly adjacent to current office space.
- Construct observation platform/photo blind along the new Headquarters trail.
- Construct a boardwalk at the end of Fritz Road, into the headwaters of Fakahatchee Strand, west of Visitor Contact Station/Headquarters office.

##### Informational Resources

- Install interpretive kiosk at the trail head and interpretive panels along the trail
- Create and distribute trail maps and brochures
- Create electronic GIS reference maps and provide upload options for visitor technology use

##### Staff-based Services

- Provide guided hikes by volunteers and staff

### **Visitor Services Plan Objective 5.3**

Open approximately 20 miles of existing firebreaks and interior roads for seasonal day use hiking.

#### **Strategies**

##### Public Use Infrastructure

- Use existing fire breaks/woods roads as seasonal trails for longer day use hiking opportunities
- Place unique trail markers and wayfinding signs along seasonal trails

##### Informational Resources

- Create and distribute trail maps and brochures
- Create electronic GIS reference maps

##### Staff-based Services

- Issue back country hiking permits
- Provide guided hikes by volunteers and staff

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### **Visitor Services Plan Objective 5.4**

Develop additional year round trails and boardwalks at the Unit 44 clear cut and pistol pond area of the Refuge.

### **Strategies**

#### Public Use Infrastructure

- Construct Parking Area along State Road 29 (collaborate with DOT and NPS near Bear Island Road Entrance to Big Cypress NP)
- Construct up to a ½ mile Boardwalk with viewing platform

#### Informational Resources

- Create trail maps and brochures
- Provide interpretive panels along the boardwalk

#### Staff-based Services

- Provide guided hikes by volunteer and staff

### **Proposed Program Changes**

Open more of the refuge to day use trails for wildlife viewing and photography by constructing parking areas, boardwalks, and using existing fire breaks/woods roads to facilitate year round and season trails.

### **Monitor and evaluate**

- Incorporate public input from planning meetings and written input.
- Trail counters will be deployed to estimate number of visitors engaged in wildlife observation and photography on the refuge.

## **STANDARD 6: ENVIRONMENTAL EDUCATION**

### **Policy (605 FW 6)**

Through formal, curriculum-based, environmental education tied to national and state education standards, we will advance public awareness, understanding, appreciation, and knowledge of key fish, wildlife, plant, and their habitats. Each refuge staff person will assess their potential to work with schools in providing an appropriate level of environmental education. We may support environmental education through the use of facilities, equipment, educational materials, teacher workshops, and study sites that are safe and conducive to learning (Appendix E).

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## Current Program Discussion

Environmental education programs on the Refuge, at local schools, community organizations, and community events are provided by various collaborating Refuge staff, as the education Park Ranger position has been vacant since 2012. With the Refuge closed to most public access, on site education is limited to special programming and events. Each year the Refuge partners with Friends of the Florida Panther Refuge to celebrate Save the Florida Panther Day by offering a free environmental education field day titled Open House on the third Saturday of March. Annually attracting approximately 200 participants, Open House offers excursions into the Refuge such as swamp buggy tours and guided hay rides, guided hikes, presentations on Refuge research and management activities, and children's activities including archery lessons. Florida Panther NWR has been a leading partner in the annual, interagency, Florida Panther Festival since inauguration of the community event in 2011. Held at the Naples Zoo and attracting 3,500-5,500 participants annually, the Festival educates about the Florida panther, recovery efforts for the species, and how residents can safely coexist with Florida's native wildlife through expert speakers, safety pen displays, educational vendors, field excursions, and children's activities. The Refuge is a designated Hands on the Land field experience site. Friends of the Florida Panther Refuge members, volunteers, and collaborators from partner agencies frequently assist with Refuge programming and public education requests.

Below is a list of current visitor facilities and services as they apply to environmental education:

- Buildings:
  - Visitor contact station/Headquarters office building
    - Brochures.
    - Fact sheets.
    - Threatened eastern indigo snake exhibit.
    - Florida panther mounted taxidermy.
- Parking lots:
  - Visitor contact station/Headquarters office building
    - 30 gravel spaces
    - 1 ADA paved spaces
  - Trailhead parking lot
    - 15 gravel spaces
    - 2 ADA paved spaces
    - 1 RV/bus gravel space
- Roads
  - Fritz road/Visitor contact station entrance
- Kiosks and signs
  - Visitor contact station entrance
    - with open office days and hours
  - Trailhead parking lot
    - with 10 interpretive panels
- Trails
  - Leslie M. Duncan Memorial Trail (0.3 miles)
  - Panther Trail (1.3 miles)

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- Pavilions/shelters:
    - Otter Pond pavilion at Panther hiking trail
    - McBride's Cabin
  - Restrooms:
    - 1 portable ADA restroom at trailhead.
    - 2 portable ADA restrooms at McBride's Cabin site.
    - 2 restrooms with 3 stalls each at Headquarters office.
  - Educational and Interpretive Resources
    - Wildlife tracks activity
    - Wildlife detectives activity
    - Enviroscope watershed activity
    - Creative naturalists activity
    - Identifying invasive species activity
    - Florida panther capture slides
    - Maps

## **STANDARD 6: GOALS, OBJECTIVES, AND STRATEGIES**

### **Comprehensive Conservation Plan Objective 5**

Develop facilities and associated amenities to promote public education of the ecosystem, the panther, and the refuge program.

### **VISITOR SERVICES PLAN GOAL 6**

Meet or exceed the quality criteria defined in section 605 FW 1.6, and facilitate curriculum-based environmental education opportunities that advance public awareness, understanding, appreciation, and knowledge of key fish, wildlife, plant, and resource issues.

### **Visitor Services Plan Objective 6.1**

Ensure all public use infrastructure, informational resources, and staff-based services support a quality environmental education program.

### **Strategies**

#### **Public Use Infrastructure**

- Utilize Visitor Contact station, Refuge trails, and Conservation Club site including McBride's Cabin to facilitate environmental education activities.
- Develop a classroom and auditorium space in the new Visitor Center/Headquarters office space.
- Work with Friends to develop exhibits and educational materials showcased in the new Visitor Center/Headquarters office.
- Ensure all public use infrastructure is safe and maintained throughout use seasons.

#### **Informational Resources**

- Work with partners and adjacent public lands managers to coordinate educational curriculum

#### **Staff-based Services**

- Use interns, volunteers and teachers to conduct educational programs
- Work with partners and Friends to fund transportation for environmental education field trips

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### **Visitor Services Plan Objective 6.2**

Work with the Florida Fish and Wildlife Conservation Commission and other partners to facilitate outdoor skills and education programs on the Refuge for the public to participate in outdoors and wildlife education.

#### **Strategies**

##### **Public Use Infrastructure**

- Utilize Visitor Contact station, refuge trails and the Conservation Club including McBride's Cabin to facilitate environmental education activities.
- Ensure all public use infrastructure is safe and well maintained.
- Work with partners and Friends to fund transportation for environmental education field trips

##### **Informational Resources**

- Utilize informational resources generated by FWC's outdoor skills, woman of the outdoors program etc. for these special event programs.
- Deliver refuge specific informational resources to each group using refuge staff and literature.

##### **Staff-based Services**

- Work with FWC and other partners to organize and conduct programs on the refuge
- Utilize staff, such as Managers, Law Enforcement Officers and Visitor Services professionals to assist in the delivery of these programs.

### **Visitor Services Plan Objective 6.3**

Work with partners to advance and distribute Living With Wildlife curriculum and programming for use in schools, organizations, and rural residence areas to educate all ages about coexistence with Florida wildlife including the Florida panther, black bear, and American alligator.

#### **Strategies**

##### **Informational Resources**

- Expand and maintain the website and Facebook to highlight living with wildlife messages.
- Tailor informational resources to urban, diverse, and underserved audiences.
- Implement the Refuge's Urban Wildlife Refuge Plan.
- Work with partners such as FWC and other NGO to expand and maintain updated web-based media that reflects accurate information.
- Expand and maintain relationships with regional television stations, radio stations, and news media.
- Expand and maintain media contact lists, local government lists, colleges and universities, chambers of commerce, and other civic organizations.

##### **Staff-based Services**

- Foster and maintain strong partnerships with community organizations to create programs and opportunities beneficial to conservation.
- Leverage volunteer capacity to expand education potential.
- Maintain and expand opportunities to be involved in community events.

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### **Visitor Services Plan Objective 6.4**

Coordinate with Collier County Public Schools to offer onsite Refuge environmental education programming to students to promote awareness of the Refuge and its resources as well as human interactions with the ecosystem, upon staff availability.

### **Strategies**

#### **Public Use Infrastructure**

- Maintain Conservation Club site for safe seasonal access
- Update McBride's Cabin with electricity installation
- Install benches around Conservation Club site

#### **Informational Resources**

- Coordinate materials with Collier County and existing natural resource partners to fill educational needs and complement curriculum that adheres to Sunshine State Standards
- Explore web-based learning and virtual visit opportunities

#### **Staff Based Services**

- Participate in Collier County environmental education planning meetings
- Work with Friends to meet transportation needs through grants and equipment
- Offer pre-trip site visit coordination meetings with education partners

### **Proposed Program Changes**

Proposed changes to public use infrastructure for environmental education includes the installation of electricity at McBride's Cabin and benches throughout edges of the Conservation Club site.

Developing a classroom and auditorium space in the new Visitor Center/Headquarters is also proposed as part of the new office project. New informational resources, including those that adhere to Florida's Sunshine State educational standards, are proposed and will be printed for upcoming lesson plans, seasonal resources, and educational activities. Staff, Friends, and volunteers will be trained on educational facility maintenance and equipment use to facilitate increased education activities.

### **Monitor and evaluate**

- Incorporate public input from planning meetings and written input.
- Receive verbal reflections or written evaluations from program participants after each session.

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## STANDARD 7: INTERPRETATION

### Policy (605 FW 7)

We will communicate the most important fish, wildlife, habitat, and other natural resource issues to visitors of all ages and abilities through effective interpretation. We will tailor messages and delivery methods to specific audiences and present them in appropriate locations. Through heightened awareness, we will inspire visitors to take positive actions supporting refuge goals and the Refuge System mission (Appendix E).

### Current Program Discussion

Interpretative programming is provided by various collaborating Refuge staff, as the education Park Ranger position has been vacant since 2012. With the Refuge closed to most public access, on site interpretation is limited to special interest tours, hikes, interpretive trail panels, and special events.

Below is a list of current visitor services facilities as they apply to interpretive opportunities:

- Buildings:
  - Visitor contact station/Headquarters office building
    - Brochures.
    - Fact sheets.
    - Threatened eastern indigo snake exhibit.
    - Florida panther mounted taxidermy.
- Parking lots:
  - Visitor contact station/Headquarters office building
    - 30 gravel spaces
    - 1 ADA paved spaces
  - Trailhead parking lot
    - 15 gravel spaces
    - 2 ADA paved spaces
    - 1 RV/bus gravel space
- Roads
  - Fritz road/Visitor contact station entrance
- Kiosks and signs
  - Visitor contact station entrance
    - with open office days and hours
  - Trailhead parking lot
    - with 10 interpretive panels
- Trails
  - Leslie M. Duncan Memorial Trail (0.3 miles)
  - Panther Trail (1.3 miles)
- Pavilions/shelters:
  - Otter Pond pavilion at Panther hiking trail
  - McBride's Cabin
- Restrooms:

- 
- Portable ADA restroom at trailhead.
  - 2 Portable ADA restrooms at McBride's Cabin site
  - Educational and Interpretive Resources
    - Wildlife tracks activity
    - Wildlife detectives activity
    - Enviroscope watershed activity
    - Creative naturalists activity
    - Identifying invasive species activity
    - Florida panther capture slides
    - Maps

## **STANDARD 7: GOALS, OBJECTIVES, AND STRATEGIES**

### **VISITOR SERVICES PLAN GOAL 7**

*Communicate the most important fish, wildlife, habitat, and natural resource issues to visitors of all ages and abilities through effective interpretation.*

#### **Visitor Services Plan Objective 7.1**

Upgrade and expand the interpretive program, portraying the significance of the Refuge and threats affecting the Refuge and the South Florida ecosystem and recovery of the Florida panther. Ensuring all public use infrastructure, informational resources, and staff-based services support quality interpretation of key resources and issues.

### **Strategies**

#### **Public Use Infrastructure**

- Utilize Visitor Center exhibits as teaching tools.
- Utilize signs and kiosks as interpretive teaching tools.

#### **Informational Resources**

- Maintain and periodically refurbish Visitor Center exhibits.
- Maintain special viewings in the theater gallery.
- Update and maintain interpretive messages on Refuge kiosks, signs, and publications as appropriate.
- Maintain monthly calendar of events on website.
- Post current special events and interpretive programs on Facebook.
- Develop a self-guided interpretive program.

#### **Staff-based Services**

- Recruit and train additional volunteers to lead interpretive programs.
- Provide interpretive training to all interested staff.
- Continue to offer staff and volunteer-led interpretive programs.
- Continue to host special events that help visitors connect with the Refuge.
- Maintain, develop, and create new partnerships and speaker possibilities.
- Develop an environmental interpretation step-down plan.
- Explore developing virtual geocache opportunities for each designated entrance area.

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## **Proposed Program Changes**

### Exhibits

- Establish a Visitor Center with interpretive exhibits within the new Headquarters office.
- Construct new kiosks at proposed trail heads and at Conservation Club/McBride's cabin.
- Design traveling interpretive displays that provide the most up to date information.

### Interpretation

- Provide opportunities for interpretive hiking, biking, or swamp buggy tours on designated trails.

### Events

- Host increased special events and activities where detailed interpretive tours are conducted via hiking, biking, or on swamp buggy.

### **Monitor and evaluate**

- Incorporate public input from planning meetings and written input.
- Periodically check web-based reviews from Google, Facebook, and Trip Advisor.
- Assess seasonal trail and edge conditions.
- Conduct program audits to ensure programs are focused on establishing interpretive themes and that they offer opportunities for the public to connect with Refuge resources.

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## STANDARD 8: MANAGE FOR OTHER RECREATIONAL USE OPPORTUNITIES

### Policy (605 FW 1 and 603 FW 1)

The National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, states that compatible wildlife-dependent recreational uses are the priority public uses of the National Wildlife Refuge System (hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation) and will receive enhanced consideration over other general public uses. Volunteers, partners, recreation fees, and concessions are tools available to assist in managing these uses. We will only permit other uses when we determine that they are legally mandated, provide benefits to the Service, occur due to special circumstances, or facilitate one of the priority wildlife-dependent recreational uses (Appendix E).

### Current Program Discussion

The Refuge currently allows a variety of public uses that support or enhance wildlife-dependent recreation. Such uses include hiking, wildlife observation, wildlife photography, environmental education, and environmental interpretation.

Below is a list of current visitor services facilities as they apply to other recreational uses:

## STANDARD 8: GOALS, OBJECTIVES, AND STRATEGIES

### VISITOR SERVICES PLAN GOAL 8

*Ensure all public uses are appropriate and compatible while supporting or enhancing one of the wildlife dependent recreational uses.*

### Visitor Services Plan Objective 8.1

Ensure all public use infrastructure, informational resources, and staff-based services support appropriate and compatible recreational use opportunities that support or enhance one of the wildlife-dependent recreational uses. Compatibility Determinations made by Refuge management are detailed in Appendix C of this plan.

### Strategies

#### Public Use Infrastructure

- Ensure information depicted on signs and kiosks is current, well described, and conforms to USFWS Graphic Standards.
- Install bicycle racks at designated trailheads and interest points.
- Install additional trail traffic counters at strategic locations.
- Install benches at Conservation Club site.
- Update compatible uses and their permitting process on Refuge outreach materials and website.

#### Informational Resources

- Update maps, brochures, and online resources to show additional trails as they are opened for public use.
- Translate maps, brochures, and online content into other locally common languages.

#### Staff-based Services

- Provide information about new recreational opportunities at the Visitor Center and kiosks.

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- Develop programs for presentation on and off-Refuge explaining the variety of recreational facilities and opportunities available on the Refuge.

### **Proposed Program Changes**

In addition to program changes outlined in previous goals and objectives, the Refuge proposes to allow public uses determined to be appropriate and compatible under special conditions and limitations, including issuance of Special Use Permits. These include instructor-led small group activities, camping, bicycling, and limited off-road vehicle use.

#### Instructor-Led Small Group Activities

The Refuge proposes allowing instructor-led small group activities on a conditional basis. These group activities are characterized by a group organized by a leader for the purposes of sharing information, knowledge and experience where there is no fee paid to attend. These may include but are not limited to astronomy club meetups, field skills workshops, or outdoor wellness programs. Each request must comply with Special Conditions attached to a Special Use Permit to ensure compatibility. At a minimum, the following standard SUP Special Conditions are included:

- Each request must be submitted a minimum of 30 calendar days in advance of the first scheduled activity by completing an SUP application. Each request will be reviewed on a case-by-case basis.
- Up to two (2) activities may be permitted per month. Preference will be given to new requests over repeat requests.
- Activities will not exceed two hours in duration, which includes set-up and breakdown. Activity length should be limited to the shortest amount of time reasonably required.
- It will be the responsibility of the permittee to provide and manage all activity-related resources and ensure that all participants remove litter and other activity-related materials from Refuge property immediately following conclusion of the session.
- A maximum of 50 participants may be permitted for one-time activities, and a maximum of 20 participants may be permitted for recurring activities.
- Permittee and activity participants will comply with all the Refuge regulations and additional instructions as provided by the Refuge Manager.
- Failure of the permittee to comply with any of these special conditions or with any State or Federal laws or special Refuge regulations will be sufficient cause for permit revocation and may result in denial of future SUPs.
- Permittee must have the SUP in their possession at all times while on the Refuge. A copy of the permit must also be prominently displayed on the dash of permittee's vehicle(s) at all times while on the Refuge. The permit must be presented to Refuge personnel upon request.
- All vehicles must park in designated spaces. No vehicles may be parked on the grass or other natural areas.
- Activity-related materials made from any type of plant (e.g. flower and plant arrangements) or animal (e.g. feathers, shells, etc.) materials will need to be approved prior to the activity in order to maintain the environmental health of the Refuge and to prevent the introduction of any pests, pathogens, or invasive species to the Refuge.
- All activities will be conducted in such a manner as to minimize disturbance to wildlife, Refuge resources, and the visiting public. The following will be specifically prohibited: 1) audio amplification devices; 2) adhering, fixing, or fastening decorations to vegetation and/or structures; 3) erecting self-supporting decorations, banners, flags, etc. in a manner that will obstruct the view of public areas or disturb wildlife; 4) throwing or scattering rice, bird seed, or similar products; and 5) the release of any type of wildlife (e.g. butterflies, doves, etc.), balloons, or lanterns.

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- A NWRS fact sheet will be provided with every SUP and must be distributed by the permittee to all adult participants.
  - The permittee agrees to forever hold harmless the United States, its officers, agents, employees, contractors and/or assigns from any and all damages to property or injuries to persons which arises or may be incidental to the activities associated with an SUP.

### Camping

A limited semi-primitive overnight camping opportunity is proposed to facilitate the family wild turkey hunt and small scouting groups, December-February for a maximum of two nights with a Special Use Permit. The use is overnight camping at McBride's Cabin, facilitating a group campsite in much of the same way the area was used prior to Refuge establishment. Remnants of the Fakahatchee Conservation Club include a smoker pit bar-b-que structure and a fire pit with concrete apron. December- February for a maximum of 2 nights with a Special Use Permit. The Refuge Manager may close campsites to prevent conflict with wildlife species, including threatened and endangered species. The Refuge Manager will limit all access to protect denning panther, or for other management purposes, when necessary. Special Conditions of camping include:

- Camping will only be allowed for permitted hunters during the Family/hunt camp weekend, and for scout groups of twenty (20) or less.
- Camping is only allowed at the designated campsite at the Conservation Club (McBride's Cabin).
- No wood gathering or vegetation removal will be permitted without a permit.
- Feeding wildlife is not permitted.
- All trash and waste must be carried out and properly disposed off-site.
- Pets are not authorized.
- The site is available on a first-come basis by permit.
- The maximum length of stay is two nights.
- The maximum number of people occupying the group campsite is twenty.
- No fires are allowed outside of the fire ring.
- A nominal fee will be associated with camping permits.

### Bicycling (Non-Motorized Riding)

Recreational bicycling as a mode of transportation facilitates travel and access to the Refuge for priority public uses. Bicycle use will be permitted on designated trails. Secretary Order 3376 Sec 4 b) E-bikes shall be allowed where other types of bicycles are allowed; and c) E-bikes shall not be allowed where other types of bicycles are prohibited. These trails are open daylight hours only, sunrise to sunset. Refuge brochures and maps provide the public with the locations of visitor facilities and associated restrictions. Bicycle use will be permitted daily on designated trails. Mountain bike activities off-trail will be prohibited. Bicycling will occur only in designated areas to prevent the erosion and degradation of wetlands or water quality and ensure public safety. Bicycles will be prohibited on the Leslie Duncan memorial trail, due to the narrow width of the trail and conflict with other users. Bicycles will be allowed to facilitate access for wildlife observation, photography or hunting. Biking activities off designated trails will be prohibited. Bicycle riding as a general mode of transportation will be allowed on designated trails. Organized rides and club rides involving more than 10 bicycles will be required to obtain a Special Use Permit, as these large groups may require greater management to prevent negative interactions with other public users and wildlife.

### Limited Off Road Vehicle Use

Off road vehicle is characterized by the use of non-street legal vehicles such as ATV, UTV, or Swamp Buggies. This activity will only be allowed for the facilitation of environmental education programs, interpretive tours, or hunting access for permitted hunters during the time of their hunt. The use will

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occur on existing trails and firebreaks that are designated in Figure 4 of the EA of this document. Refuge brochures and maps provide the public with the locations of visitor facilities and associated restrictions.

**Monitor and evaluate**

- Conduct periodic Comprehensive Condition Assessments that include all recreational infrastructure.
- Hold periodic public meetings to solicit feedback from the public on ways to improve the Refuge's recreational offerings.
- Install additional trail counters at strategic locations to better understand public use levels and patterns and tailor facilities and programs to support these needs.
- Incorporate public input from planning meetings and written input.

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## STANDARD 9: OUTREACH

### Policy (605 FW 1.14I)

Effective outreach depends on open and continuing communication between the Refuge staff and the public. This communication involves determining and understanding the issues, identifying audiences, crafting messages, selecting the most effective delivery techniques, and evaluating effectiveness. Achieved results will further the mission of the National Wildlife Refuge System and purpose(s) of the Refuge. See the National Outreach Strategy: A Master Plan for Communicating in the U.S. Fish and Wildlife Service, and America's National Wildlife Refuge System: 100 on 100 Outreach Campaign (Appendix E).

### Current Program Discussion

Outreach is a two-way communication between the USFWS and the public to establish and promote involvement, and influence attitudes and action, with the goal of improving joint stewardship of our natural resources. Outreach includes but is not limited to the following: relations with news media, congressional, corporate, constituent groups, community, state and local government, state wildlife agencies, environmental education and interpretive activities, public involvement, traditional public information activities such as open houses, information products such as brochures, leaflets, exhibits, slide shows, videos, public service announcements, and web based media.

Media outreach at the Refuge typically occurs in the form of news releases, radio and television interviews, and phone contacts. Staff maintain good working relationships with local media sources, and a number of articles are printed each year covering various Refuge topics.

Florida Panther National Wildlife Refuge is designated as an Urban Refuge located within a one-hour drive of the Naples metropolitan area, offering ideal gateways for the U.S. Fish and Wildlife Service to improve access and engage new audiences in outdoor recreation and conservation. The Urban Wildlife Conservation Program (UWCP) is expanding its innovative engagement model to work with neighbors to become a community asset and to build the next generation of conservationists.

Refuge staff, volunteers, and Friends are invited to participate in a number of outreach events each year such as special events, festivals, and workshops. All requests are considered with actual participation based on staff schedules and availability, as well as budget considerations for the cost associated with participation. Over the years, the staff has typically participated in numerous outreach events including

Below is a list of current visitor services facilities as they apply to outreach:

- Buildings:
  - Visitor contact station/Headquarters office building
    - Brochures.
    - Fact sheets.
    - Threatened eastern indigo snake exhibit.
    - Florida panther mounted taxidermy.
- Parking lots:
  - Visitor contact station/Headquarters office building
    - 30 gravel spaces
    - 1 ADA paved spaces

- Trailhead parking lot
    - 15 gravel spaces
    - 2 ADA paved spaces
    - 1 RV/bus gravel space
- Roads
  - Fritz road/Visitor contact station entrance
- Kiosks and signs
  - Visitor contact station entrance
    - with open office days and hours
  - Trailhead parking lot
    - with 10 interpretive panels
- Trails
  - Leslie M. Duncan Memorial Trail (0.3 miles)
  - Panther Trail (1.3 miles)
- Pavilions/shelters:
  - Otter Pond pavilion at Panther hiking trail
  - McBride's Cabin
- Restrooms:
  - 2 restrooms with 3 stalls each at Visitor Contact/Headquarters
  - 1 portable ADA restroom at trailhead
  - 2 portable ADA restrooms at McBride's Cabin

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## **STANDARD 9: GOALS, OBJECTIVES, AND STRATEGIES**

### **VISITOR SERVICES PLAN GOAL 9**

*Engage off-site public in effective outreach.*

### **Comprehensive Conservation Plan Objective 5.2**

Increase local awareness of the south Florida ecosystem, the Refuge, and the panther through the development and implementation of an outreach program.

### **Visitor Services Plan Objective 9.1**

Ensure all informational resources and staff-based services promote an understanding and appreciation of the Refuge's fish, wildlife, habitat conservation, along with the mission of the National Wildlife Refuge System.

## **Strategies**

### **Informational Resources**

- Develop an outreach plan that articulates communications strategies and schedules.
- Update brochures to reflect national outreach messages and initiatives.
- Expand and maintain the website and Facebook to highlight Refuge accomplishments.
- Expand and maintain website and Facebook to reflect national outreach messages and initiatives.

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- Tailor informational resources to urban, diverse, and underserved audiences.
  - Implement the Refuge's Urban Wildlife Refuge Plan.
  - Expand and maintain updated web-based media that reflects national outreach messages and initiatives.
  - Expand and maintain relationships with regional television stations, radio stations, and news media.
  - Expand and maintain media contact lists, local government lists, colleges and universities, chambers of commerce, and other civic organizations.

#### Staff-Based Services

- Foster and maintain strong partnerships with community organizations to create programs and opportunities beneficial to conservation.
- Leverage volunteer capacity to expand outreach potential.
- Maintain and expand opportunities to be involved in community events.
- Incorporate national outreach messages into all off-site environmental education.
- Incorporate national outreach messages into all off-site interpretive programs.
- Incorporate national outreach messages into all off-site special events.
- Tailor staff-based services to urban, diverse, and underserved audiences.
- Offer more internship opportunities focused on outreach.
- Recruit and train volunteers to facilitate outreach.
- Maintain partnerships with regional universities to recruit quality interns.
- Encourage Friends to submit grants requests that will provide additional outreach staff.
- Establish partnerships with community organizations to disseminate information.
- Host "town hall" events, including community leaders.
- Develop community specific programs.
- Annual agency-planning meeting with outreach strategies based on the latest available science.
- Use stakeholders meeting periodically to address concerns.
- Meet annually with city councils, county commissioners, and other elected officials.

### **Proposed Program Changes**

#### Planning meetings

- Develop annual meetings with other governmental agencies, stakeholders, and city councils.

#### Outreach plan

- Develop an outreach plan that articulates communications strategies and schedules.

#### Off-site events

- Expand relationships with local leaders and media.
- Host "town hall" and "fireside chat" events.
- Develop community specific programs.

#### Informational resources

- Update and expand outreach information.

### **Monitor and evaluate**

- Urban Refuge Program reviews will be conducted periodically to ensure the Refuge is meeting visitor service standards. These programmatic reviews will also assess if the VSP goals and

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objectives are being met. To ensure a thorough external and internal review of the program or service, we will monitor and evaluate the program or service using a variety of methods, including program reviews, literature reviews, site visits, focus groups, personal interviews, economic analyses, and surveys.

- Incorporate public input from planning meetings and written input.

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## STANDARD 10: VOLUNTEERS AND FRIENDS

### Policy (605 FW 1.14J)

Volunteer and Refuge support groups fortify Refuge staffs with their gift of time, skills, and energy and are integral to the future of the National Wildlife Refuge System. Refuge staff will initiate and nurture relationships with volunteers and Refuge support groups, and will continually support, monitor, and evaluate these groups with the goal of fortifying important Refuge activities. The National Wildlife Refuge System Volunteer and Community Partnership Enhancement Act of 1998 (P.L. 105-242) strengthens the Refuge System's role in developing effective partnerships with various community groups. Whether through volunteers, Refuge support groups, or other important partnerships in the community, Refuge staff will seek to make the Refuge an integral part of the community, giving rise to a stronger Refuge System (Appendix E).

### Current Program Discussion

#### Volunteers

The Refuge has a well-established volunteer program with approximately 365 individuals donating their time, skills, and energy each year. Volunteers support all work groups at the Refuge with the visitor services program receiving the majority of support. Volunteers are recruited passively at the Visitor Center, online, and through local media, with a short narrative describing opportunities and the application process. Targeted recruitment for specific positions occur at local volunteer fairs. Volunteers are especially important as workloads increase while staff levels remain static. The program utilizes three recreational vehicle pads and a Refuge bunkhouse with six rooms to house volunteers, interns, and partners.

The Refuge has a four part volunteer program: regular, resident, events, and Friends. Regular volunteers are divided into year-round and seasonal categories. These are individuals who commit to a set number of hours per week or per month. Residents or Recreational Vehicle campers make up another segment of the program. These are individuals or couples who live on the Refuge in their personal camper or Refuge bunkhouse. Special event volunteers work occasions such as the Everglades Day Festival, Migratory Bird Surveys, and National Public Lands Day. The Friends group also contributes a significant number of volunteer hours.

Volunteers provide much needed assistance to Refuge staff. Volunteers staff the Visitor Center front desk, provide administrative and clerical work, lead guided tours, assist with special art projects, staff off-site exhibits, and provide assistance with off-site programs such as the Speakers Bureau, help with on-site special events such as the Everglades Day Festival, National Public Lands Day, and Christmas Bird Count for Kids. They act as roving interpreters on the various trails and public use areas, assist in education programs for visiting students, assist biologists with the collection of field data for studies and surveys, remove invasive exotic plants and trees, assist in reforestation projects, and perform various maintenance duties.

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**Table 5. Volunteer Numbers and Volunteer Hours By Year**

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>Total Number of Volunteers</b>	100	137	142	119	80	85	64	101	80	46
<b>Total Hours</b>	3910	4500	4229	4283	6555	6128	5896	6916	881	6463

### **Friends of the Florida Panther Refuge**

The mission of the Friends group is to promote a better understanding and appreciation of the natural history and environment of South Florida, the Refuge, and the entire Everglades system. The Friends is a 501(c) (3) non-profit organization that partners with the Refuge to provide support for environmental education, community outreach, fundraising, and advocacy. The Friends have a current signed partnership agreement with the Refuge as of 2015. The purpose of this agreement is to facilitate and formalize collaboration between the Friends and the USFWS in order to achieve common goals and objectives at the Refuge. The agreement is valid for 5 years.

The Friends obtain funding through membership dues, private donations, and fundraising. They support the Refuge and its staff by acting as a volunteer-based organization to aid in a wide variety of positions at the Refuge including event organization, maintenance, leading tours

The Friends raise awareness through regular and relevant posting on the Friends' Facebook page and ensure that the Friends' website is updated with current information.

### **Partnerships**

Refuge staff maintain partnerships with other Federal and state agencies, in addition to non-governmental organizations, local schools and universities, and the general public. A full list of partnerships can be found in Table 8 of this document.

## ***STANDARD 10: GOALS, OBJECTIVES, AND STRATEGIES***

### **VISITOR SERVICES PLAN GOAL 10**

*Ensure Refuge staff initiate and nurture relationships with volunteers and Friends organizations.*

### **Visitor Services Plan Objective 10.1**

Develop and maintain a cadre of volunteer interpreters to provide on- and off- site interpretive programs and to deliver key interpretive messages of Florida Panther NWR to increase awareness and appreciation of the Refuge, its management, and its resources.

### **Strategies**

#### **Public Use Infrastructure**

- Maintain housing facilities utilized by volunteers.
- Maintain resident campsites utilized by volunteers.
- Explore development of a volunteer resources station.

#### **Informational Resources**

- Update and maintain kiosks, publications, and web-based media with volunteer opportunity information.

- 
- Develop quarterly volunteer newsletters.
  - Develop and disseminate a Refuge-specific volunteer handbook.

#### Staff-based Services

- Develop new strategies to recruit volunteers.
- Promote volunteer opportunities on *www.volunteer.gov* webpage.
- Recruit volunteers who are fluent in locally common languages and develop interpretive and outreach programs to better serve local communities.
- Encourage all departments to utilize volunteers.
- Provide orientation training and annual refreshers.
- Conduct quarterly volunteer trainings and meetings.
- Develop and promote volunteer opportunities that help promote the mission of the Refuge.
- Encourage local schools, non-profit organizations, and for-profit organizations to participate in stewardship/volunteer programs.
- Expand training opportunities by utilizing available resources. For example, local and area resources, on-the-job trainings, teacher workshops, and courses offered by the USFWS's National Conservation Training Center (NCTC) to provide training needs.
- Seek additional scholarship to NCTC or request assistance from the Friends group to fund training as needed.
- Seek opportunities for non-traditional rewards for volunteers such as guided tours of other Refuges within the state or Complex.

### **Visitor Services Plan Objective 10.2**

Improve and increase the number of existing RV volunteer campsites from 4 to at least 6 in a more functional and easily accessed area.

#### **Strategies**

##### Public Use Infrastructure

- Expand at least two additional resident volunteer campsite pads with poured concrete parking, potable water, sewer hook-up, and full 50 amp power on the north side of the Weed tract.

#### **Proposed Program Changes**

##### Volunteer Program

- Will develop new strategies to recruit volunteers.
- Will expand camping options for resident volunteers.

##### Friends Program

- Will expand the Friends group.
- Will encourage the Friends group to support new public uses.

##### Partnerships

- Will expand partnerships, especially for the visitor services program.

#### **Monitor and evaluate**

- Incorporate public input from planning meetings and written input.

- 
- Solicit feedback from volunteers on a regular basis.
  - Conduct exit interviews with all volunteers that leave the program.
  - Assess volunteer program regularly and make adjustments as needed.
  - Visitor service program reviews will be conducted periodically to ensure the Refuge is meeting visitor service standards. These programmatic reviews also assess if the VSP goals and objectives are being met. To ensure a thorough external and internal review of the program or service, we will monitor and evaluate the program or service using a variety of methods, including program reviews, literature reviews, site visits, focus groups, personal interviews, economic analyses, and surveys.

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## 11: RECREATION FEE PROGRAM

### Policy (261 FW 1; 263 FW 1)

#### ***Federal Lands Recreation Enhancement Act of 2004 (P.L. 108-447);***

#### ***U.S. Fish and Wildlife Service Guidance on the Recreation Fee Program – September 2008***

“The Federal Lands Recreation Enhancement Act of 2004 (FLREA) allows land management agencies, such as the National Wildlife Refuge System, to charge fees for entry and certain amenities (user fees). The charging of entrance and user fees at national wildlife refuges can be a helpful management tool if the program is well-managed and implemented.” (Appendix E)

### **Current Program Discussion:**

Currently there are no recreation fee programs on the Refuge.

## **STANDARD 11. GOALS, OBJECTIVES, AND STRATEGIES**

### **VISITOR SERVICES PLAN GOAL 11**

*Institute an effective Recreation Fee Program under the guidance of the Federal Lands Recreation Fee Program or as mandated by Congress for sustaining resources for the operation and maintenance of recreation areas, visitor services improvements, including seasonal staffing, and habitat enhancement projects of Federal lands.*

### **Visitor Services Plan Objective 11.1**

Collect fees for hunting and group camping activities and ensure all public use infrastructure, informational resources, and staff-based services support an effective Recreation Fee program.

### **Strategies**

#### Public Use Infrastructure

- Utilize funding generated for fee permits to maintain infrastructure at the Conservation Club and other visitor access points.

#### Informational Resources

- Update and maintain fee information on all informal contact points such as the website, publications, and .

#### Staff-based Services

- Sell Refuge and interagency passes.
- Train staff and volunteers on the America the Beautiful - National Parks and Federal Recreational Lands Passes Program administrative duties.
- Establish fee collection program
- Conduct annual refresher training for fee collectors.

### **Additional Strategies**

- Annually issue new/renewed commercial use SUPs in January for upcoming calendar year.
- Evaluate fees for commercial SUPs to determine if rates are appropriate based on new fee schedule.
- Conduct a coordination meeting with all interpretive guide SUP holders to ensure understanding of permit conditions and relay appropriate Refuge messages.

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### Public Use Fees

- Introduce fees for camping (\$10 per night), hunting (\$25 per year)
- Provide Refuge Annual Pass purchase option for \$25 to match the Federal Duck Stamp

### **Proposed Program Changes**

#### Public Use Infrastructure

- Expand Visitor Contact Station operating days and hours

#### Informational Resources

- Include fee schedule information

#### Staff-based Services

- Introduce pass and fee collection program

### **Monitor and evaluate**

- Incorporate public input from planning meetings and written input.
- Track fees collected and number of permits sold or issued.
- Conduct phone interviews with all commercial use special use permit holders to ensure understanding of permit conditions and relay appropriate Refuge messages.
- Collect monthly program numbers (# of programs, # of participants) and feedback from SUP holders.
- Track commercial activities on the Refuge.
- Future Recreation Fees may be necessary depending upon use and cost of operations and maintenance.

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## **12: CONCESSIONS**

### **Policy (50 CFR Part 25.61) and Director's Order No.139**

Concession Contracts, discusses the Service's current policy for concession management and provides guidance for permitting and administering concession operations on Service lands. We use concessions to assist us in providing wildlife-dependent recreation activities to the visiting public. The concessions are managed through contracts between the Service and a private entity, where the private entity is allowed to charge a fee for services provided at a field station to the visiting public (Appendix E).

### **Current Program Discussion**

Currently there are no concession operations on the Refuge.

### **Proposed Program Changes**

The refuge is not proposing concession operations in this plan.

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## 13: COMMERCIAL RECREATIONAL USES

### **Policy (50 CFR 29.1; 50 CFR 27.97; 8 RM 16; 603 FW 1; 605 FW 5)**

A commercial recreational use is a use that generates revenue or that results in a commodity which is or can be sold for income or revenue. Before considering compatibility, the use must be determined to contribute to the achievement of the refuge purpose or the mission of the Refuge System, as outlined in Title 50 Code of Federal Regulations, 29.1 (Appendix E).

To be allowed on a refuge, a commercial use must go beyond the “not materially interfere with...” requirement and must contribute to the achievement of the refuge purpose or mission of the Refuge System. The contribution must be clearly defined in the justification section of the compatibility determination for any commercial use.

Title 50, Code of Federal Regulations, 27.97, Private Operations, prohibits an unauthorized commercial enterprise on any national wildlife refuge. Thus, commercial tours are required to apply for a special use permit (SUP) from the Refuge Manager. By establishing a SUP system, the refuge staff is able to set sustainable limits on the number of permits issued.

In determining if a commercial recreational use is compatible, one way to connect it to the mission of the System is to determine if the commercial recreation use will facilitate one of the wildlife-dependent priority public use activities which are “directly related to the mission of the System.” (Refuge Improvement Act – 1997)

### **Current Program Discussion**

The Refuge currently issues special use permits (SUP) for commercial filming and commercial environmental education tours.

In 2019, a total of four companies and/or organizations were issued SUPs to provide commercial programs on the Refuge. These are private, commercial, or non-profit organizations that maintain an SUP to conduct commercial activity on the Refuge. There is no limit as to the number of permits that are issued each year, but each proposal is reviewed for appropriateness and compatibility.

This standard covers all commercial SUP uses on this Refuge. Each SUP has its own compatibility determination that is readily available to be attached to each SUP. In addition, commercial filming permits also have an AV application that is attached to the permit. The Refuge follows 8 Refuge Manual 16 for Audio-Visual Production and Commercial Filming and 43 CFR Part 5.

## **STANDARD 13: GOALS, OBJECTIVES, AND STRATEGIES**

### **VISITOR SERVICES PLAN GOAL 13**

*Institute an effective Commercial Recreational Use Program that contributes to the achievement of the Refuge purpose or the mission of the Refuge System.*

### **VSP Objective 13.1**

Though the use of Special Use Permits, use commercial sources to achieve refuge goals and objectives including providing educational and interpretive programs on the refuge. Ensure all public use infrastructure, informational resources, and staff-based services support an effective Commercial Use Program.

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## Strategies

### Public Use Infrastructure

- Identify existing infrastructure to be appropriately used by permitted commercial uses including trail systems, public use areas, and restroom facilities.

### Informational Resources

- List appropriate permitted commercial use offerings on visit and permits sections of refuge website.
- Provide appropriate permitted commercial use offerings to visitor inquiries through phone conversation, email, or mailings.

### Staff-based Services

- Train staff on commercial recreational use program administration.
- Review SUPs annually to ensure compliance and work with non-compliant permittees to resolve outstanding issues.
- Annually issue new/renewed commercial SUPs at the beginning of each fiscal year.
- Evaluate fees for commercial SUPs to determine if rates are appropriate based on updated fee schedule.

## Proposed Program Changes

- Permit commercial recording
- Explore partnerships for commercial guides to facilitate ecotourism in the form of Interpretive tours.
- Review infrastructure availability to appropriate permitted commercial uses as strategies of this plan are implemented.
- Unmanned Aerial Vehicle/Drone Use
  - The take-off and landing of the unauthorized aircraft including unmanned aerial vehicles (UAV) is prohibited. Authorization of the use of a UAV will only be permitted to facilitate scientific research or commercial filming projects. A Special Use Permit from the refuge is necessary to obtain prior to the operation of aircraft on the refuge.

## Monitor and evaluate

- Incorporate public input from planning meetings and written input.
- Conduct phone interviews with all commercial use SUP holders to ensure understanding of permit conditions and relay appropriate Refuge messages.
- Collect monthly or annual program numbers (# of programs, # of participants) as appropriate per permit.
- Collect annual use plans from commercial SUP holders, reporting patron numbers, use dates, final products as appropriate per permit.
- Collect feedback from commercial SUP holders.

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## **14: WILDERNESS**

### **Policy (Wilderness Act of 1964 (U.S. C. 1131-1136) Public Law 88-577, September 3, 1964)**

The Wilderness Act of 1964 directs the Secretary of the Interior, within 10 years, to review every roadless area of 2,024 or more hectares (5,000 or more acres) and every roadless island (regardless of size) within national wildlife refuges and national parks, and to recommend to the President the suitability of each such area or island for inclusion in the National Wilderness Preservation System by later special Acts of Congress. The Act provides criteria for determining suitability and contains provisions related to activities that can be undertaken on a designated area.

The Wilderness Act establishes additional purposes for the designated wilderness areas within refuges (50 CFR 29.12), which “shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for the future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness.” Proposed wilderness areas are managed so as to protect their wilderness values pending action by Congress (Appendix E).

### **Current Program Discussion**

Florida Panther National Wildlife Refuge does not have designated wilderness areas.

### **Proposed Program Changes**

The Refuge is not proposing wilderness designations or use in this plan.

### III. Implementation Schedule

Table 6 allows the Refuge to view strategies as it relates to the project completion schedules during the life of the VSP.

**Table 6. Visitor Services Strategies Implementation Schedule.**

Strategies Implementation Schedule																			
PROJECTS	TIME FRAME FOR PROJECT COMPLETION																		COMMENTS
	Day	Week	Annual	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Unit 44 Management							X												
Unit 44 Public Access: Trail									X										
Unit 44 Public Access: Boardwalk										X									
Unit 44 Public Access: Viewing Structure									X										
Turkey Hunting						X													
Primitive Camping						X													
Headquarters and Visitor Contact Center						X													
Seasonal Hiking Trails					X														
McBride's Cabin and Conservation Club Access					X														

Strategies Implementation Schedule																			
PROJECTS	TIME FRAME FOR PROJECT COMPLETION																		COMMENTS
	Day	Week	Annual	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	
Pistol Pond Fishing						X													
RV Camping Pad Expansion							X												

## IV. Visitor Services Annual Work Plan

Table 7 allows the individuals within the visitor services program to see at a glance what the plans are for the year and associated deadlines for the task.

**Table 7. Visitor Services Annual Work Plan.**

Visitor Services Annual Work Plan - Fiscal Year 2020														
Category	Event	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Comments
Annual Events	Panther Social	X												Friends Annual Meeting
	CISMA Invasive Species Symposium		X											Late February
	Open House			X										3 <sup>rd</sup> Saturday of March
	Volunteer Recognition			X										4 <sup>th</sup> Saturday of March
	CISMA Invasive Fish Round Up				X									Spring
	National Wildlife Refuge Week										X			Mid October
	Florida Panther Festival											X		1 <sup>st</sup> Saturday of November
	Christmas Bird Count												X	
Required Reporting	Recreation Fee Report										X			
	RAPP								X					
Annual Required Training	EEO/Diversity									X				
Routine Activities	Post on Facebook	X	X	X	X	X	X	X	X	X	X	X	X	3-5x weekly
	Friends Board Meeting	X	X	X	X	X	X	X	X	X	X	X	X	2 <sup>nd</sup> Wednesday Monthly
	Check TRAFx counters	X	X	X	X	X	X	X	X	X	X	X	X	
	Article for Egrits			X			X			X			X	Quarterly
	Update Website			X			X			X			X	Quarterly

Visitor Services Annual Work Plan - Fiscal Year 2020														
Category	Event	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC	Comments
Annual Fee Free Days	Martin Luther King Jr Day	X												
	Presidents' Day		X											
	National Public Lands Day									X				
	1 <sup>st</sup> Sunday NWR Week										X			
	Veterans Day											X		

## V. Visitor Services Annual Partnership Planning

Table 8 tracks the Refuge's formal and informal partnerships.

**Table 8. Visitor Services Annual Partnership Planning.**

Visitor Services Annual Partnership Planning - Fiscal Year (2020)							
Name of Partnership	Type of Partnership (Academia, Non-profit, Agency, etc.)	Agreement Type (Grant, Challenge Cost Share, Cooperative, MOU, Donation, Programmatic, etc.)	Partnership's Goal for Refuge	Type of Contribution		Time Frame of Project	Comments
				In-kind (materials, labor)	Monetary		
Audubon Florida	Non-profit environmental organization	Non-formal partnership	Interpretation, environmental education	Education and resource expertise	N/A	Ongoing	
Avian Research and Conservation Institute	Non-profit environmental organization	Research SUP	Environmental education, research	Education and research expertise, field assistance	N/A	Ongoing	
Big Cypress National Preserve	Federal Agency	MOU	Environmental education, fire management, research	Education and resource expertise	N/A	Ongoing	
Conservancy of Southwest Florida	Non-profit environmental organization	Non-formal partnership	Environmental education, research	Education and resource expertise	N/A	Ongoing	

**Visitor Services Annual Partnership Planning - Fiscal Year (2020)**

Name of Partnership	Type of Partnership (Academia, Non-profit, Agency, etc.)	Agreement Type (Grant, Challenge Cost Share, Cooperative, MOU, Donation, Programmatic, etc.)	Partnership's Goal for Refuge	Type of Contribution		Time Frame of Project	Comments
				In-kind (materials, labor)	Monetary		
Collier County Sherriff	County agency	MOU	Law enforcement	Law enforcement, labor	N/A	Ongoing	
Defenders of Wildlife	Non-profit environmental organization	Non-formal partnership	Environmental education	Education expertise	N/A	Ongoing	
Everglades Coalition	Non-profit environmental organization	Non-formal partnership	Environmental education	Education expertise, volunteerism	N/A	Ongoing	
Florida Dept of Environmental Protection	State agency	Cooperative Agreement	Environmental education, regulation, research	Education, regulation, resource expertise	N/A	Ongoing	
Florida Division of Forestry	State agency	MOU	Environmental education, fire management	Education, resource expertise	N/A	Ongoing	
Florida Fish and Wildlife Conservation Commission	State agency	MOU	Environmental education, fishing, hunting, law enforcement, regulation, research	Education, regulation, and research expertise. Law enforcement	N/A	Ongoing	

**Visitor Services Annual Partnership Planning - Fiscal Year (2020)**

Name of Partnership	Type of Partnership (Academia, Non-profit, Agency, etc.)	Agreement Type (Grant, Challenge Cost Share, Cooperative, MOU, Donation, Programmatic, etc.)	Partnership's Goal for Refuge	Type of Contribution		Time Frame of Project	Comments
				In-kind (materials, labor)	Monetary		
Florida Gulf Coast University	Academia	Research SUP	Environmental education, research	Volunteerism	N/A	Ongoing	Wings of Hope Panther Posse, Service-Learning, Sciences Depts.
Florida Indian Tribes	Federally Recognized Native American Tribes	Non-formal partnerships	Environmental education, fire management, regulation, research	Education, regulation, resource expertise	N/A	Ongoing	
Florida Invasive Species Partnership	Non-profit environmental organization	Partners for Fish and Wildlife Agreement	Environmental education, research	Education and resource expertise	N/A	Ongoing	
Florida Park Service	State agency	Non-formal partnership	Environmental education, fire management	Education and resource expertise	N/A/	Ongoing	
Florida Native Plant Society	Non-profit environmental organization	Non-formal partnership	Environmental education	Education and resource expertise, volunteerism	N/A	Ongoing	

**Visitor Services Annual Partnership Planning - Fiscal Year (2020)**

Name of Partnership	Type of Partnership (Academia, Non-profit, Agency, etc.)	Agreement Type (Grant, Challenge Cost Share, Cooperative, MOU, Donation, Programmatic , etc.)	Partnership's Goal for Refuge	Type of Contribution		Time Frame of Project	Comments
				In-kind (materials, labor)	Monetary		
Florida Wildlife Federation	Non-profit environmental organization	Non-formal partnership	Environmental education	Education expertise	N/A	Ongoing	
Friends of the Florida Panther Refuge	Non-profit environmental organization	MOU, Friends Partnership Agreement 2017	Environmental education, research	Environmental education, volunteerism	Human Dimension's Aid full salary, Open House, As needed	Ongoing	
Illinois College	Academia	MOU	Research	Research, labor, volunteerism	N/A	Ongoing	Orchid technicians, annually month of July
Naples Botanical Garden	Non-profit environmental organization	Non-formal partnership	Environmental education, research	Education and resource expertise	N/A/	Ongoing	
Naples Orchid Society	Non-profit environmental organization	Non-formal partnership	Environmental education, research	Research technician labor	N/A	Ongoing	
Naples Zoo at Caribbean Garden	Non-profit environmental organization	Non-formal partnership	Environmental education	Education expertise	N/A/	Ongoing	

**Visitor Services Annual Partnership Planning - Fiscal Year (2020)**

Name of Partnership	Type of Partnership (Academia, Non-profit, Agency, etc.)	Agreement Type (Grant, Challenge Cost Share, Cooperative, MOU, Donation, Programmatic, etc.)	Partnership's Goal for Refuge	Type of Contribution		Time Frame of Project	Comments
				In-kind (materials, labor)	Monetary		
Paradise Coast Convention and Visitor's Bureau	County agency	Non-formal partnership	Environmental education		N/A	Ongoing	
Sierra Club Florida Chapter	Non-profit environmental organization	Non-formal partnership	Environmental education	Education expertise	N/A	Ongoing	
Sportsmen Trust Group (FWC, NWRA, & multi Florida Sportsmen organizations)	Ad-hoc	Non-formal partnership	Public Access	General Public Interests	N/A	Ongoing	
Southwest Florida Cooperative Invasive Species Management Area	Non-profit environmental organization	Non-formal partnership	Environmental education	Education, volunteerism	N/A	Ongoing	
South Florida Water Management District	State agency	Non-formal partnership	Regulation, research		N/A	Ongoing	
University of Florida	Academia	MOU	Environmental education, research	Educational and research expertise	N/A	Ongoing	

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## Section B. Environmental Assessment

### Florida Panther National Wildlife Refuge Environmental Assessment for 2021 Visitor Services Plan and Turkey Hunting and Sport Fishing Plan

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# Environmental Assessment for the Florida Panther National Wildlife Refuge Visitor Service Plan and Turkey Hunting and Sport Fishing Plan

## Introduction, Purpose and Need

The Service is developing a Visitor Services Plan (VSP), which details proposed goals and objectives for “priority” or wildlife-dependent recreational opportunities and associated uses. This Environmental Assessment (EA) is being prepared to evaluate the effects associated with implementing activities that are being planned in the VSP for the Florida Panther National Wildlife Refuge (FPNWR). The VSP outlines the future management of compatible outdoor recreation opportunities for the FPNWR, and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and USFWS (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

### *Background:*

National Wildlife Refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is to:

*“administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans”*

The NWRSA mandates the Secretary of the Interior in administering the National Wildlife Refuge System to (16 U.S.C. 668dd(a)(4)) to:

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out, except that if a conflict exists between the purposes of a refuge and the mission of the System, the conflict shall be resolved in a manner that first protects the purposes of the refuge, and, to the extent practicable, that also achieves the mission of the System;

- 
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the NWRS are located;
  - Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
  - Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses;
  - Ensure that priority general public uses of the System receive enhanced consideration over other general public uses in planning and management within the System; and
  - Provide increased opportunities for families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities, such as fishing and hunting.

The Florida panther (*Puma concolor cougar*) first received Federal protection in 1973, when it was classified as endangered under the provisions of the Endangered Species Act. In 1976, the Service appointed a recovery team to prepare and assist in coordinating the implementation of a recovery plan. This initial plan was approved by the Service in 1981. Concurrently, the Florida Game and Fresh Water Fish Commission (now Florida Fish and Wildlife Conservation Commission) initiated several important baseline studies identified as high priority needs in the recovery plan. The initial panther Recovery Plan identified the importance of the acquisition and protection of the Fakahatchee Strand and surrounding areas. In 1985, the Service published an environmental assessment entitled Fakahatchee Strand: A Florida Panther Habitat Preservation Proposal. This document identified 88,000 acres of important panther habitat in Collier County surrounding the Fakahatchee Strand State Preserve. Proposed protection strategies included third party conservation easements and fee title acquisition of various tracts by State and Federal agencies. Approximately 30,000 acres of the northern Fakahatchee Strand was proposed for inclusion in the National Wildlife Refuge System.

Lands identified for acquisition to create the FPNWR were among over 1.3 million acres of southwest Florida land that had been purchased by self-made New York millionaire Barron Collier in the early 1920's. The Florida Legislature created 1.3 million acre Collier County in 1923, enticed by Barron Collier 's offer to construct the 76 mile segment of the Tamiami Trail (U.S. 41) which will pass through it. Southwest Florida was a trackless wilderness which slowly prospered under his guidance. County population at the time of his death in 1939 was less than 6000 residents.

The Service purchased the initial 23,380 acres to establish FPNWR from the Colliers for \$10.3 million in June 1989. The Service received title to additional Collier family owned lands during 1997 via the Arizona-Florida Land Exchange Act of 1988, along with 594 acres previously owned by the Florida Department of Transportation. As of 2019, total acreage of FPNWR is approximately 26,609 acres (Figure 1).

Florida Panther National Wildlife Refuge was administratively established in 1989 under the Endangered Species Act and the Fish and Wildlife Act in order to conserve fish, wildlife and plants which are listed as threatened and/or endangered, and for the development, advancement, management, conservation and protection of fish and wildlife resources. Establishment of the FPNWR was originally authorized during 1985 under the authority of the Fish and Wildlife Act of 1956 and the Endangered Species Act of 1973. The primary purpose of establishing the FPNWR was to protect the Florida panther and its habitat, and was based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand Environmental Assessment

(USFWS 1985). Located in the core of occupied panther territory, the FPNWR ensures that important Florida panther habitat and wildlife corridors are protected in perpetuity.

Until recently, the Florida panther was considered to be a distinct subspecies of puma (*Puma concolor*), and recognized as *Puma concolor coryi*. Over the years, thirty-two subspecies of *Puma* have been described (Young & Goldman 1946 and Kitchner et al. 2017). On the basis of a phylogeographical study completed by Culver et al. 2000, six subspecies were suggested (Culver et al. 2000 and Kitchner et al. 2017). However, based on a more recent study of mtDNA completed by Caragiulo et al. 2014, only two subspecies are tentatively recognized, which includes *Puma concolor concolor* in South America and *Puma concolor cougar* in North and Central America (Kitchner et al. 2017).

#### **Proposed Action:**

The refuge is proposing to open public access to new and expanded public uses detailed in the VSP. The extent and magnitude of these public use opportunities are intended to be managed such that they result in no or insignificant negative effects to the natural and human communities occurring within and adjacent to the FPNWR. The priority wildlife dependent recreation and other outdoor recreation activities proposed in the VSP are listed in Table 1.

**Table 1: Public use opportunities outlined in the proposed VSP**

Use	Priority or Wildlife Dependent?
Wildlife observation	Yes
Photography	Yes
Environmental education	Yes
Interpretation	Yes
Fishing	Yes
Turkey hunting	Yes
Scientific research	No
Commercial recording	No
Instructor-led small group activities	No
Camping	No
Bicycling (non-motorized)*	No
Off road vehicle use for limited activities	No
Commercial Tours	No
Unmanned Aircraft (drones)	No

\* Secretary Order 3376 Sec 4 b) E-bikes shall be allowed where other types of bicycles are allowed; and c) E-bikes shall not be allowed where other types of bicycles are prohibited.

If found compatible with the Refuge's purposes, the priority uses will continue to be allowed until 2036. All other listed non-priority uses will need to be re-evaluated in 2031.

Proposed actions are often iterative and evolve during the planning process as the agency refines its proposal and learns more from the public, Tribes, and other agencies. Therefore, the final proposed action may be different from the original. The final decision on the proposed action will be made at the conclusion of the public comment period for the EA.

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### **Purpose and Need:**

NEPA (1970) is an environmental law that promotes the enhancement of the environment. NEPA requires that all executive federal agencies analyze the potential environmental effects of proposed actions through planning documents such as EAs.

This EA evaluates proposed uses, while ensuring that these uses meet the mission of the NWRS, the purposes of the FPNWR, the vision and goals identified in the FPNWR Comprehensive Conservation Plan (CCP), other mandates, and special designations of the FPNWR and/or affecting the Refuge.

The purpose of developing the VSP/EA is to ensure that only appropriate and compatible visitor uses occur on the Refuge, and that these uses: 1) Do not detract from or materially interfere with the purposes of the FPNWR; 2) Uses contribute to the purposes and mission of the NWRS; 3) Uses are in alignment with the 2000 Comprehensive Conservation Plan (CCP) for the FPNWR; and 4) The environmental impacts of the proposed uses are minimized as much as possible.

The proposed projects of the VSP reflect basic visitor services/recreational needs identified by Service staff, the public, and the planning team members. These projects also address the identified priority issues on the FPNWR, and serve the vision and goals developed for FPNWR in the 2000 CCP.

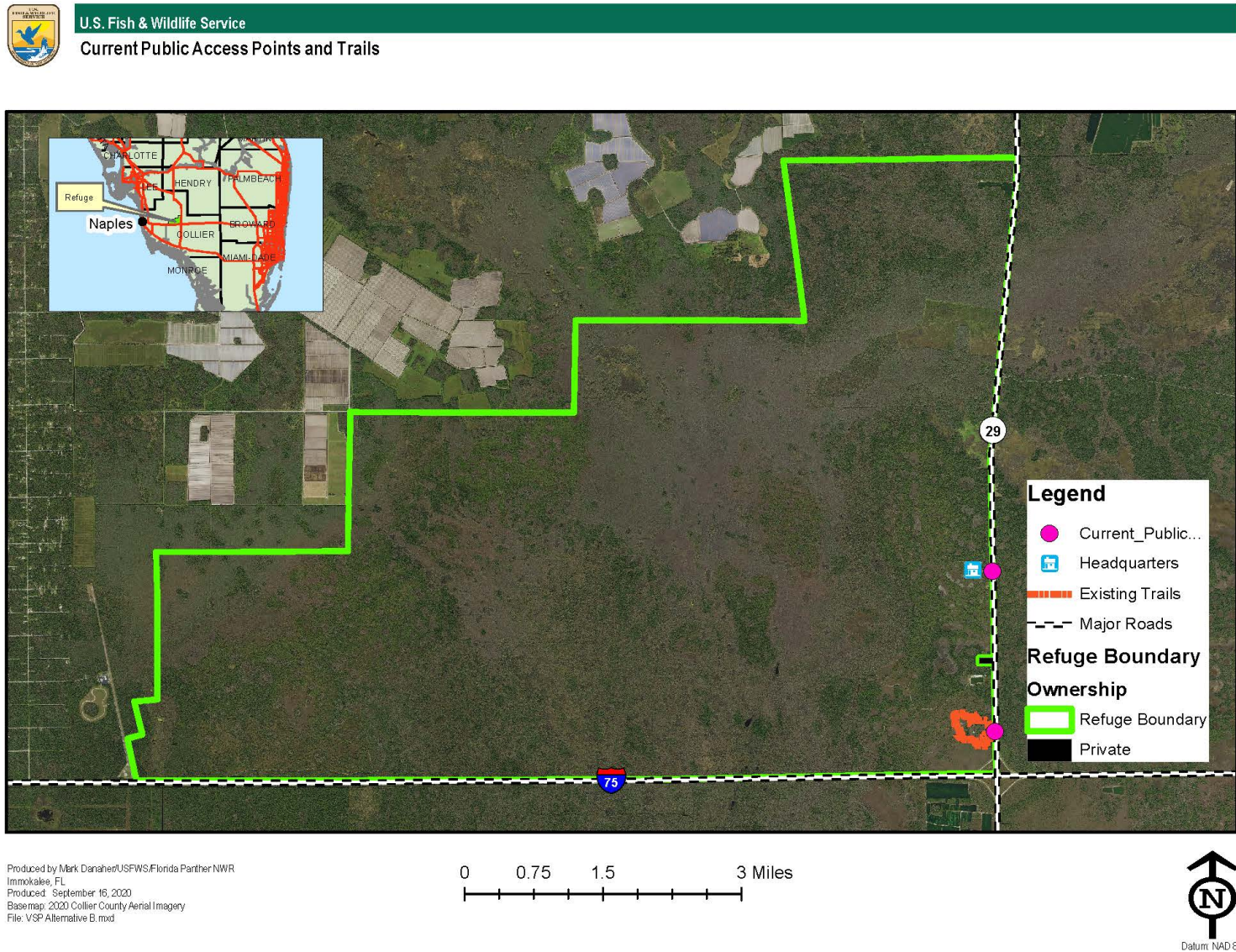
### **Alternatives Considered**

Two alternatives were analyzed in this assessment, the no action alternative and the proposed action alternative.

#### **Alternative A – [No Action Alternative]:**

NEPA requires that proposed actions are compared to the baseline or “No Action Alternative”. Under the No Action Alternative, public use opportunities on the Refuge will be limited to uses and levels covered under the 2000 CCP (USFWS 2000).

**Figure 9. Current Public Uses**



The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

## **Alternative B – [Preferred Action Alternative]:**

The proposed action is to expand recreational opportunities available to the public on refuge lands. The VSP includes CDs that, if approved, will have 10-and 15-year timeframes for non-priority and priority uses (Table 1). This EA evaluates the environmental effects of the following 14 proposed uses under the mandatory expiration dates shown in Table 1: wildlife observations, photography, environmental education, interpretations, fishing, turkey hunting, scientific research, commercial recording, instructor-led small group activities, camping, non-motorized bicycling, off road vehicle use (ORV) for hunting, commercial tours, and unmanned aircraft (drones).

Under the Proposed Action Alternative, visitor services and public recreational activities will be enhanced on the FPNWR, while also meeting the goals and objectives of the 2000 CCP. These enhancements will include the following projects:

1. Expanding opportunities for wildlife observation and photography
  - a. Constructing a public access point, trail/boardwalk, informational kiosk, vault style bathroom, and wildlife viewing structure within Unit 44 pending Section 106 archeological consultation.
  - b. Establishing new year-round and seasonal hiking trails. These new trails will include: 1) A year-round non-motorized trail that originates at refuge Headquarters, and traverses along 2 +/- miles of existing woods roads. This trail will also include interpretive messaging and an observation tower/photo blind to provide wildlife observation, photography, and interpretive opportunities; Establish a year-round non-motorized trail loop at Pistol Pond (+/- 3.5 miles), which also traverses along existing woods roads; 3) Allow seasonal non-motorized public use of approximately 20 miles of existing fire breaks/woods roads on the east side of FPNWR from December to March; and 4) Develop an approximately .5 mile out-and-back hiking trail with observation overlook at northern boundary of Unit 44 to provide wildlife observation and photography opportunities.
  - c. Construct benches along the edges of the Conservation Club site.
  - d. Allowing non-motorized bicycling and e-bikes
2. Expanding opportunities for environmental education and interpretation
  - a. Replacing current headquarters and biological laboratory with a permanent building that will include a visitor contact station, classrooms, auditorium, and educational exhibits.
  - b. Installation of electricity at McBride's Cabin through solar panels.
  - c. Update and install new kiosks.
  - d. Develop a traveling interpretive display
  - e. Allowing camping for small youth groups (e.g., Scouts and Outward Bound).
  - f. Open opportunities for interpretive biking, hiking, or swamp buggy tours on designated trails.
  - g. Allowing up to two instructor-led small group activities monthly, including but not limited to astronomy club night sky viewing, yoga and meditation, and field skills workshops.
3. Opening the refuge to turkey hunting.
  - a. Allowing limited entry turkey hunts on 25,560 acres of the Refuge.
  - b. Allowing ORV use during hunts only.
  - c. Allow camping for 1 weekend family hunt and small your scouting groups.
4. Opening the Refuge to fishing.
  - a. Allowing fishing on Pistol Pond

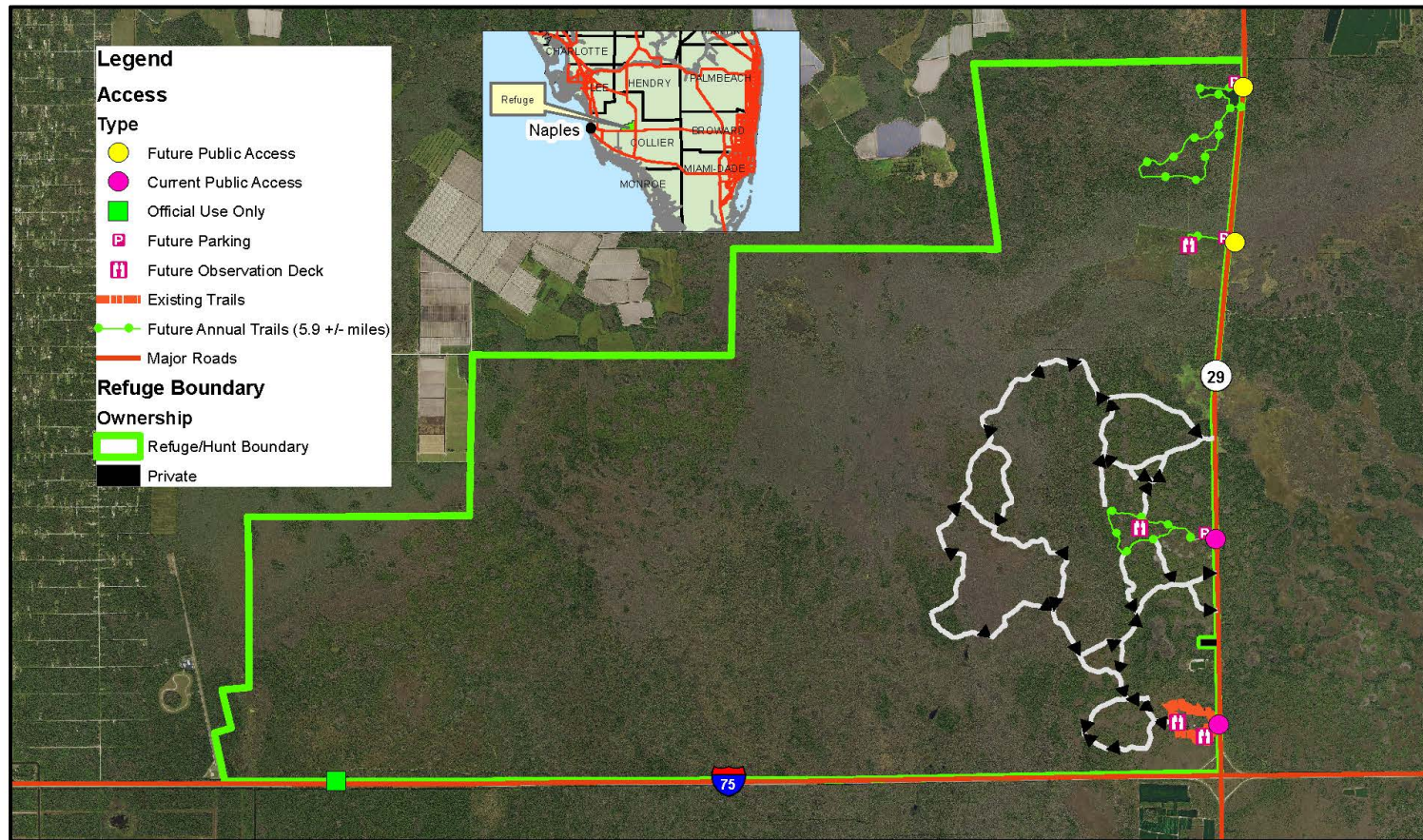
- b. Constructing a parking lot with wildlife diversion fencing, and access gates, informational kiosks, and vault style bathroom.
  - c. Constructing two ADA fishing piers Construction of up to four ~20 ft x 50 ft. fishing/observation platforms.
  - c. Restoring Pistol Pond littoral zones to improve fish and wildlife habitat.
  - d. Host youth fishing and invasive species roundup events.
- 5. Expand partnerships and volunteer program
  - a. Constructing vehicle camper pads for volunteer work campers and researchers.
  - b. Collaborate with FWC and other partners to host Outdoor Skills workshops.
- 6. Establishing a recreation fee program on the Refuge.
- 7. Exploring commercial use activities
  - a. Allow unmanned aerial vehicle/drone use for research and commercial photography.
  - b. Explore partnerships for commercially guided specialty hunts or to facilitate ecotourism with interpretive tours.
  - c. Allowing only commercial video recording on the Refuge that features the refuge mission purpose and for environmental education purposes that tie back to the refuge mission and objectives.

**Figure 10. Non-motorized Trails and Access Points**



U.S. Fish & Wildlife Service

Current and Proposed Future Non-motorized Trails & Access Points



Produced by Mark Danaher/USFWS/Florida Panther NWR  
 Immokalee, FL  
 Produced: September 16, 2020  
 Basemap: 2020 Collier County Aerial Imagery  
 File: VSP Alternative B.mxd

0 0.75 1.5 3 Miles



Datum: NAD 83

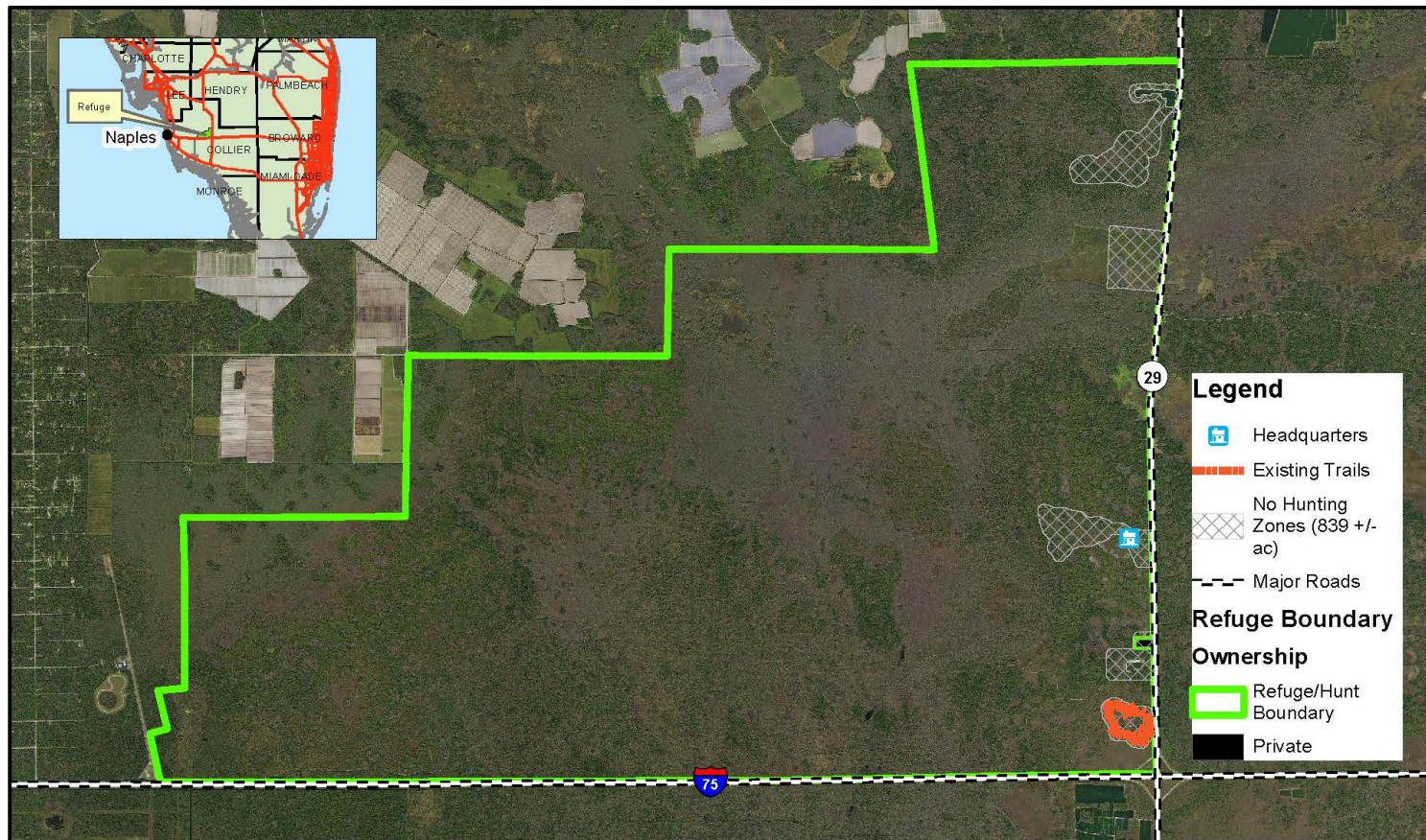
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This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

**Figure 11. Hunting and No Hunting Zones**



**U.S. Fish & Wildlife Service**  
**Proposed Hunting and No Hunting Zones**



Produced by Mark Danaher/USFWS/Florida Panther NWR  
 Immokalee, FL  
 Produced: September 16, 2020  
 Basemap: 2020 Collier County Aerial Imagery  
 File: VSP Alternative B.mxd

0 0.75 1.5 3 Miles



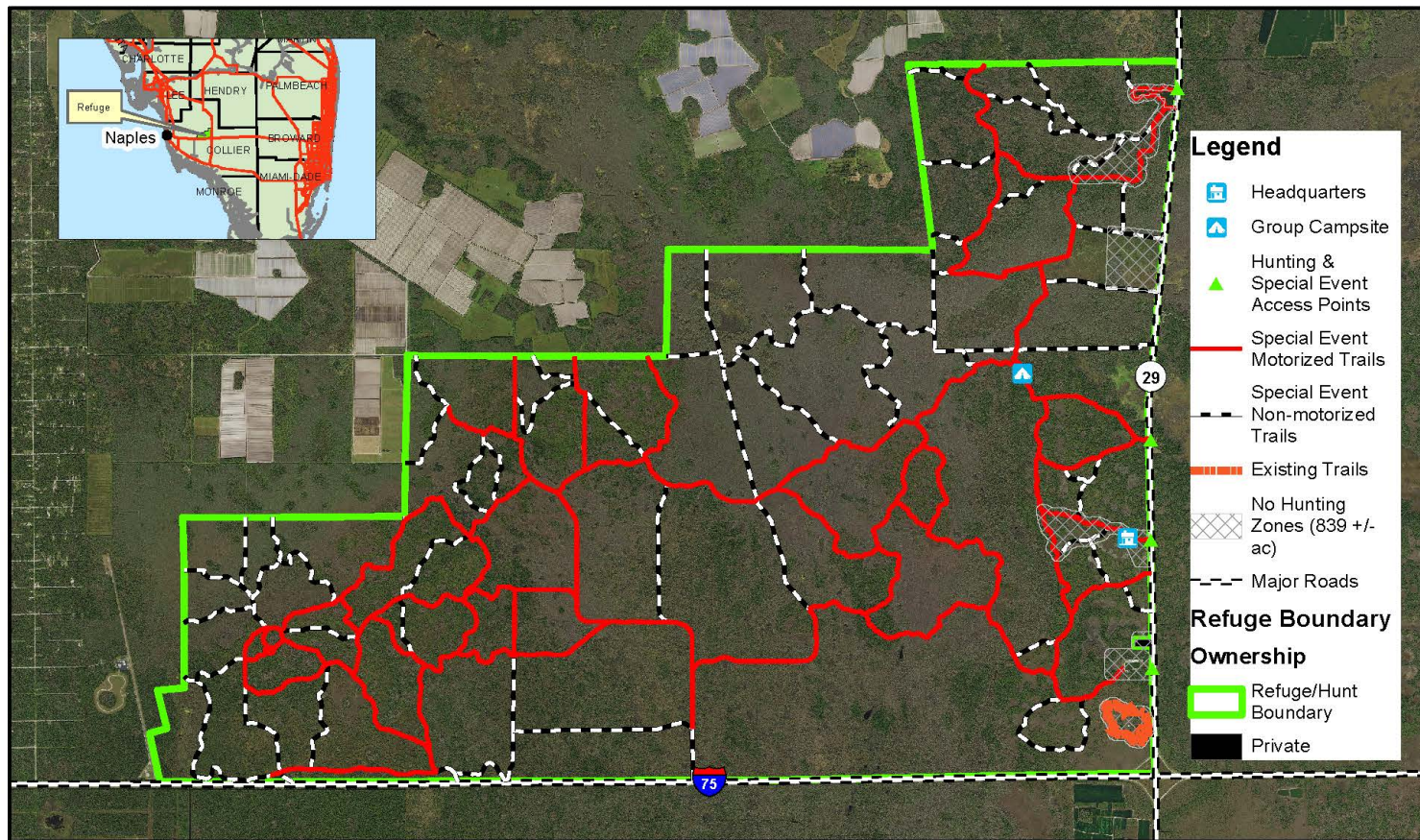
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 This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

**Figure 12 Hunt and Special Events Trails and Access Points**



U.S. Fish & Wildlife Service

Proposed Hunt and Special Event Trails & Access Points

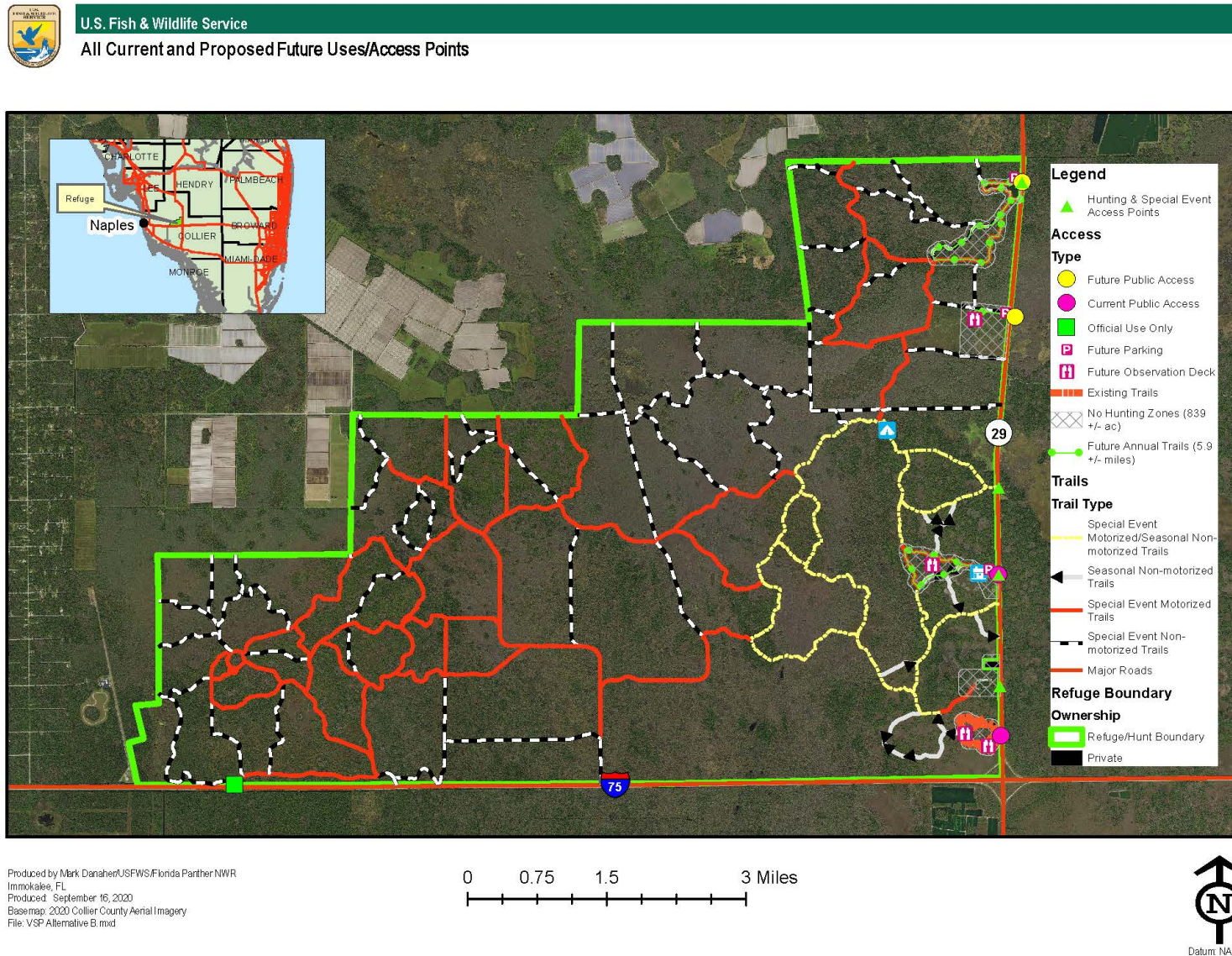


Produced by Mark Danaher/USFWS/Florida Panther NWR  
 Immokalee, FL  
 Produced September 16, 2020  
 Base map: 2020 Collier County Aerial Imagery  
 File: VSP Alternative B.mxd

The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

**Figure 13. Uses/Access Points**



The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

Figure 14. Fishing Map



U.S. Fish & Wildlife Service

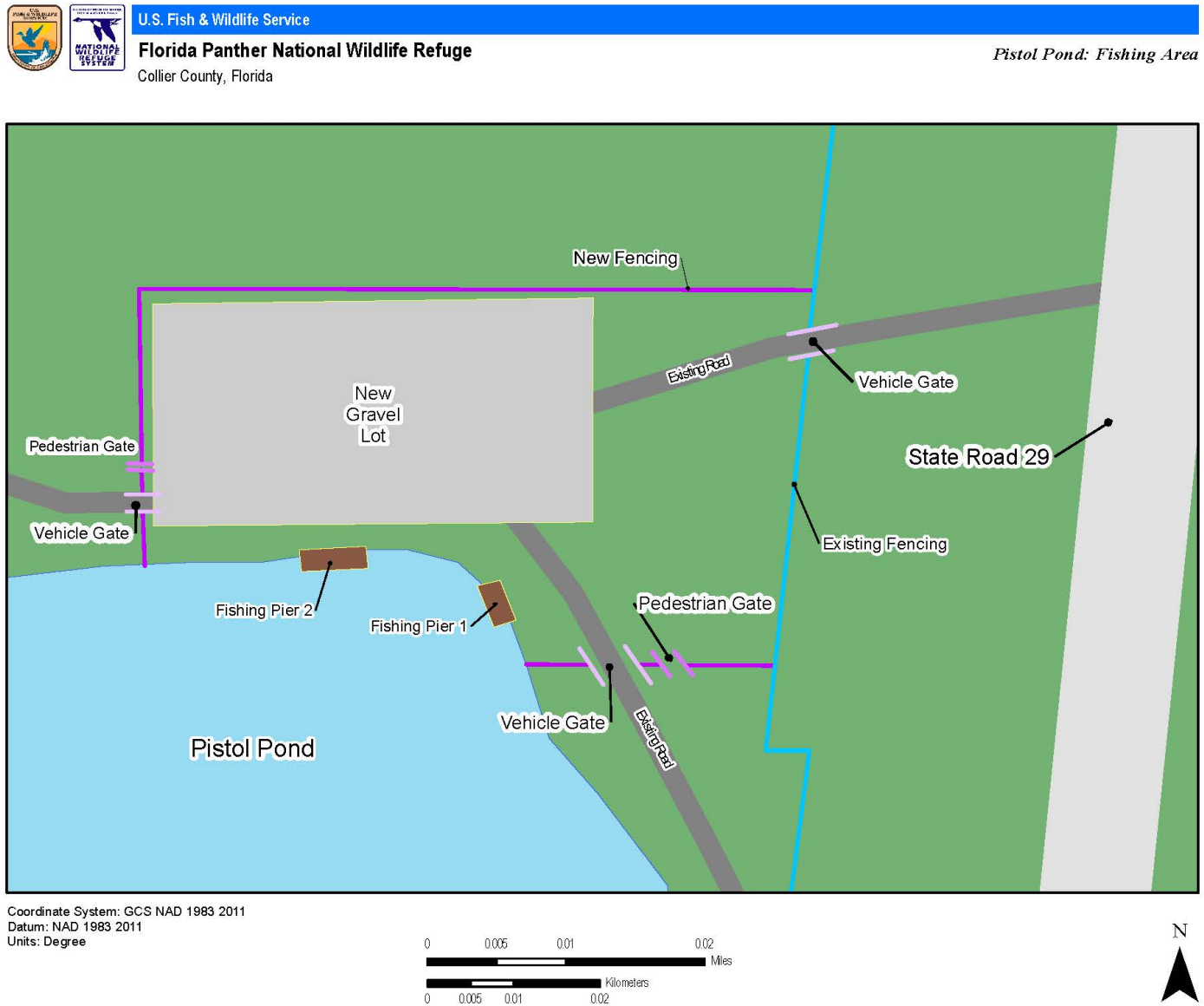
**Florida Panther National Wildlife Refuge**

Collier County, Florida

*Pistol Pond: Overview Map*



**Figure 15. Facilities Map for Fishing**



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## **Alternative(s) Considered, But Dismissed From Further Consideration**

Hunting of white-tailed deer was considered in the original CCP in March of 2000, at which time deer hunting was determined not to be compatible with the purpose of the refuge based on the best information available at the time, including deer population densities on the refuge and the availability of existing and proposed public lands for deer hunting. The Service made this decision in favor of the panther given the mandate of the refuge and the known status and distribution of the panther population in 2000.

In general, we do not believe that panther recovery efforts conflict with deer hunting and outdoor recreational activities when appropriately managed and minimized. Evidence has shown that the Florida panther population has continued to increase across south Florida while deer hunting and other recreations activities have continued and or expanded as public uses. Deer hunting has even expanded into new public lands within the Florida Panther's range within the last two decades.

A 2014 study in the Big Cypress National Preserve, Florida Panther NWR, and Everglades National Park concluded: "In Bear Island, an area with designated ORV trails, we found that variations in panther distances to trails appear to be driven by hydrology rather than hunter ORV use" (McCarthy et al 2014). The best available science related to the effects of deer hunting on the Florida panther suggest there were effects on panther habitat selection in areas of high hunter activity, but no effect on the distribution near ORV trails (McCarthy et. al 2015). These impacts are temporary, and can be minimized with effective hunt management planning and dispersing hunter density.

We support managed deer hunting within the Florida panther's range, as recent results from the largest white-tailed deer study in the history of Florida (i.e. South Florida Deer Study) estimated that hunting only accounted for approximately 1% of deer mortalities, as opposed to approximately 72% resulting from panther predation (Cherry et al. 2019). Only one of 263 white-tailed deer with active GPS collars was legally harvested by a hunter during the South Florida Deer Study (January 2015-December 2017), and two deer appeared to have been harvested illegally. While the south Florida Deer Study concluded that hunt harvest of white-tailed deer has a negligible effect on the deer population (Cherry et al. 2020), the refuge has a different mandate than the aforementioned public lands, and was specifically established to provide habitat for the recovery of the Florida panther.

However, The NWRS Improvement Act defines a compatible use as "A proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge." Given that the refuge was established for the purpose of recovering the Florida panther, significant steps toward recovery goals will need to be demonstrated before hunting of the primary prey of the Florida panther could happen on the refuge. When recovery goals or interim recovery goals have reached, we can revisit the CCP and the current hunt and fish plan to include a regulated and limited in intensity deer hunt on the refuge.

## **Affected Environment and Environmental Consequences**

A detailed description of the FPNWR's affected environment can be found in the 2000 Comprehensive Conservation Plan (USFWS 2000), and in the VSP (attached).

### **EFFECTS COMMON TO ALL ALTERNATIVES**

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In terms of allowing any public use to occur on the FPNWR, it is of utmost importance to ensure that impacts to wildlife and habitats are maintained within acceptable limits, and potential conflicts between user groups are minimized. There are some situations that could be harmful to plant and animal life and/or conflict with refuge management and research activities. As such, some cases will warrant refuge closures or the development of use restrictions in order to minimize impacts and conflicts. Examples of these situations include, but are not limited to, protection of trust and listed species (flora and fauna), protection of soils, hydrology and vegetation, protection of nesting/denning habitat, and conflict minimization with other refuge management and research activities. Proposed uses under the VSP standards of outreach; volunteers, Friends, partnerships; and recreational fees will have no impact to only negligible impacts.

### **Environmental Justice**

Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” was signed by President Bill Clinton on February 11, 1994, to focus Federal attention on the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities. The Order directed Federal agencies to develop environmental justice strategies to aid in identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. The Order is also intended to promote nondiscrimination in Federal programs substantially affecting human health and the environment, and to provide minority and low-income communities with access to public information and participation in matters relating to human health or the environment.

Neither of the management alternatives described in this environmental assessment will disproportionately place any adverse environmental, economic, social, or health impacts on minority and low-income populations. Implementation of the proposed alternative is anticipated to provide a benefit to the residents and local businesses that reside in the surrounding communities.

## **AFFECTED NATURAL RESOURCES AND ANTICIPATED IMPACTS**

### **Wild Turkey**

#### ***Description of Affected Resource***

Most of the southern half of peninsular Florida is occupied by the Osceola wild turkey (*Meleagris gallopavo osceola*). Wild turkeys have increased in Florida since the 1970s due to habitat protection and management efforts (FWC 2016). This game species has limited home ranges, and local hunting efforts are unlikely to affect regional populations, although spring turkey hunting can disrupt nesting (Vangilder and Kurzejeski 1995). Through the use of quota hunts, a sustainable harvest is expected.

A limited wild turkey hunt will be held during three weekends of the Florida Spring Turkey Season, and only one bearded turkey could be harvested seasonally by permitted hunters. The refuge hunt will adopt FWC regulations at nearby State Wildlife Management Areas, and also add federal regulations specific to the refuge. During the 2018-2019 season, 216 turkey were taken from WMAs in the South and South-west regions (FWC 2019). Currently, three hunt weekends (i.e., two limited/quota turkey hunts and one limited family turkey hunt weekend) are being proposed. Based on observed results of these three hunt weekends, permitted turkey hunts may be expanded in the future to align with the State of Florida’s spring season, which will likely only require updates in the Code of Federal Regulations. A Family Quota Permit is defined by FWC as a type of limited entry permit that is required for an adult and up to two youths age eight to fifteen to participate. The following information provides further details on specific information regarding these permits. Up to twenty-five permits on each quota weekend hunt (i.e., fifty total permits) and up to ten family groups

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(i.e., twenty total permits) will be issued annually. However, Florida Panther NWR will monitor the turkey population and hunter access to allow for adaptive management in the number of permits issued annually. Every hunter (including out-of-state hunters) must comply with current FWC Hunter Education Certification law. Proof of certification, exemption, or possession of an apprentice license will be required to be carried by the hunter while in the field.

The bag limit will be one bearded turkey per hunt permit. Baiting is prohibited. Shooting turkeys in roost trees is prohibited. Based on FWC reported hunter success rates for the 2019 Special-Opportunity Turkey Hunts, average hunter days per harvested turkey was 8.1 days (FWC 2019). The wild turkey is likely one of the most difficult game animals to hunt in the Southeast, and has low harvest success rates.

Legal weapons only include bows, crossbows, PCP air guns propelling a bolt or arrow, and shotguns using #2 or smaller shot size.

The refuge hunt area will be accessed through designated access points off State Road (SR) 29. General public use of the hunting area will be closed during the weekend hunts. Access to the entire refuge except for the areas detailed in Section III.B. of the hunt plan, will be open to turkey hunting. Hunters will be provided maps showing trails and roads, access points and designated parking areas for unloading off-road vehicles.

The use of ORVs (a 4-wheeled all-terrain vehicle or recreational off-highway vehicle including Swamp Buggies, ATVs, and UTVs) is permitted on designated trails, when operated by individuals with a valid state driver's license, a valid hunting license and in possession of all three required permits (as outlined in Section III. C. of the hunt plan). Pre-hunt scouting on foot or bicycle will be allowed during daylight hours throughout the spring turkey season for permitted hunters only. The use of ORVs, tracked vehicles, vessels (except canoes or kayaks) or unlicensed and unregistered motorcycles is prohibited, except ORVs may be operated only by individuals participating in the limited entry/quota hunt. ORVs may be operated by participants in the limited entry/quota hunt and operated only on designate roads/trails/firebreaks 1 week prior to the individual's permitted hunt.

Licensed and permitted mobility-impaired hunters will be welcome during the Refuge Spring Turkey Hunts. Hunters requiring special provisions will need to contact refuge officials for additional details, and refuge officials will work with these hunters prior to the start of the spring turkey season to arrange for appropriate special provisions. Examples of special provisions may include the opening/closure of gated roads to allow mobility-impaired hunters to drive a vehicle further into the hunt area, and/or be afforded assistance by a non-hunting adult who is not otherwise authorized to participate in the hunt. If a public hunt participant informs refuge staff in advance that he/she has special needs or limitations, every reasonable effort will be made to address those concerns so the person may fully participate and have an enjoyable experience.

### ***Environmental Trends and Planned Actions Description***

Refuge management activities can be accomplished without conflicting with hunting activities via administratively closed areas, timing of hunts, and methods of hunt. Non-hunted resident wildlife will include resident birds, small mammals such as voles, moles, mice, shrews, and bats; reptiles and amphibians such as snakes, turtles, salamanders, and invertebrates such as butterflies, moths, insects and spiders. Due to limited home ranges of these animals, regional impacts will not occur. Locally, there may be temporary displacement of resident birds. Disturbance of many small mammals, reptiles, or amphibians will be minimal due inactivity during hunt seasons. The Refuge anticipates no measurable impacts to resident non-hunted wildlife populations locally or regionally.

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Due to the short season proposed for spring turkey hunting, and the extended home range of the Florida Panther, no impacts to the panther population are anticipated.

Regular off-road vehicle operation through sawgrass and wet prairie habitats creates trails. Trails are open areas where native vegetation is more sparse than surrounding areas due to physical disturbance and soil erosion (Pernas 1995; Duever et al. 1981; Duever et al. 1986).

There is a concern about the effects of the bioavailability of spent lead ammunition (bullets) and sinkers on the environment, endangered and threatened species, birds (especially raptors), humans and other mammals, and other fish and wildlife susceptible to biomagnification. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure (Kelly et al. 2011). Many hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. Avian predators and scavengers can be susceptible to lead poisoning when they ingest lead fragments or pellets in the tissues of animals killed or wounded by lead ammunition. Lead poison may weaken raptors and increase mortality rate by leaving them unable to hunt or more susceptible to vehicles or power line accidents (Kramer and Redig 1997). In a study of bald eagles and golden eagles admitted to the Raptor Rehabilitation Program at the College of Veterinary Medicine at Washington State University from 1991 to 2008, it was found that 48% of bald eagles and 62% of golden eagles tested had blood lead levels considered toxic by current standards. Of the bald and golden eagles with toxic lead levels, 91% (bald) and 58% (golden) were admitted to the rehabilitation facility after the end of the general deer and elk hunting seasons in December (Stauber 2010).

### ***Impacts on Affected Resource***

#### **Alternative A**

Estimated Hunter Numbers: 0

Estimated Take: 0

A turkey hunt will not be implemented. Opportunities to create additional outdoor recreation experiences by adding new access will be lost. In addition, the Refuge's ability to connect with certain segments of the public will potentially be diminished since hunting for a popular game species will not be permitted. Hunters will pursue hunting opportunities off-refuge and thus the Refuge's ability to reach those members of the public and promote natural resources conservation, environmental education and natural resources stewardship may be more limited.

#### **Alternative B**

Estimated Hunter Numbers: < 70

Estimated Take: Approximately 8

Although hunting causes direct mortality and temporary disturbance to wildlife, harvesting individuals from populations within the carrying capacity of existing habitat ensures long-term health and survival of the species. Hunting, and its associated activities, can result in positive or negative impacts to wildlife and other Refuge resources. With proper management and monitoring, turkey hunting (as proposed for the Refuge) is expected to cause only negligible to minor negative impacts. Even if permitted hunts were to be expanded in the future, and occurred throughout the spring turkey season, impacts to federal trust species and the environment are anticipated to be negligible to minor. A positive effect of allowing limited turkey hunting will be the provision of additional wildlife-dependent recreational opportunities, a better appreciation and more complete understanding of the wildlife and habitats associated with the Refuge, and an opportunity to utilize a sustainable, renewable resource. This can translate into more widespread and stronger support for the Refuge, National Wildlife Refuge System and the USFWS, as well as increased public assistance with Refuge

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management activities. Additionally, the proposed turkey hunts provide unique hunting/outdoor opportunities for youths and their families, which are unlike any other public hunting opportunity in south Florida. It is estimated that hunters will take less than eight turkeys each season on the Refuge. The local turkey population is expected to rebound seasonally, with no significant effects anticipated. Range-wide, this slight increase in take is not expected to have a cumulative effect on the species. While concerns do exist regarding the bioavailability of spent lead ammunition, lead associated with the proposed hunt will not be anticipated to have significant impacts for turkey. Overall, the adverse effects of hunting on wild turkey is expected to be negligible.

## **Fish**

### ***Description of Affected Resource***

Fishing has not previously been allowed at the Refuge. In accordance with existing State fishing laws and regulation, the proposed hunt and fish plan proposes to allow fishing at a 19-acre former quarry site known as Pistol Pond. Fishing at Pistol pond will be open year round sunrise to sunset and accessible through a gate in the DOT wildlife protection fencing along SR29. A parking area on the northeast side of the pond will facilitate access to up to four fishing platforms and bank fishing along the perimeter of the pond. Fishing regulations will align with current State regulations for species-specific requirements for freshwater fishing licenses and freshwater bag and length limits. Only attended hook and line fishing will be permitted in the harvest of fish species. The service is currently conducting a section 106 archeological consultation to determine feasibility of providing necessary infrastructure at pistol pond.

Both native and exotic species are available in Pistol pond as catchable creel based on previous sampling. Native species include bluegill (*Lepomis macrochirus*), largemouth bass (*Micropterus salmoides*), redear sunfish (*Lepomis microlophus*), warmouth (*Lepomis gulosus*), and brown bullhead (*Ameiurus nebulosus*). Exotic species include Mayan cichlid (*Cichlasoma urophthlmus*), black acara (*Cichlasoma bimaculatum*), oscar (*Astronotus ocellatus*), and spotted tilapia (*Tilapia mariae*). Prior sampling of the some of the native species from Pistol Pond has revealed elevated mercury contamination in their flesh. As such, the refuge-fishing brochure will reference checking the FWC fish consumption advisory guidance in the Florida freshwater fishing guide.

### ***Environmental Trends and Planned Actions Description***

The proposed use is not likely to adversely affect fish and frog populations. Fish harvest will occasionally occur; however, most anglers generally practice catch and release. Recreation participants are required to adhere to all FWC fishing regulations except where Refuge-specific regulations have been set. These regulations are designed to protect species populations from the pressures of fishing by the public.

This use should not result in impacts that adversely affect the purposes for which the Refuge was established or alter any existing or proposed uses as stipulated in the Comprehensive Conservation Plan (CCP). Impacts s are not anticipated on wildlife, their behaviors, or their habitat. Travel will occur primarily within and adjacent to ruderal communities that have already been significantly impacted by anthropogenic disturbances for decades. A slight increase in gas emissions may occur due to the increase in vehicular traffic. However, no significant biological or ecological impacts are anticipated.

There is a concern about the effects of the bioavailability of spent lead ammunition (bullets) and sinkers on the environment, endangered and threatened species, birds (especially raptors), humans and other mammals, and other fish and wildlife susceptible to biomagnification. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure (Kelly

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et al. 2011). Many hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. Avian predators and scavengers can be susceptible to lead poisoning when they ingest lead fragments or pellets in the tissues of animals killed or wounded by lead ammunition. Lead poison may weaken raptors and increase mortality rate by leaving them unable to hunt or more susceptible to vehicles or power line accidents (Kramer and Redig 1997). In a study of bald eagles and golden eagles admitted to the Raptor Rehabilitation Program at the College of Veterinary Medicine at Washington State University from 1991 to 2008, it was found that 48% of bald eagles and 62% of golden eagles tested had blood lead levels considered toxic by current standards. Of the bald and golden eagles with toxic lead levels, 91% (bald) and 58% (golden) were admitted to the rehabilitation facility after the end of the general deer and elk hunting seasons in December (Stauber 2010).

### ***Impacts on Affected Resource***

#### **Alternative A**

Opening the Refuge to fishing will not be implemented. Opportunities to create additional outdoor recreation experiences by adding new fishing access will be lost. In addition, the Refuge's ability to connect with certain segments of the public will potentially be diminished since fishing will not be permitted. Anglers will pursue these opportunities off-refuge and thus the Refuge's ability to reach those members of the public and promote natural resources conservation, environmental education and natural resources stewardship may be more limited.

#### **Alternative B**

The legal take of fish species will be in accordance with state-wide freshwater fishing regulations. Any adverse effects on fish populations are expected to be negligible, especially due to the fact that Pistol Pond is a manmade quarry pond, and is a closed system. Because it is a closed system, stocking of non-invasive fish species may occur in order to improve the fishery and recreational experience. All freshwater Florida game fish species are considered sufficiently numerous to allow their take according to regulation. Possible beneficial effects include the sale of State fishing licenses, which are used to further management efforts aimed at keeping fishable populations at sustainable levels, and allow more people to get outdoors and enjoy nature. Also, the creation of littoral zones prior to opening the pond to fishing will result in significant environmental benefits. Currently, there is only a small portion of the pond's perimeter that has a somewhat gentle sloping littoral zone. This portion was created several years ago, and is only approximately 110 feet long. The remaining perimeter of the pond consists of almost vertical banks, which are not only a safety hazard for the public, but also negatively impact native wildlife. Fishing and the additional proposed activities at Pistol Pond may result in short-term impacts to wildlife, vegetation, or soil, which could include temporary damage resulting from trampling of vegetation and disturbance to feeding or resting birds or other wildlife in the proximity. Casting may disturb some foraging/roosting birds as well as reptiles and small mammals, but is anticipated to result in insignificant effects. All environmental impacts resulting from fishing and associated projects for fishing at Pistol Pond are expected to be insignificant due to the fact that the project site is located on a previously significantly altered quarry site, no public vehicle access will be allowed to occur outside of the parking area.

When compared to motorboats, canoes and kayaks appear to have less disturbance effects on most wildlife species (DeLong 2002). People fishing at Pistol Pond are most likely to encounter reptiles (primarily alligators) and amphibians, but these encounters are not expected to negatively impact these fauna unless they are intentionally harassed by humans. Informational kiosks and other outreach information will be used to prevent and minimize negative impacts to wildlife and the environment. Fishing and other proposed public access opportunities may result in trash being left in

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the environment if users do not follow posted rules and respect the natural environment. Such trash could negatively impact wildlife (e.g., wildlife entanglement in fishing line) and result in unnecessary human-wildlife conflicts (e.g., black bears and raccoons). Occasionally, anglers may hook turtles, alligators or other species as accidental by-catch. The greatest potential risk to wildlife and aquatic species posed by fishing is discarded fishing line and other fishing litter (e.g., hooks), which can entangle wildlife and cause injury or death (Thompson 1969, Gregory 1991). The seven principles of “Leave No Trace” will be promoted at all public access locations. Should trash become a problem at any of the public access locations, these locations may be shut down temporarily or permanently. While concerns do exist regarding the bioavailability of lead tackle, lead associated with fishing will not be anticipated to have significant impacts for fish species.

With the exception of fishing line entanglement, hook injuries, and increases in litter, overall disturbance to wildlife on the Refuge by anglers and other users is expected to be commensurate with that caused by public users at the existing public hiking trails.

Restoration of the littoral zone around Pistol Pond will improve wildlife habitat, wildlife viewing opportunities and fishing access.

## **Wildlife and Aquatic Species**

### ***Description of Affected Resource***

The Florida Panther National Wildlife Refuge is known for its diversity and abundance of wildlife. A total of 126 breeding and non-breeding bird species have been identified; an additional 35 species are likely to occur on the refuge. Forty-six species of reptiles and amphibians are known to occur on the refuge, and another fifteen species are known to occur in close proximity to the refuge. Twenty-two species of mammals are known to occur on the refuge, and another eleven species are known to occur in close proximity to the refuge. A variety of fish species, representing 13 families, occurs in the area (USFWS 2000).

### ***Environmental Trends and Planned Actions Description***

The most important ecological threats and problems facing the FPNWR and surrounding natural areas are directly related to the rapidly growing human population and associated use and development of the landscape. From 2010 to 2070, the South Florida population is expected to grow 68% percent to 11.67 million, with the most dramatic growth occurring in Collier and Lee counties (Carr and Zwick 2016). Associated use and development of the landscape is likely to increase in intensity over the next several decades, leading to further habitat fragmentation and urban development, altered ecological processes, invasive species, and impacts from global climate change.

Climate change is one of the most compelling conservation challenges. Accelerated climate change will be expected to amplify current resource management challenges involving habitat fragmentation, degradation, and loss, as well as urbanization, invasive species, disease, parasites, and water management. As rising temperatures affect the dynamics of complex natural systems, the potential exists for mass for mass species extinctions and disruptions. Fortunately, the Service is in a unique position to help wildlife and ecosystems adapt.

According to NOAA and National Aeronautics and Space Administration (NASA) data, the Earth's average surface temperature has increased by about 1.2 to 1.4 degrees Fahrenheit (°F) since 1900 (U.S. Environmental Protection Agency, June 16, 2009). In January 2008, NOAA reported that seven of the eight warmest years on record have occurred since 2001, part of a rise in temperatures of more

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than 0.6 degrees Celsius (°C) (1°F) since 1900. Within the past three decades, the rate of warming in global temperatures has been approximately three times greater than the century scale trend (NOAA 2008). If greenhouse gases, primarily carbon dioxide, methane, and nitrous oxide, continue to increase, climate models predict that the average temperature at the Earth's surface could increase from 3.2 to 7.2°F above 1990 levels by the end of this century (U.S. Environmental Protection Agency, July 20, 2009).

The effects of climate change and global warming are anticipated to result in changes in weather and rainfall patterns, decreases in snow and ice cover, rising sea levels, and stressed ecosystems across the globe. For the southeastern United States and Gulf Coast, this could result in a variety of impacts, including increased loss of barrier islands and wetlands; increased risk of shoreline erosion and flooding due to sea level rise, storm surge, and extreme precipitation events; greater likelihood of warmer/drier summers and wetter/reduced winter cold; and alterations of ecosystems and habitats due to these changes in weather patterns.

Global warming, resulting in melting of glaciers and ice sheets, will cause sea levels to rise. NASA estimates that yearly, 50 billion tons of ice are melting from the Greenland ice sheet (National Aeronautics and Space Administration, July 20, 2000). NASA aerial surveys show that more than 11 cubic miles of ice are disappearing from the Greenland ice sheet annually (Krabill et al. 2000). New satellite measurements reveal that the Greenland and West Antarctic ice sheets are shedding about 125 billion tons of ice per year (National Aeronautics and Space Administration, August 12, 2009). Considering that land less than 10 meters above sea level contains two percent of the world's land surface, but 10 percent of its population, major impacts in the U.S. will be felt by large numbers of people living on the low-lying coastlands, particularly along the Gulf Coast. Worldwide measurements of sea level show a rise of about 0.17 meters (0.56 feet) during the twentieth century (National Aeronautics and Space Administration 2009).

The effects of rising sea levels are even more dramatic in Florida. Because of Florida's land subsidence, sea levels around South Florida have risen about 0.31meters (1.0 feet) since 1846 and it is still rising today, at a rate that is equivalent to 0.20 to 0.40 meters (0.67 to 1.33 feet) per century (Florida Oceans and Coastal Council 2010 and U.S. Environmental Protection Agency undated). That rate is 6 to 10 times faster than the average rate of sea level rise along the South Florida coast during the past 3,000 years. If the current trend continues without any additional global warming, the edge of the sea along the South Florida coast will climb another 7.6 centimeters (three inches) by 2025 and 25.4 centimeters (10 inches) by 2100. But global warming is expected to accelerate this sea level rise even faster. During the next 15 years, the sea is likely to rise 12.7 centimeters (five inches), rather than 7.6 centimeters (three inches) (U.S. Environmental Protection Agency undated). By 2100, the best available science indicates that sea-level rise could range between 20 inches to more than 3 feet (Florida Oceans and Coastal Council 2010). While these rising sea levels will not directly impact the Florida Panther NWR within the 15 year planning period, the indirect effects of human populations migrating away from the immediate coastline is a threat to refuge resources.

The IPCC estimates that 20-30 percent of plant and animal species will be at risk of extinction if temperatures climb more than 1.5° to 2.5°C (National Aeronautics and Space Administration 2009). Computer models suggest that the overall climate of Florida may warm, resulting in more frequent extremely hot summer days and a longer growing season (U.S. Environmental Protection Agency undated). A warmer climate could allow heat-loving exotic plant species, such as the invasive *Melaleuca*, *lygodium*, and cogon grass to expand their ranges. However, warmer winters lead to fewer frosts, consequently, tropical plants and trees that are vulnerable to cold temperatures may also benefit.

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Facing the climate change challenge requires working on a landscape level to integrate the Service efforts with partners from other federal, state and tribal agencies, conservation groups, academic institutions, private landowners and recreational users. Moving forward, the Service will engage partners in a dialogue about working together to apply our resources with the best science to ensure landscapes are resilient and capable of sustaining America's fish and wildlife for generations to come.

Some of the most challenging management issues that a rapidly changing climate presents are: the timing, location, and intensity of wildfires; changes in rain patterns; changes in access to water resources; altered hydrology in rivers and wetlands; increased frequency of extreme weather events; and rising sea levels. Further, climate change will amplify existing management challenges involving habitat fragmentation, urbanization, invasive species, disease, parasites, and water management; all of which require an emphasis on large areas with interconnected and ecologically functional habitats capable of sustaining many species rather than a single species or isolated remnant habitats.

Adaptation refers to the management actions the Service and our partners take to reduce the impacts of climate change on fish, wildlife, plants, and habitats. Adaptive response to climate change can be reactive or anticipatory. Mitigation is the human intervention to reduce the sources and/or enhance the sinks of greenhouse gases. The Service must demonstrate leadership using carbon sequestration, best practices in natural resource management, and facility, fleet, travel, and other management strategies to achieve carbon neutrality by 2020. Education involves creating an essential understanding among Service employees, our partners, and our constituents that climate change is real and happening now; climate change threatens fish and wildlife resources that we have come to value and are entrusted to protect. The Service and our partners need to develop achievable and effective goals and activities to address rapid, fundamental change in the natural world; and, perhaps most important, every member of the Service, regardless of the position, can do something meaningful to reduce the threats to fish and wildlife resources from climate change.

According to the Service's 2010 Climate Change Strategic Plan, The Service will follow six guiding principles in responding to climate change:

- We will continually evaluate our priorities and approaches, make difficult choices, take calculated risks and adapt to climate change.
- We will commit to a new spirit of coordination, collaboration and interdependence with others.
- We will reflect scientific excellence, professionalism, and integrity in all our work.
- We will emphasize the conservation of habitats within sustainable landscapes, applying our Strategic Habitat Conservation framework.
- We will assemble and use state-of-the-art technical capacity to meet the climate change challenge.
- We will be a leader in national and international efforts to address climate change. (USFWS, 2010)

The Service's Strategic Plan for Climate Change is a blueprint for action in a time of uncertainty. It calls for the Service to rise to the challenges at hand, lay the foundation for wise decisions in the future and take steps right now to ensure that our nation's fish and wildlife resources will thrive in the years to come.

Wildlife and their habitats in southern Florida will be adversely affected by the effects of global climate change. As sea levels rise, temperatures increase, and precipitation decreases, invasive and exotic species are expected to expand their home ranges and human populations will likely shift from coastal areas to higher inland locations. The State Wildlife Action Plan identifies the South Florida

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landscape as the highest ranking endangered ecosystem in the United States (FWC 2011b). It further outlines the highest priority threats facing the state's wildlife: alterations of the physical environment resulting in habitat loss and fragmentation, degradation of water resources, incompatible fire management, and introduced plants and animals (FWC 2011b). All of these wildlife threats are compounded and complicated by climate change and sea level rise. According to the Florida Climate Change Task Force, "Florida is considered to have a very high number of species at risk of extinction due in part to climate change" (Cameron Devitt et al. 2012). By 2050, moderate to extreme water shortage risks are estimated for Southwest Florida, (adapted from Terra Tech 2010 in Cameron Devitt et al. 2012), affecting habitats, plants, animals, and humans.

In general, Florida is expected to become hotter and drier and experience climate instability (including increasing temperatures, higher high temperatures, lower low temperatures, increased heat waves, increased extreme drought, increased extreme flooding, and increased intensity and occurrence of hurricanes and other extreme weather events). Additionally, the state will see changes in water temperatures and chemistry, habitat and species assemblages, landforms and geomorphic processes, land use, human health, air temperature and chemistry, and human infrastructure and economy (Beever et al. 2009). Near term consequences of climate change and sea level rise in Florida include: increased saltwater intrusion, likely decreased availability of freshwater for potable use, and increased risk of flooding during major rain events, while other impacts likely to be seen include more extreme precipitation patterns; shorter, wetter rainy season; extremely dry winters; increased likelihood of multi-year drought; increased risk of ground and surface water contamination from flooding; heat stress on humans and wildlife; dehydration of soils and plants' greater wildfire risk; harmful algal blooms; increased risks of impacts from insects and insect-borne diseases; and reduction of water available to human and natural systems (Heimlich et al. 2009).

### ***Impacts on Affected Resource***

#### **Alternative A**

The level of public access, types of uses and locations will remain unchanged under this alternative. As such, this alternative will have no additional environmental impacts other than what was identified in the original FPNWR CCP and EA (USFWS 2000).

#### **Alternative B**

As long as the FPNWR continues to utilize ecologically based management and/or expands this form of management, impacts resulting from the new projects proposed under Alternative B are anticipated to produce only negligible to minor effects. Ecologically based management, coupled with improved sustainable levels of public use, provides both preferred habitat and increased public wildlife observation/educational opportunities. While construction activities of proposed facilities may produce short-term impacts, proper mitigation measures should minimize impacts to wildlife and aquatic species. Construction activities related to new facilities, fencing, and power line trenching will generate noise and dust. However, no effects to wildlife and aquatic species activities are anticipated. Increased human use of the project areas during and after construction of facilities is anticipated to result in minor increases in noise levels. However, the sound will diminish with distance and vegetative buffering offered by the surrounding forested stands. Additional public use and visitation resulting from the proposed projects are anticipated to produce inconsequential environmental impacts when combined with the existing uses and impacts that these project areas currently incur, some of which occurs on a daily basis.

The proposed actions will affect various native flora and fauna in the immediate project area. Negative plant and wildlife effects are expected to be minimal from a landscape scale perspective due to the fact that all proposed projects will occur on and/or within existing disturbed sites, many of which have been negatively impacted for decades. Displaced wildlife will be able to utilize the

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surrounding forested landscape, and depending on the species, could potentially utilize the project areas after the proposed actions are completed. Individual plants and plant habitat could be permanently altered due to construction of the facilities, and maintenance/enhancement of the trails. However, the aforementioned activities are not likely to affect plant species persistence. Construction activities related to parking lots, building construction, fencing, and power line trenching will generate noise and dust. However, construction activities are not expected to significantly affect the occurrence of migratory birds and other wildlife species. This statement is especially true when considering the fact that the project areas are all located within previously disturbed sites, and most are directly adjacent to the heavily traveled SR-29.

While concerns do exist regarding the bioavailability of spent lead ammunition, lead associated with the proposed increased hunting will not be anticipated to have significant impacts for non-target wildlife and aquatic species. Overall, impacts are expected to be negligible to minor due to the limited amount of proposed turkey hunting permits to be issued, the type, amount and location of approved public access, and general locations of all proposed project activities (e.g., highly disturbed areas, many of which have been negatively impacted by humans for decades).

## Non-native species

### ***Description of Affected Resource***

Second only to Hawaii, Florida has been reported to have the second worst invasive exotic plant problem in the United States. Over 25,000 exotic plants have been introduced to Florida since the New World was discovered. With its subtropical climate, south Florida provides ideal growing conditions for the introduction and spread of non-native exotic plants. Often times when these non-native plants arrive in areas where they did not ecologically evolve, there are no natural enemies or other plants that can limit their growth and spread. Without natural limits to their expansion in new environments, these non-native plants invade and dominate areas quickly, and often result in monotypic stands of non-native vegetation. Over 1,200 non-native plant species, (approximately 31% of all plant species documented in Florida), have become naturalized in Florida (Wunderlin, 1998).

Invasive exotic plants have already reduced wildlife habitat and biodiversity in many areas on the FPNWR. To date, approximately 156 non-native plants have been documented on the Southwest Florida Gulf Coast Refuges. On the FPNWR, Brazilian pepper (*Schinus terebinthifolia*), cogongrass (*Imperata cylindrica*) and old world climbing fern (*Lygodium microphyllum*) pose the most significant ecological threats. These plants are not only problematic on the refuge, but also infest lands adjacent to the Refuge. The spread of invasive weeds occurs by root spread or by seed dispersal via wind, water, refuge visitors, equipment, or animals. Significant infestations on Service lands have resulted in wildlife habitat loss and a decline in native species diversity where the infestations occur. Properties adjacent to the FPNWR can serve as potential sources, which exacerbates the spread of non-native invasive plants on the refuge. Since 2009, the Service and partners have spent over \$3.5M to treat exotic invasive plants on FPNWR.

In addition to exotic invasive plants, numerous non-native animal species have been introduced into south Florida, and have become naturalized in many areas. Some of the species include but are not limited to:

### Amphibians

- Cane toad (*Rhinella marina*)
- Cuban tree frog (*Osteopilus septentrionalis*)

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## Reptiles

### *Monitor Family (Varanidae)*

- Nile monitor (*Varanus niloticus*)

### *Tegu subfamily (Tupinambinae)*

- Argentine black and white tegu (*Salvator merianae*)

### *Large Constrictor Snakes*

- Boa constrictor/Common boa (*Boa constrictor*)
- Burmese python (*Python bivittatus*)

### *Iguana Family (Iguanidae)*

- Black spinytail iguana (*Ctenosaura similis*)
- Green iguana (*Iguana iguana*)

### *Anole Family (Dactyloidae)*

- Brown Anoles (*Anolis* spp.)
- Knight Anole (*Anolis equestris*)

### *Other Reptiles*

- Bearded dragons (*Pogonas* spp.)
- Brown basilisk (*Basiliscus vittatus*)
- Northern curly-tailed lizard (*Leiocephalus carinatus*)
- Veiled chameleon (*Chamaeleo calyptratus*)
- red-headed rock agama (*Agama agama*)
- Red-eared slider (*Trachemys scripta elegans*)

### *Birds*

- Rock dove (*Columba livia*)
- Eurasian collared-dove (*Streptopelia decaocto*)
- White-winged dove (*Zenaida asiatica*)
- Monk parakeet (*Myiopsitta monachus*)
- Egyptian goose (*Alopochen aegyptiaca*)
- Muscovy duck (*Cairina moschata*)

### *Mammals*

- Wild Hog (*Sus Scrofa*)

## ***Environmental Trends and Planned Actions Description***

The IPCC estimates that 20-30 percent of plant and animal species will be at risk of extinction if temperatures climb more than 1.5° to 2.5°C (National Aeronautics and Space Administration 2009). Computer models suggest that the overall climate of Florida may warm, resulting in more frequent extremely hot summer days and a longer growing season (U.S. Environmental Protection Agency undated). A warmer climate could allow heat-loving exotic plant species, such as the invasive Melaleuca, lygodium, and cogon grass to expand their ranges. However, warmer winters lead to

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fewer frosts, consequently, tropical plants and trees that are vulnerable to cold temperatures may also benefit.

Facing the climate change challenge requires working on a landscape level to integrate the Service efforts with partners from other federal, state and tribal agencies, conservation groups, academic institutions, private landowners and recreational users. Moving forward, the Service will engage partners in a dialogue about working together to apply our resources with the best science to ensure landscapes are resilient and capable of sustaining America's fish and wildlife for generations to come.

#### ***Impacts on Affected Resource***

**Alternative A & B:** All proposed uses have the potential to inadvertently spread non-native plants and animals. Seeds of invasive plants can be carried on vehicles or clothing. Small non-native animals can hitchhike on vehicles or in camping gear. However, most of the non-native species that may spread by these means are likely already present on refuge lands. This negative effect is expected to be minimal under both alternatives, and having a longer duration under the proposed action.

The awareness raised on non-native species through various environmental educational and interpretive materials is considered a minimal positive consequence of both alternatives. Visitors that are informed about the harmful nature of invasive species may be less likely to release unwanted exotic pets and plants into the environment (USFWS 2012).

### **Threatened and Endangered Species, and Other Special Status Species**

#### ***Description of Affected Resource***

The FPNWR has the potential to support eight federally listed animal species, 1 petitioned animal species and one federal candidate species. The FPNWR is known to harbor 32 state endangered plant species, twelve state threatened plant species, and four commercially exploited plant species (FPNWR internal records).

Potentially affected species were identified by evaluating the location and nature of the proposed actions, the USFWS county list of records for T&E species, which are present or historically occurred in Collier County, FL (last updated in 06/23/2020), scientific literature, and expert biological opinion. Potential habitat was evaluated using lidar technology, aerial photographs, the knowledge of USFWS personnel, species experts familiar with the project area, and habitat requirements for selected TES species. For the purposes of this analysis, a list of federally and state listed species was obtained from the following sources: 1) federally listed species that may occur in or near FPNWR was obtained from the USFWS IPAC website (<http://ecos.fws.gov/ipac/>) on 23 June 2020 (Consultation Code: 04EF2000-2020-SLI-0884 Event Code: 04EF2000-2020-E-02671); 2) FPNWR species lists; and 3) state listed species that may occur in or near FPNWR. Species that were eliminated from further analysis include: 1) species that were extirpated or are not believed to occur within the project area; and 2) species that occur in areas that will not be affected by the project.

Federally listed species with documented occurrences on the Florida Panther National Wildlife Refuge include: American alligator (*Alligator mississippiensis*), Eastern indigo snake (*Drymarchon corais couperi*), red-cockaded woodpecker via planned translocation and introduction (*Picoides borealis*), Florida bonneted bat (*Eumops floridanus*), Florida panther (*Puma concolor coryi*), wood stork (*Mycteria americana*), and Audubon's crested caracara (*Polyborus Plancus audubonii*). The Eastern diamondback rattlesnake (*Crotalus adamanteus*) occurs throughout the FPNWR, and has been documented within the project area. The Eastern diamondback rattlesnake has been petitioned for listing as a threatened species under the Endangered Species Act. As indicated in Federal

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Register Volume 77 Issue 91 (Thursday, May 10, 2012), the USFWS found that the petition presented substantial scientific or commercial information indicating that listing the eastern diamondback rattlesnake may be warranted. As such, the USFWS has initiated a review of the status of the species to determine if listing the Eastern Diamondback Rattlesnake is warranted. Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*) has never been documented on the FPNWR. However, three immature snail kites were documented on private lands adjacent to the FPNWR (approximately 6.5-11 aerial miles from the project area) during a recent Christmas Bird Count on 14 December 2019.

State listed threatened, endangered and animal species of concern known to occur on the Refuge include: gopher tortoise (*Gopherus polyphemus*), roseate spoonbill (*Ajaia ajaia*), little blue heron (*Egretta caerulea*), Southeastern American kestrel (*Falco sparverius paulus*), tricolored heron (*Egretta tricolor*), and Big Cypress fox squirrel (*Sciurus niger avicennia*).

No federal or state listed plant species are known or expected to occur within the disturbed portions of the project area, as these areas all occur within existing disturbed sites (i.e., SR-29, quarry site, oil exploration site/pad, former clearcut, woods roads, former hunt club camp, and firebreaks). Most of these disturbed areas have been in place decades, and some have been in place for over 70 years, and continue to be maintained (e.g., All proposed areas have been repeatedly visited and surveyed by botanical researchers and FPNWR biological staff since the refuge was established, and Service employees drive/walk/visit many of these areas upwards of five days per week.

*Eumops floridanus* has been captured and detected acoustically within multiple habitats on the FPNWR, including at Roth Work Center Pond, Pistol Pond, and the west side of the Refuge. The last known *E. floridanus* roost was abandoned and destroyed by winds during 2016/2017 until July 2021 when a male Florida bonneted bat was found in a roosting cavity on the refuge.

A detailed list of Federally listed species is in the Intra-Service consultation, or "Section 7" as it's known under the Endangered Species Act. This Section 7 is one of the compliance documents associated with the proposed action and can be found in Appendix G of this document.

### ***Environmental Trends and Planned Actions Description***

See Environmental Trends and Planned Actions under Wildlife and Aquatic Species.

### ***Impacts on Affected Resource***

#### **Alternative A**

An Intra-service section 7 consultation was completed for this alternative in the original FPNWR CCP and EA in March 2000. Species included in this consultation were Florida panther, wood stork, Bald eagle, American alligator, Florida snail kite, red-cockaded woodpecker, and eastern indigo snake. The determination was that the action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources.

#### **Alternative B**

The proposed actions will affect various native flora and fauna in the immediate project area. However, as noted elsewhere in this document, it is important to note that the project areas will occur immediately adjacent to and/or within existing disturbed areas (i.e., SR-29, quarry site, oil exploration site/pad, former clearcut, woods roads, and firebreaks), many of which have been in place for decades. Other than *Polyborus plancus audubonii*, *Puma concolor coryi* and *M. americana*, no potential effects are anticipated for any of the other threatened and endangered species known to occur on the FPNWR. Construction activities associated with facilities may temporarily disrupt scavenging/foraging activities of *Polyborus plancus audubonii*, *M. Americana* and state listed species

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of birds, but birds can easily fly over and avoid the construction areas. Creation of parking lots and facilities may require the removal of some vegetation and minor filling to accommodate proposed facilities, but ample trees for perching are available nearby. Specific actions to minimize impacts for listed species will be identified in a separate Section 7 for the public access point, trail/boardwalk and wildlife viewing structure within Unit 44 when final plans for this project are developed. In addition to actually improving habitat for listed species such as the wood stork in Unit 44 and Pistol Pond, another beneficial effect that may result from Alternative B is that the Service may be able to utilize increased citizen science to assist with improved observational data (e.g., reporting occurrences/observations of rare, threatened and endangered species, along with invasive species). This potential beneficial effect is something that the refuge hasn't been able to appreciably benefit from due to the limited public access that has occurred on the FPNWR since it was established.

No snags or trees with cavities will be removed for any of the proposed projects unless they are peeped by Refuge Biological staff, and no wildlife species are discovered utilizing cavities. No federal or state listed plant species are known or expected to occur within the project areas, as the project areas occur immediately adjacent to and/or within existing disturbed areas (e.g., woods roads, SR-29, quarry site, clearcut and windrowed wetland, and former oil exploration site). Some of the proposed project locations have been in place and impacted by humans for over 50 years. These areas have been, and continue to be, repeatedly visited and surveyed by researchers and FPNWR biological staff. Some of the proposed woods roads that have been identified for trails are used as many as five times per week by FPNWR employees, cooperators and visiting researchers, which includes the use of ATV's, UTV's and swamp buggies.

Well-managed hunt programs and other outdoor recreational activities do not conflict with the Service's ability to recover the Florida panther or other federal trust species on the FPNWR. A perfect example of this lack of conflict is evidenced by the fact that the Puma population has continued to increase throughout southwest Florida even though hunting and other forms of outdoor recreation have continued to occur as traditional uses across millions of acres, including both private and public lands. Pumas are one of the most adaptable mammals in the Northern Hemisphere, and have home ranges within close proximity of human occupied areas in southwest Florida (e.g., Golden Gate Estates). The proposed quota turkey hunts are anticipated to only have minimal to moderate short-term effects on the Florida panther and other federal trust species. Panther activity may be temporarily altered as a result of human activity. However, any alteration of panther activity is expected to be insignificant.

Restoration of littoral zone around Pistol Pond will improve habitat for various wildlife species, including wading bird species such as the wood stork.

While concerns do exist regarding the bioavailability of spent lead ammunition, lead associated with the proposed increased hunting will not be anticipated to have significant impacts for threatened and endangered species and other special status species.

See Appendix G for a full list of species and environmental impacts.

## **Habitat and Vegetation (including vegetation of special management concern)**

### ***Description of Affected Resource***

The Service and other interested parties are concerned for the Refuge's long-term environmental health and wildlife productivity. Nationwide studies have documented a declining status of numerous

vegetative and wetland-dependent wildlife populations. These declines have been attributed to habitat loss and alteration. Since being logged 60 to 70 years ago, cypress forests have re-established, but impacts from the logging can still be found on the FPNWR today. Land management practices on lands surrounding the Refuge have exerted influences to alter refuge habitats, and with a rapidly growing human population to the north of the refuge, impacts to refuge habitats are only anticipated to increase. Ditching for infrastructure, residential and agricultural development near the Refuge has altered refuge hydrology, and has promoted generally drier soils. As a result, many of the Refuge's ecological communities and processes have been negatively impacted. The long-term ecological health of the Refuge is inextricably linked to hydrology and fire, which are the two major ecosystem drivers that maintain and enhance ecosystem integrity on the Refuge.

There have been numerous land cover classifications developed in the state of Florida. Due to its utility on the Refuge, we have chosen to use the Florida Land Cover Classification System and Florida Cooperative Land Cover Map Version 3.0 (CLC) to highlight unique ecological communities and groupings that are found on the Refuge. The CLC is a joint partnership between the FWC and Florida Natural Areas Inventory (FNAI) to develop ecologically-based statewide land cover from existing sources and expert review of aerial photography. The CLC follows the Florida Land Cover Classification System that was developed by FNAI (Florida Natural Areas Inventory 2010). Based on expert knowledge and on-the-ground reconnaissance, some ecological community boundaries, categories and descriptions were modified once the CLC was clipped in ArcGIS to fit the Refuge boundary. Primary edits included separate community types for cypress domes, hardwood hammock and glades marsh. With slight modifications, ecological community descriptions are based off of those described in the 2010 Guide to the Natural Communities of Florida (FNAI 2010) and the 1999 South Florida Multi-species Recovery Plan (USFWS 1999). Fourteen ecological community types and groupings have been identified for the Refuge below:

#### FPNWR Ecological Communities/Groupings

<b>FPNWR Ecological Communities/Groupings</b>	
<b>Community</b>	<b>Acres</b>
Artificial Lakes and Ponds	26
Canal/Ditch	5
Clearcut wetlands	530
Cypress	11,862
Cypress Dome	591
Cypress/Mixed Hardwood Swamp	2,068
Freshwater Marshes	468
Hammock	2,694
Mesic Pine Flatwoods	2,573
Other Freshwater Forested Wetland	2,669
Rural	38
Transportation	8
Wet Pine Flatwoods	2,500
Wet Prairie	577
<b>Total</b>	<b>26,609</b>

#### ***Environmental Trends and Planned Actions Description***

Other than for invasive species where control and elimination are the target, hunting programs are designed to be sustainable. The Service and adjacent conservation land managers will continue conservation management activities to continue to protect and manage habitats and vegetation on the refuge and in the surrounding landscape. While habitats and vegetation on the refuge will be

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expected to continue to be impacted by outside factors, including human population increases and associated development patterns, climate change, and invasive species, the Service is unaware of any other adverse environmental trends or planned actions that will adversely impact habitat and vegetation.

### ***Impacts on Affected Resource***

#### **Alternative A**

The visitor service activities described in this alternative will have minimal effects as identified in the 2000 CCP and associated EA.

#### **Alternative B**

Negative habitat and plant effects are expected to be minimal from a landscape scale perspective due to the fact that all of the proposed projects will occur on and/or within disturbed sites, many of which have been negatively impacted for decades. Individual plants and plant habitat could be permanently altered due to construction and maintenance of the facilities (i.e., trails, Unit 44 boardwalk, parking lots and wildlife observation towers/platforms). However, the aforementioned activities are not likely to affect plant species persistence. As aforementioned, no federal or state listed plant species are known or expected to occur within the project areas, as the project areas occur immediately adjacent to and/or within existing disturbed areas (e.g., woods roads, SR-29, quarry site, clearcut and windrowed wetland, and former oil exploration site). Proposed project areas have been repeatedly visited and surveyed by botanical researchers and FPNWR biological staff for decades, and Refuge employees drive/walk on many of the woods roads upwards of five days per week.

Increased trail maintenance, visitor use and construction of facilities could exacerbate the spread of exotic invasive plant species if left unchecked. However, once trails and facilities are in use, FPNWR will diligently control exotic invasive plant species in and around them.

Hunters will be allowed off-trail on foot, but any associated vegetation disturbance will likely be negligible. Permitted off-road vehicle use during permitted hunts may cause localized and temporary vegetation disturbance. Overall, the intensity of uses is expected to be low, relative to the size of the refuge, and adverse effects to habitats are expected to be negligible under both alternatives. Any negative effects could be further reduced by limiting use to existing trails, and by making potentially sensitive areas off-limits.

## **Geology and Soils**

### ***Description of Affected Resource***

The Tamiami Limestone formation underlies all of the Refuge and is approximately 6 million years old. The geologic platform of the Refuge and surrounding lands is one of the youngest geologic platforms in North America, which has been repeatedly submerged and exposed by rising and falling seas during the last 50,000 years. Underneath the exposed surface, there are thousands of feet of horizontal carbonate rock and siliciclastic layers. Ranging from 11 to 16 feet above sea level, the Refuge's topography is slightly higher in elevation than the Everglades, which is primarily due to the underlying Pliocene Tamiami Formation. The coral-rich Tamiami Formation is capped by hard rock, under which are found sand, silts and clays, shell marks, and shell-free, greenish clay. A thin layer of sand, sandy marl, clay and fine shell cover prairie and flatwood areas, while a thicker organic peat ranging in thickness to 7 feet can be found in the hammocks and strands.

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Soils are predominantly organic peats in the mixed hardwood strand areas ranging in thickness up to 7 feet. A thin layer of mineral soil, especially marl and sand, is dominant on the prairies. Slash pine forests grow primarily on shallow sandy soils with calcareous materials beneath, and often in association with exposed cap rock. These soils generally include Sunniland, Broward, Keni, Copeland, Matmon, Charlotte and Pompano. Cabbage palm and saw palmetto are primary associates of slash pine on these soils (Leighty et al. 1954). Hammocks are found on elevated bedrock areas, generally overlain by sandy peat (Craighead 1971). These are considered Keri-Copeland complex soils, which have organic matter mixed with fine sands overlying limestone, sometimes with a marl layer between (Leighty et al. 1954). Mixed swamp and bald cypress forests grow in organic soils as deep as seven feet, which occur in deep depressions in the mineral soil. Strands form in elongated depressions and domes in circular ones. The largest and fastest growing cypress trees grow on the deepest peat (Duever et al. 1978), Scrub and dwarf cypress grow on sand or marl soils of the Ochopee and Tucker Marl series (Leighty et al. 1954). They are approximately three to six inches deep overlying bedrock (Craighead 1971). Wet prairies grow generally from sandy soils up to three feet deep, with little peat accumulation due to a fairly frequent occurrence of fire. Because of a longer hydroperiod and less fire frequency, marshes normally grow from peat deposits over mineral soil. Deposits may be more than 13 feet deep (Duever et al. 1986).

### ***Environmental Trends and Planned Actions Description***

The Service is unaware of any environmental trends or planned actions that will adversely impact geology and soils in this area.

### ***Impacts on Affected Resource***

#### **Alternative A**

The visitor service activities described in this alternative will have minimal effects on the geology and soils of the refuge. There are no newly proposed developments such as trails, roads, or buildings on the refuge that will affect refuge soils. Recreational uses such as hiking are expected to be minimal and will not result in significant, if any, impacts to the soils. Existing refuge roads will continue to be maintained with little or no impacts.

#### **Alternative B**

Because all of the proposed projects will occur on previously disturbed sites, they are expected to only cause negligible to minimal impacts to localized soils and waters. Additionally, these disturbances are expected to be short term and/or only occurring during the duration of construction or maintenance. New facility construction or filling activities will comply with the requirements of Section 404 of the Clean Water Act and all other applicable laws and regulations. Parking areas will be constructed to allow storm water to percolate into the soil rather than allowing it to run directly into adjacent wetlands.

## **Air Quality**

### ***Description of Affected Resource***

The Clean Air Act of 1970 (as amended in 1990 and 1997) required the EPA to implement air quality standards to protect public health and welfare. National Ambient Air Quality Standards (NAAQS) were established based on protecting health (primary standards) and preventing environmental and property damage (secondary) for six pollutants commonly found throughout the United States: lead, ozone, nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and particulate matter less than 10 and 2.5 microns in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>). The Refuge lies within a designated class II area under the Clean Air Act.

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### ***Environmental Trends and Planned Actions Description***

The Service is unaware of any environmental trends or planned actions that will adversely impact air quality in this area.

### ***Impacts on Affected Resource***

#### **Alternative A**

No long-term or adverse effects to air quality will occur.

#### **Alternative B**

Other than localized dust that will be created from construction operations, trail/facility maintenance, and public use, all proposed projects are anticipated to only produce negligible air quality impacts.

## **Noise**

### ***Description of Affected Resource***

Natural sounds are part of a web of resources vital to refuge ecosystems. From insects, frogs, birds and bellowing alligators, sounds compose immersive experiences important for wildlife and visitors. Animals depend on hearing natural sounds in the environment for a range of activities, including communication, establishing territories, finding habitat, courting and mating, finding food and avoiding predators, and protecting the young.

### ***Environmental Trends and Planned Actions Description***

The Service is unaware of any environmental trends or planned actions that will adversely impact noise in this area.

### ***Impacts on Affected Resource***

#### **Alternative A**

The visitor service activities described in this alternative will have negligible impacts.

#### **Alternative B**

Other than localized noise that will be created from construction operations, trail/facility maintenance, and public use, all proposed projects are anticipated to only produce negligible noise impacts.

## **Water Resources and Wetlands**

### ***Description of Affected Resource***

The surface water hydrology in the Refuge is typically characterized as a sheet flow flooding regime due to the flat gradient and topography of the Refuge and the larger Big Cypress Basin. Water movement is slow across the landscape. Sheet flow across the Refuge is heavily influenced by upstream flows and downstream draws from canals and pumps. The upstream flows into the Refuge are primarily from Camp Keais Strand and Okaloacooche Slough, both of which have been significantly altered by agriculture, ditching and transportation infrastructure.

### ***Environmental Trends and Planned Actions Description***

The Big Cypress Basin is a recognized physiographic region in Southwest Florida. It is a source of recharge for the shallow aquifers of South Florida and is important to the integrity of the water resources in the western Everglades. The hydrological features of the basin were recognized when Congress established the Big Cypress National Preserve in 1973. The Big Cypress Basin is a rain driven system. The Refuge is flooded with a shallow sheet of surface water starting after the onset of the rainy season (usually in June) and ending in the winter dry season after the surface waters

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recede. Rainfall averages 54 inches per year. During the rainy season, shallow depressions fill with water. Because of poor drainage, water stands on the land until it evaporates, infiltrates to the underlying aquifer, or slowly drains off through sloughs or strands. When the dry season begins, the water level starts to recede. The Service is unaware of any environmental trends or planned actions that will adversely impact water resources and wetlands aside from climate change impacts addressed under the Wildlife and Aquatic Species section of this document.

### ***Impacts on Affected Resource***

#### **Alternative A**

The visitor service activities described in this alternative will have negligible impacts.

**Alternative B:** The visitor services identified in this alternative will have minimal to negligible impact to water resources. Because all of the proposed projects will occur on previously disturbed sites, they are expected to only cause negligible to minimal impacts to local hydrology and wetlands. Any negative impacts to wetlands of the United States will be mitigated according to state and federal policies and laws. New facility construction or filling activities will comply with the requirements of Section 404 of the Clean Water Act and all other applicable laws and regulations. Parking areas will be constructed to allow storm water to percolate into the soil rather than allowing it to run directly into adjacent wetlands.

## **Visitor Use and Experience**

### ***Description of Affected Resource***

Two recreational hiking trails offer the opportunity for free public use of the Refuge seven days a week from sunrise until sunset. The first trail is an accessible 0.3-mile loop with a shell surface and interpretive signs. The second trail is a 1.3-mile unimproved loop through three primary refuge habitats of pineland, wet prairie, and hardwood hammock. This trail offers the Otter Pond observation deck and a pavilion with two benches. The trails are accessible from SR 29, approximately 0.25 miles north of I-75.

In addition to opportunities at two public use hiking trails, the Refuge collaborates with the Friends of the Florida Panther Refuge to offer photography outings for limited groups including local photography clubs. Refuge tours via guided hike or swamp buggy excursion and public events also offer excellent wildlife observation and photography opportunities while exploring the diversity of habitats and wildlife found on the Refuge.

Environmental education and interpretation programs at local schools, youth organizations, and community events are provided by various refuge staff, as the education Park Ranger position has been vacant since 2012. With the Refuge closed to most public access, on site education is limited to occasional tours, interpretive hikes, interpretive trail panels, and special events.

Hunting and fishing have not been permitted as compatible uses on the Refuge to date; the Refuge is currently closed to both hunting and fishing.

### ***Environmental Trends and Planned Actions Description***

Collier County, where the FPNWR is located, is Florida's 17th most populous county, and supports approximately 1.7% of Florida's population (U.S. Census Bureau 2015). Between 2000 and 2010, Florida added approximately 2.8 million new residents, which represented the third largest state increase in the nation (Smith and Rayer 2013). U.S. Census Bureau population estimates indicate that Southwest Florida is one of the fastest growing areas in the nation. Both Collier County and the

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adjacent Lee County ranked as some of the nation's fastest-growing metropolitan areas and counties between 2013 and 2014 (U.S. Census Bureau 2015). According to most recent U.S. Census Bureau estimates, Lee County grew from 679,513 in July 1, 2014 to 701,982 in July 1, 2015. The 22,469 new residents equates to a 3.3 percent increase, and is almost double of Florida's 1.8% overall growth rate (U.S. Census Bureau 2015). Lee County supported one of the third fastest-growing metropolitan areas in the nation as of 2016 (U.S. Census Bureau 2015 & News-press.com 2016). Based on historical census estimates, Collier County's human population has increased over 129% since 1990, while Lee has increased approximately 102% during this same time period.

The increasing human population of Southwest Florida brings a host of challenges to the area in general, and to the Refuge in particular. Higher resident and tourist populations will require more housing, commercial and industrial development, and services. This demand will put pressure on government services and infrastructure. These demands, will in turn, exert greater pressures on the areas natural environment. Human population and real estate development are contributing factors to the decline of wildlife, suitable habitats, as well as the traditional ranching and outdoor lifestyle in the local communities of Southwest Florida. These demands affect land use all around the Refuge boundaries. In 2016, nine large landowners to the immediate north of the Refuge applied for an incidental take permit and have developed a Habitat Conservation Plan for eastern Collier County, which is currently being reviewed by the Service. The plan will set aside 109,000 acres into conservation easements to mitigate the development of 45,000 acres. This comprehensive land use planning effort will cover development of single family and multi-unit housing, public and private institutional facilities, commercial/office space, retail establishments, surface water management, internal roadways, parks/landscaping, earth mining and other elements typical of mixed-use developments. Currently, these lands are used for agriculture, including row crops and cattle ranching, with native habitats facilitating wildlife movement throughout the landscape. Therefore, changes to this landscape could result in impacts on the Refuge and its wildlife.

Southwest Florida has grown at exceptionally high rates since the last CCP was written. Unfortunately, this trend is expected to only increase during the life of the current CCP. Most of the urban growth within Collier county is occurring east of Naples, with a large mixed use neighborhood (i.e., Ave Maria) already constructed approximately 5 miles north of the Refuge boundary, and numerous other developments being planned. Two large developments to the northwest of the FPNWR were approved by Collier County Commissioners during 2020, and could house as many as 4,000+ residences when fully built out (i.e., Rivergrass Village and Hyde Park).

Urbanization has, and will continue to impact our native flora and fauna throughout Southwest Florida, especially for species with large home ranges such as the Florida panther and black bear. Urbanization not only negatively impacts our native ecosystems, but also the native plants and animals that are dependent upon these ecosystems for survival. Urbanization has the potential to negatively impact hydrology on the Refuge, introduce and further the spread of exotic invasive species on the Refuge, lead to direct wildlife mortality, and alter the Refuge's prescribed burning program.

Public lands such as the FPNWR play a critical role in the conservation of rare species and native habitats, which sometimes receive little formal protection or conservation on private lands. This is especially true for federally listed plants, which receive no legal protection on private lands. During the next 10 to 50 years, human populations will continue to expand in Collier County, leading to increased impervious surfaces, reduced forested habitat, increased traffic, and additional constraints on an already impacted prescribed burning program on the FPNWR. These trends suggest not only that public land will play an increasingly important role in the conservation of threatened and endangered species in the future, but also that management to ensure recovery and/or prevention of

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federal listing of species will be an increasingly difficult challenge. Management can do nothing to stem this trend of rapid urbanization, but the refuge and other conservation lands (both private and public) will become even more important as repositories of biodiversity. While the proposed activities in both alternatives are anticipated to result in only negligible cumulative environmental effects, the proposed activities offer proactive means to address the current and future recreational demands in this currently rural portion of Collier County.

For some species such as the Florida Panther, the Service consistently works beyond the refuge boundary to collaborate and cooperate with FWC, Florida Department of Environmental Protection, NOAA, states, tribes, Florida Forest Service, South Florida Water Management District, private landowners, numerous other partners to support an all-lands approach to species recovery. The agency has worked, and continues to work with partners to reintroduce at-risk species into historical habitat on the FPNWR where appropriate (e.g., red-cockaded woodpecker). This trend is only anticipated to increase with a steadily increasing human population and urbanized landscape adjacent to the FPNWR.

### ***Impacts on Affected Resource***

#### **Alternative A**

Negligible impacts, as visitor use and experiences will not increase. Opportunities to create additional outdoor recreation experiences by adding additional compatible wildlife dependent recreational uses will be lost. In addition, the Refuge's ability to connect with certain segments of the public will potentially be diminished. Visitors will pursue these opportunities off-refuge and thus the Refuge's ability to reach those members of the public and promote natural resources conservation, environmental education and natural resources stewardship may be more limited.

**Alternative B:** The National Wildlife Refuge System Improvement Act of 1997 determined that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation are legitimate and appropriate public uses of the Refuge System. This Act also recognized that these compatible wildlife-dependent recreational uses are the priority general public uses of the Refuge System. Since 1989, the public has had extremely limited opportunities to pursue these compatible wildlife-dependent recreational uses on the FPNWR. The proposed activities are expected to result in purely beneficial effects with regards to wildlife-dependent recreation and visitor use on the FPNWR. However, as public use increases, unanticipated conflicts between different user groups could occur. If this should happen, the FPNWR will adjust its public access programs, as needed, to eliminate and/or minimize any public use issues/conflicts. The FPNWR will use methods that have proven to be effective in reducing or eliminating public use conflicts. These methods include establishing separate use areas, different use periods, and limits on the numbers of users in order to provide safe, quality, appropriate, and compatible wildlife-dependent recreational opportunities. The proposed projects should accomplish the avoidance and minimization of public use conflicts, while simultaneously meeting the needs of the plants, wildlife and ecological communities found on the FPNWR.

## **Cultural Resources**

### ***Description of Affected Resource***

While comprehensive archaeological investigations on FPNWR have been extremely limited, several archaeological investigations have occurred within and adjacent to the refuge (Dean and Weisman 2007; Fay and Carr 1990; Kanaski 2004; Schwadron 2002 & 2005).

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Fay and Carr 1990 conducted the first systematic archaeological investigation on the Refuge. They evaluated the locations of proposed fire and maintenance facilities in the Roth Work Center, as well as 8 deer feeding stations scattered across the Refuge. The Roth Work Center was described as being situated on a substantially disturbed hammock. The Refuge's 1990 "main office" was originally a 20th century hunting camp. A house once stood on the site of the maintenance shed, but it was removed shortly after the FWS's acquisition of the tract in 1989-1990. Systematic shovel testing revealed traces of the razed structure, but evidence of earlier occupations was not encountered. The results of the archaeological survey for the feeding stations are instructive. Seven of the feeding stations were located in low-lying cypress strands, and testing did not reveal any evidence for prior human occupation at these locations. Fay and Carr 1990 did discover notable cultural resources within three sites. One of these sites was noted as being potentially significant for listing on the National Register of Historic Sites. Surface collections at this site consisted of a bone point, modified shark teeth, a perforated Busycon adze, Belle Glade Plain, St. Johns Check-stamped, Fort Drum Incised, Surfside Incised, and untyped sand-tempered plain sherds. Based on the artifacts recovered, Fay and Carr 1990 estimated the general chronological period of the sites surveyed to range from ca. 500 A.D. through 1400 A.D. for occupation.

With the exception of two known cultural resource sites identified by Fay and Carr 1990, no other significant cultural resource sites are known to exist within the areas being proposed for VSP activities, and no significant sites eligible for listing on the National Register of Historic Sites are anticipated due to the fact that the proposed activities will occur on highly impacted/disturbed areas, many of which have been impacted by human activities for decades.

#### ***Environmental Trends and Planned Actions Description***

The Service is unaware of any environmental trends or planned actions that will adversely impact cultural resources in this area. Proposed projects with construction related activities will require review by the Service's Regional Archaeologist in consultation with the State of Florida Historic Preservation Office, as mandated by Section 106 of the National Historic Preservation Act. The National Historic Preservation Act requires that any actions by a Federal agency which may affect archaeological or historical resources be reviewed by the State Historic Preservation Office, and that the identified effects must be avoided or minimized. The Service's policy is to preserve these cultural, historic, and archaeological resources in the public trust, and avoid any adverse effects wherever possible.

#### ***Impacts on Affected Resource***

**Alternative A & B:** Both alternatives provide for cultural resource protection and low levels of development, thereby producing little negative effect on the refuge's cultural and historic resources. Because all of the proposed activities will occur within previous disturbed areas, all proposed projects are anticipated to result in negligible to no impacts to cultural resources. Proposed projects with construction related activities will require review by the Service's Regional Archaeologist in consultation with the State of Florida Historic Preservation Office, as mandated by Section 106 of the National Historic Preservation Act. The National Historic Preservation Act requires that any actions by a Federal agency which may affect archaeological or historical resources be reviewed by the State Historic Preservation Office, and that the identified effects must be avoided or minimized. The Service's policy is to preserve these cultural, historic, and archaeological resources in the public trust, and avoid any adverse effects wherever possible.

Through the increased public uses identified, Alternative B will likely provide for greater public interpretation of historic and archaeological resources on the refuge when compared to Alternative A. Refuge interpretation will mostly be in conjunction with exhibits, public outreach and informational kiosks associated with a particular activities. While increased public use on the Refuge could lead to

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the chance of vandalism, pot hunting or casual taking of artifacts from known archaeological sites, no difference between alternatives is expected due to the limited number of archaeological sites on the FPNWR, and the limited areas that will be open to public access. In addition to law enforcement, the FPNWR has a trail camera trap grid of multiple cameras spread out over the Refuge to monitor wildlife on the refuge, and these trail cameras could aid in the detection and prevention of vandalism and theft.

## **Refuge Management and Operations/Land Use on the Refuge**

### ***Description of Affected Resource***

Refuge facilities include an administrative headquarters, field research lab, Roger Roth Work Center, 3 bunkhouses, 2 public use hiking trails, kiosks, a screened cabin at McBride's Pond, a panther quarantine enclosure and several small equipment storage sheds located on the west side of the Refuge. A network of existing trails and fire breaks are used by management to conduct prescribed burns, inventory and monitor species and otherwise facilitate the habitat management goals of the refuge. Access to these trails and firebreaks are through 7 gates along SR29 and 3 gates off of I-75 that are only accessible by refuge management.

### ***Environmental Trends and Planned Actions Description***

The Service is unaware of any environmental trends or planned actions that will adversely impact operations in this area.

### ***Impacts on Affected Resource***

**Alternative A:** No change from current condition and the future activities identified in the 2000 CCP. Planned public access opportunities that were identified and assessed in the 2000 CCP, but have yet to be accomplished (e.g., Unit 44, Pistol Pond Fishing & Wildlife Viewing and replacing the current FPNWR Headquarters and Biological Laboratory with a permanent building), are anticipated to have negligible impacts on land management operations on the FPNWR, as these projects will occur within existing disturbed areas that have been heavily impacted for decades.

**Alternative B:** Due to the location (e.g., previously disturbed sites) and timing of the proposed activities, Alternative B is anticipated to only produce negligible to minor impacts to the FPNWR's land and infrastructure. Proposed activities can be implemented to minimize impacts to the FPNWR's land and infrastructure.

## **Administration**

### ***Description of Affected Resource***

The Refuge is one of two NWRs managed as part of the Southwest Florida Gulf Coast Refuge Complex, which includes Florida Panther and Ten Thousand Islands NWRs. Although many of the biological, natural, and cultural resources are very different between the two refuges, the operations, including resources and staffing, are shared between the two refuges as annual work planning identifies the highest priorities of our conservation work given the availability of resources. Currently, the Refuge complex has a staff of 10 full time employees (full-time equivalent, FTE), 6 part time/seasonal employees. Law enforcement staff is shared between other refuges located in South Florida. Volunteers also contribute an annual average of 7,500 hours to assist with inventory and monitoring of biological resources, maintenance of equipment and facilities, and outreach to the public; this contribution is the equivalent of 3.6 full-time employees.

### ***Environmental Trends and Planned Actions Description***

The Service is unaware of any environmental trends or planned actions that will adversely impact staffing and funding in this area.

### **Impacts on Affected Resource**

**Alternative A:** No change from current condition and activities identified in the 2000 CCP.

**Alternative B:** Estimated costs to implement all of the proposed activities are anticipated to exceed \$5,000,000 initially. Costs associated with the proposed activities will increase due to initial costs of the activities (some of which will be substantial) and the increased staff and resources required to implement and maintain these activities. However, some of the largest initial expenses could be offset and funded through nontraditional sources such as grants and partnerships (e.g., Pistol Pond and Unit 44). Additional staffing will be needed to maintain the proposed trails and other facilities.

1) Construct a public access point, trail/boardwalk and wildlife viewing structure within Unit 44, pending Section 106 archeological consultation

Costs include; \$1,300,000 construction of a .50 +/- mile year-round trail/boardwalk and an observation tower/wildlife viewing blind; 3) \$100,000 for construction of parking area; 4) \$25,000 for vault bathroom; and 5) \$5,000 for interpretive signage. The project will require recurring maintenance costs of \$10,000 annually.

2) Expenses for conducting annual hunts will be borne through general refuge funds. The costs will include personnel costs to facilitate hunts, annual management planning and turkey monitoring, additional law enforcement patrols, early gate opening and closure, maintenance of boundary posting and gates, installing and maintaining information panels, posting and removing signs, preparing the hunt brochure, maintaining roads, and covering all related fuel costs. These annual costs are estimated to run about \$17,500. This costs estimate does not cover the cost of habitat management such as prescribed fire and invasive species management.

Fees from turkey hunting may annually average an estimated \$2,000; they could be higher, dependent upon permit costs and quota levels. Though this revenue amount is insufficient to cover the cost of managing the hunt program, the relatively low cost of this program can easily be covered using station funds. Some additional costs may be defrayed by cooperating with partners; for example, FWC may provide Law Enforcement Officers for patrols during hunts.

Table 1. Funding and Staffing Requirements for hunting

Identifier	Cost
Staff (Maintenance Workers, Biologist, and Refuge Managers)	\$6,000
Maintain roads, parking lots, trails*	\$3,000
News releases, fact sheets, and reports	\$500
Maintain signage	\$2,000
Law Enforcement	\$6,000
<b>Total Annual Cost</b>	<b>\$17,500</b>
<i>*Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for trail/road maintenance on the refuge and are reflective of the percentage of trail/road use</i>	

*for hunting and fishing. Volunteers account for some maintenance hours and help to reduce overall cost of the program.*

- 3) Replacing the current FPNWR Headquarters and Biological Laboratory with a permanent building, which will include a visitor contact station and educational exhibits. Estimate \$3,000,000 to build and \$120,000 annual operating expense.
- 4) Establish new hiking trails Approximately \$200,000 initial cost for road base, trail improvements and culverts, orientation kiosk, signage, and \$10,000 in annual maintenance.
- 5) McBride's Cabin and Conservation Club Other than force account costs for administration, this activity is not anticipated to cost more \$5,000 per year (maintenance costs).
- 6) Develop a mobile interpretative outreach display.
- 7) There will be costs associated with the development of infrastructure to support fishing at Pistol Pond and it will invariably follow a phased progress plan. Following the approval of a fishing opening package, a suite of site improvements will be implemented, including an improved entrance road with modified fencing, an unimproved gravel parking area, an initial fishing platform, and an orientation kiosk. This initial facility infrastructure will be sufficient for opening a safe fishing opportunity that could be used for special events such as The Annual Refuge Open House, National Public Lands Day, and a special purpose fishing day like the SW Florida Cooperative Invasive Species Management Area fish rodeo. This initial infrastructure will be available on a refuge managed schedule. When the Refuge budget is capable and staff time is available for coordinating development, a more complete development will include installation of a new automated gate, complete area signage, purchase and placement of recycling and trash containers, improved parking area (gravel and parking bumpers), additional fishing platforms, interior fencing around the parking area with additional access gates to the hiking trails, and a vaulted restroom facility. This complete development (\$164,000) will enable fishing year-round.

Annual costs to administer the fishing program at Pistol Pond, including salary, equipment, and maintenance, totals approximately \$10,000. Expenses will consist primarily of posting and maintaining "Public Fishing Area" signs, maintenance of the access road surfaces, law enforcement patrols, retrieval of monofilament line deposited in recycle containers, and production and dissemination of materials regarding fishing access and regulations.

Table 2. Costs to Administer a Fishing Program at Florida Panther National Wildlife Refuge.

Identifier	Expense
Kiosk & Signage	\$10,000
Vaulted restroom, trash & recycling containers, fishing platform(s)	\$100,000
Access improvements (gravel, gates)	\$25,000
Fencing (includes slide gate, maintenance of gate operator)	\$29,000
<b>Total infrastructure improvements</b>	<b>\$164,000</b>
Annual Maintenance (Parking lot, signs, fencing)	5,000
Law Enforcement (annual reoccurring)	\$5,000
<b>Annual Reoccurring Total</b>	<b>\$10,000</b>

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- 8) Construct vehicle camper pads for volunteer work campers and researchers: This project will afford four (4) new concrete parking pads, electric, water and sewer hook-up, and access to communication accessories. Approximately \$80,000-\$100,000 depending on the final location.
  - 9) Night sky viewing and primitive camping: Costs will mainly be associated with staffing and equipment, and should not exceed \$2,000 per year.
  - 10) Protect cultural resources through surveys, enforcement, and preservation planning: One time cost of approximately \$75,000 for the assessment of past cultural resource surveys and a comprehensive survey of all cultural resources on the FPNWR.
  - 11) Protect refuge resources and visitors: In order to accommodate the proposed public access activities and provide law enforcement across the FPNWR, total cost will be approximately \$100,000 annually for additional law enforcement capacity.

## **Socioeconomics**

### **Local and Regional Economies**

The refuge is located in eastern Collier County, and is bounded by I-75 (also known as Alligator Alley or SR 84) to the south, SR 29 to the east and private lands to the north and west. The refuge shares common boundaries with Big Cypress National Preserve to the east, Fakahatchee Strand State Preserve State Park to the south, and Picayune Strand State Forest to the southwest.

### ***Environmental Trends and Planned Actions Description***

The increasing human population of Southwest Florida brings a host of challenges to the area in general, and to the Refuge in particular. Higher resident and tourist populations will require more housing, commercial and industrial development, and services. This demand will put pressure on government services and infrastructure. These demands, will in turn, exert greater pressures on the areas natural environment. Human population and real estate development are contributing factors to the decline of wildlife, suitable habitats, as well as the traditional ranching and outdoor lifestyle in the local communities of Southwest Florida. These demands affect land use all around the Refuge boundaries. In 2016, nine large landowners to the immediate north of the Refuge applied for an incidental take permit and have developed a Habitat Conservation Plan for eastern Collier County, which is currently being reviewed by the Service. The plan will set aside 109,000 acres into conservation easements to mitigate the development of 45,000 acres. This comprehensive land use planning effort will cover development of single family and multi-unit housing, public and private institutional facilities, commercial/office space, retail establishments, surface water management, internal roadways, parks/landscaping, earth mining and other elements typical of mixed-use developments. Currently, these lands are used for agriculture, including row crops and cattle ranching, with native habitats facilitating wildlife movement throughout the landscape. Therefore, changes to this landscape could result in impacts on the Refuge and its wildlife.

Southwest Florida has grown at exceptionally high rates since the last CCP was written. Unfortunately, this trend is expected to only increase during the life of the current CCP. Most of the urban growth within Collier county is occurring east of Naples, with a large mixed use neighborhood (i.e., Ave Maria) already constructed approximately 5 miles north of the Refuge boundary, and numerous other developments being planned. Two large developments to the northwest of the FPNWR were approved by Collier County Commissioners during 2020, and could house as many as 4,000+ residences when fully built out (i.e., Rivergrass Village and Hyde Park).

Urbanization has, and will continue to impact our native flora and fauna throughout Southwest Florida, especially for species with large home ranges such as the Florida panther and black bear. Urbanization not only negatively impacts our native ecosystems, but also the native plants and

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animals that are dependent upon these ecosystems for survival. Urbanization has the potential to negatively impact hydrology on the Refuge, introduce and further the spread of exotic invasive species on the Refuge, lead to direct wildlife mortality, and alter the Refuge's prescribed burning program.

Public lands such as the FPNWR play a critical role in the conservation of rare species and native habitats, which sometimes receive little formal protection or conservation on private lands. This is especially true for federally listed plants, which receive no legal protection on private lands. During the next 10 to 50 years, human populations will continue to expand in Collier County, leading to increased impervious surfaces, reduced forested habitat, increased traffic, and additional constraints on an already impacted prescribed burning program on the FPNWR. These trends suggest not only that public land will play an increasingly important role in the conservation of threatened and endangered species in the future, but also that management to ensure recovery and/or prevention of federal listing of species will be an increasingly difficult challenge. Management can do nothing to stem this trend of rapid urbanization, but the refuge and other conservation lands (both private and public) will become even more important as repositories of biodiversity. While the proposed activities in both alternatives are anticipated to result in only negligible cumulative environmental effects, the proposed activities offer proactive means to address the current and future recreational demands in this currently rural portion of Collier County.

### ***Impacts on Affected Resource***

#### **Alternative A**

The no action alternative is anticipated to result in neutral to positive socioeconomic effects, as some new public access opportunities will still occur under this alternative (i.e., Unit 44 activities, new office and visitor center and Pistol Pond fishing access).

#### **Alternative B**

Potential effects on socioeconomics are generally expected to be neutral or positive. Greater positive impacts are anticipated when compared to those produced under Alternative A. Increased opportunities for public recreation on the Refuge will help meet some of the growing local demand for such activities. There will be a positive effect on the local economy resulting from public visitation and associated spending. Carefully coordinated and managed turkey hunt is expected to keep any risks to human health and safety to a minimum.

## **Environmental Justice**

### ***Description of Affected Resource***

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

### ***Environmental Trends and Planned Actions Description***

The Service is unaware of any environmental trends or planned actions that will adversely impact environmental justice in this area.

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## ***Impacts on Affected Resource***

**Alternative A&B:** There are no disproportionate negative environmental or health effects to minority or low-income populations anticipated from either alternative. Implementation of either alternative that includes public use and environmental education is anticipated to provide a benefit to the residents residing in the surrounding communities. Public involvement during the planning stages of the FPNWR Comprehensive Conservation Plan revision (in-progress) was inclusive, and provided many opportunities for issues of environmental justice to be raised.

### **Mitigation Measures and Conditions**

To ensure that implementation of the action alternatives protects natural and cultural resources that are unimpaired and the quality of the visitor experience, a consistent set of mitigation measures will be applied to actions proposed in this plan. The USFWS will prepare appropriate environmental compliance (i.e., those required by the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), and other relevant legislation) for these future actions. As part of the environmental compliance, the U.S. Fish and Wildlife Service will avoid, minimize, and mitigate adverse impacts when practicable. The implementation of a compliance-monitoring program will be within the parameters of NEPA and NHPA compliance documents, U.S. Army Corps of Engineers Section 404 permits, etc. The compliance-monitoring program will oversee these mitigation measures and will include reporting protocols.

The following mitigation measures and best management practices will be applied to avoid or minimize potential impacts from implementation of the action alternatives. Mitigation measures for the proposed uses includes:

1. Avoidance of an impact through not taking an action or parts of an action;
2. minimizing impacts through limiting the degree or magnitude of an action; or
3. rectifying impacts by repairing, rehabilitating, or restoring the affected environment.

For instance, mitigating the use of ORV, is done by avoiding regular use, minimizing impacts by only allowing them on existing trails, and monitoring the trail width and depth to identify potential closures and maintenance and rehabilitation needs. We also may temporarily closed due to high water events or other management needs. All other tracked vehicles, boats, or motorcycles are prohibited on the refuge. To prevent disruption of natural surface water flows, all trails that will receive ORV, hiking, biking, (for FWS operations or public use) will be designed, built, and/or maintained so the trail surface is kept at the natural grade of the surrounding landscape. Techniques that will help minimize trail rutting that could otherwise occur in wet areas of the Addition include “at-grade” maintenance, trail stabilization with aggregate material, the use of culverts, and low-water crossings. This mitigation will help preserve the natural sheet flow through the Addition at a local and regional level. In addition, if trail conditions eventually become degraded in areas and surface flow becomes altered, the indicator and standards monitoring program will be applied to remedy the situation and restore surface water flows (as described in the previous User Capacity section). The use of culverts, low-water crossings, and at-grade trail construction and maintenance are examples of such techniques.

For new facilities, and to the extent practicable for existing facilities, stormwater management measures will be implemented to reduce nonpoint source pollution discharge from parking lots and other impervious surfaces. Such actions could include use of oil/sediment separators, street sweeping, infiltration beds, permeable surfaces, and vegetated or natural filters to trap or filter stormwater runoff.

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Areas used by visitors (e.g., trails, developed areas, and designated campsites) will be monitored for signs of native vegetation disturbance. Public education, revegetation of disturbed areas with native plants, erosion control measures, and barriers will be used to control potential impacts on plants from trail erosion or social trailing.

To the extent possible, new or rehabilitated facilities will be sited to avoid sensitive wildlife habitats, including feeding and resting areas, major travel corridors, nesting areas, and other sensitive habitats. Construction activities will be timed to avoid sensitive periods, such as nesting or breeding seasons. Ongoing visitor use and NPS operational activities could be restricted if their potential level of damage or disturbance warranted doing so.

Measures will be taken to reduce the potential for wildlife to get food from humans. Wildlife-proof garbage containers will be required in developed areas (including visitor centers, picnic areas, trails, and interpretive waysides). Signs will continue to educate visitors about the need to refrain from feeding wildlife.

Other visitor impacts on wildlife will be addressed through such techniques as visitor education programs, restrictions on visitor activities, and ranger patrols.

### **Monitoring**

The Service and FWC have historically worked closely together on Florida panther research and monitoring efforts. Since the Refuge's establishment, the Refuge has been a critical component in the State's ongoing inventory and monitoring effort for the Florida panther. In 2008, the Service, FWC, and National Park Service developed an Interagency Response Plan (USFWS et al. 2008) to properly respond to human/panther conflicts, document depredations and coordinate outreach efforts among the three agencies. The Service also works with the FWC on various wildlife research activities beyond the Florida panther.

Since its establishment in 1989, a major objective of the Biological Program has been to inventory flora and fauna on the FPNWR. The objectives of wildlife inventories on FPNWR are to discern the distribution, abundance and population dynamics of indigenous species. Data derived from these inventories also augment ongoing and future research, and allow objective formulation and evaluation of wildlife management on the refuge. Long-term definitive wildlife inventory objectives include, but are not limited to:

- a) Species presence
- b) Species abundance/densities
- c) Habitat preferences
- d) Diurnal and seasonal variation in habitat preferences
- e) Use of treated and untreated habitats (e.g., fire maintained ecosystems and invasive plant treatments)
- f) Shifts in habitat use due to water levels, vegetation stage, or unknown factors
- g) Predator/prey relationships
- h) Competing species relationships

As we add new or expand uses, the Refuge will add the monitoring of visitor use impacts to this list of objectives. Specifically, monitoring changes in vegetation by the transfer of invasive plant seed sources, disturbance to wildlife, human/wildlife conflicts, and soil compaction. Specific to the use of ORV's, the FWS will monitor the width of trails, depth of trails at sensitive locations along the existing trail network both before and after the hunting season. Trail width is often an indicator of the degree

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of suitable substrate within a trail. As trails become rutted, ORV operators travel parallel to the rutted area in order for the vehicle to have traction to cross the area. This practice often increases the width of the trail. The trail depth is related to the rutting caused by vehicles traveling through moist soils. The displacement of soils by vehicles deepens trails over time. These indicators will allow the Service to maintain trails or temporary trail closures should the integrity of the adjacent soils, vegetation and habitats be degraded. Monitoring of litter and trash at Pistol pond is also necessary. The use of the refuge is strictly “pack it in pack it out.” Should litter become a burden on staff resources (spending more than 10 man hours a year to clean litter in a given area), it may trigger management actions to restrict areas or possible closure of the use.

The FPNWR has one of the longest running camera trap programs in the state of Florida, and have amassed 100’s of thousands of images and videos. The Refuge plans to continue maintaining camera traps on the Refuge in order to better assess any potential trend changes for species such as the Osceola wild turkey, Florida panther, Florida black bear, bobcat, white-tailed deer, and other species suitable to be monitored by camera traps. FPNWR plans to work with partners, Friends of the Florida Panther Refuge, researchers, and volunteers to continue evaluating and analyzing past data obtained from the FPNWR camera trap grid. The use of the is camera grid will also assist us in monitoring the public use on trails and the impact to the species above.

FWC also monitors turkey brood rearing success statewide through a citizens science app. Citizens can report wild turkey sightings, helping provide a way to gauge wild turkey nesting success, brood survival, and population dynamics at a statewide level. Florida’s annual summer wild turkey survey is part of a larger regional study designed to provide more insight into the distribution and abundance of wild turkeys. The information, combined with harvest data, lets FWC biologists scientifically manage the wild turkey population—ensuring we have a thriving population now and in the future.

In addition to camera traps, long-term monitoring has included water level recorders to monitor water tables on the FPNWR, and forest bird monitoring, which has been conducted since 2010.

The FPNWR Wildlife Inventory and Monitoring Plan (1993) identifies and describes the procedures for the census of certain wildlife populations on the refuge, and discerns their distribution, abundance and population dynamics. Data developed from monitoring activities described in the plan were hoped to augment ongoing and future research. Since its development in 1993, many inventory and monitoring ideas in the FPNWR Wildlife Inventory and Monitoring Plan have been replaced by numerous research projects, which provided more scientific data within funding and personnel capabilities. A revised FPNWR Wildlife Inventory and Monitoring Plan will likely be developed once the FPNWR Comprehensive Conservation Plan revision is approved.

### **Summary of Analysis:**

The purpose of this EA is to briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

**Alternative A – No Action Alternative**—The level of public access, types of uses and locations will remain unchanged under this alternative. As such, this alternative will have no additional environmental impacts other than what was identified in the original FPNWR CCP and EA (USFWS 2000). In addition, the Refuge’s ability to connect with certain segments of the public will potentially be diminished since additional uses will not be permitted. Would be visitors pursue these opportunities off-refuge and thus the Refuge’s ability to reach those members of the public and promote natural resources conservation, environmental education and natural resources stewardship may be more limited.

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### **Alternative B– Proposed Action Alternative**

As described above, the proposed action's potential impacts to natural resources and visitor use and services including the take of fish and turkey through hunting and fishing, degradation of soils and vegetation, the spread of invasive plants, disturbance to wildlife, increase in litter and potential user conflicts. However, given the anticipated level of use, effective monitoring and the mitigation and avoidance measures discussed above reduce these potential impacts to to a negligible level. Specifically hunting, and its associated activities, can result in positive or negative impacts to wildlife and other Refuge resources. With proper management and monitoring, turkey hunting (as proposed for the Refuge) is expected to cause only negligible to minor negative impacts. Fishing access will require some small facilities such as a parking area and wildlife fencing similar to the existing trails. Fishing can also have impacts such as excessive litter. Pistol pond is a former quarry that was excavated for limestone rock material. Therefore, adding infrastructure to this highly disturbed area will have negligible impacts.

Hunting and Fishing along with the other uses including: wildlife observation, photography, environmental education, interpretation, bicycling, instructor-led small group activities, small group camping, commercial recording, commercial tours, UAS drones, and scientific research as proposed are expected to have positive impacts by increasing the Refuge's ability to reach new audiences while having a minimal footprint and infrastructure on the Refuge.

### **List of Sources, Agencies and Persons Consulted:**

National Park Service, Big Cypress National Preserve  
Florida Fish and Wildlife Conservation Commission  
Florida Dept of Environmental Protection, Fakahatchee Strand State Park and Preserve  
South Florida Water Management District  
Collier County, FL  
Friends of the Florida Panther National Wildlife Refuge  
Everglades Coordinating Council  
Sportsmen Trust Group  
Florida Wildlife Federation  
Audubon of Florida  
Defenders of Wildlife  
Conservancy of SW Florida

### **List of Preparers:**

Kevin Godsea, Project Leader  
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Jessica Sutt, Wildlife Refuge Specialist  
Erin Myers, Wildlife Refuge Manager  
Laura Housh, Natural Resource Planner

### **State Coordination:**

The Service held a hunt coordination meeting with FWC on January 5, 2017 to discuss the development of this Hunt Plan. Additional meetings were held with FWC between 2014-2017. Annual consultation with the State will finalize refuge regulations to ensure that any changes are properly coordinated and all changes and hunt details will be detailed in the refuge's annual hunt brochure. When designing the refuge hunt, seasons and bag limits may be more restrictive on the refuge, but sideboards will not be more liberal than the seasons and bag limits set by the State.

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Additionally, the Service sent scoping letters making notification and seeking input on drafting the Hunt and Fish Plan October 1, 2020.

### **Tribal Consultation:**

The Service sent scoping letters making notification and seeking input on October 1, 2020 to:

- Seminole Tribe of Florida
- Miccosukee Tribe of Indians of Florida
- Seminole Nation of Oklahoma
- Poarch Band of Creek Indians

### **Public Outreach:**

A notice of intent to revise the existing CCP and prepare an EA was published in the Federal Register on April 23, 2014 (79 Federal Register 22697). At that time, the refuge launched an online community engagement website on Mindmixer.com under the domain [www.floridapantherplan.com](http://www.floridapantherplan.com) to start engaging the public on their ideas for future refuge management. The online engagement tool generated 71 individual ideas with 111 comments on those ideas for consideration, and generated 8,707 page views over 6 months of public scoping. In addition to this online engagement tool, we held a stakeholder informational meeting attended by local non-profit organizations with representatives from the Florida Wildlife Federation, Conservancy of Southwest Florida, Friends of the Florida Panther NWR, Collier Audubon, Big Cypress Sportsmen's Alliance, Sierra Club, Everglades Coordinating Council, South Florida Wildlands Association, and Florida Sportsmen's Conservation Association on July 11, 2014. A separate scoping meeting was conducted with representatives from local, State, and federal agencies on July 15, 2014. This was followed by a public scoping meeting on July 16, 2014 with 51 attendees. Comments were encouraged to be written and submitted by mail and email or through the online engagement website. A subsequent notice of intent was published in the Federal Register on July 21, 2014 (79 Federal Register 42349) extending the comment period an additional 60 days. A total of 4,778 comments were submitted at the public workshop, email, mail, and website and were used to inform the development of this VSP and EA. The VSP, Hunt and Fish Plan, and EA was made available to other federal agencies, Tribes, State and local government agencies, non-governmental organizations, and the general public for review and comment.

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS1261090000-212-FF09R20000; pages 23794-23842](https://www.federalregister.gov/documents/2021/05/04/2021-09000-212-floridapanther-national-wildlife-refuge-compatibility-determinations)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International

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South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

## Determination

*This section will be filled out upon completion of any public comment period and at the time of finalization of the Environmental Assessment.*

- ☒ **The Service's action will not result in a significant impact on the quality of the human environment. See the attached "Finding of No Significant Impact."**
- ☐ The Service's action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

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## OTHER APPLICABLE STATUES, EXECUTIVE ORDERS & REGULATIONS

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS	
<b>Cultural Resources</b>	
American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR Part 7	
Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3	
Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa – 470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7	
National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810	
Paleontological Resources Protection Act, 16 U.S.C. 470aaa – 470aaa-11	
Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001-3013; 43 CFR Part 10	
Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)	
Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)	
<b>Fish &amp; Wildlife</b>	
Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22	
Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450	
Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m	
Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904	
Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21	
Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)	
<b>Natural Resources</b>	
Clean Air Act, as amended, 42 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23	
Wilderness Act, 16 U.S.C. 1131 et seq.	
Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.	
Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)	
<b>Water Resources</b>	
Coastal Zone Management Act of 1972, 16 U.S.C. 1451 et seq.; 15 CFR Parts 923, 930, 933	

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Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 U.S.C. 1251 et seq.; 33 CFR Parts 320-330; 40 CFR Parts 110, 112, 116, 117, 230-232, 323, and 328
Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.; 33 CFR Parts 114, 115, 116, 321, 322, and 333
Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141-148
Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)
Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)

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# Appendices

## APPENDIX A: HUNT AND SPORT FISHING PLAN



U.S. Fish and Wildlife Service

# Florida Panther National Wildlife Refuge *Turkey Hunting and Sport Fishing Plan*



*Wild Turkey after prescribed burn - Larry Richardson, USFWS*

# Florida Panther National Wildlife Refuge Turkey Hunting and Sport Fishing Plan

U.S. Fish and Wildlife Service

Florida Panther National Wildlife Refuge  
12085 State Road 29 South  
Immokalee, FL 34142

Submitted By:  
Project Leader

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Concurrence:  
Refuge Supervisor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Approved:  
Regional Chief,  
National Wildlife Refuge System

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# FLORIDA PANTHER NATIONAL WILDLIFE REFUGE TURKEY HUNT AND SPORT FISH PLAN

## *I. Introduction*

National Wildlife Refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and the Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. Located in the core of occupied panther territory, the refuge ensures that important Florida panther habitat and corridors are protected in perpetuity. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

The refuge purposes include:

*“...for the conservation of threatened and endangered species...” (Endangered Species Act of 1973)*

*“...for the development, advancement, management, conservation, and protection of fish and wildlife resources...” (Fish and Wildlife Act of 1956)*

*“...for the benefit and recovery of the endangered Florida panther” (Fakahatchee Strand Environmental Assessment 1985)*

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is to:

*“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”*

The NWRSA mandates the Secretary of the Interior in administering the System to (16 U.S.C. 668dd(a)(4):

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;

- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

The Hunt and Fish Plan provides the details for implementing the hunting and fishing goals and objectives outlined in the Visitor Services Plan (VSP). This Hunt and Fish Plan is being considered as part of the Proposed Action in the VSP for Florida Panther NWR and is analyzed in the accompanying Environmental Assessment (EA).

The U.S. Fish and Wildlife Service took a major stride toward recovery of the Florida panther on June 20, 1989, by purchasing 26,270 acres for the Florida Panther NWR. The land was purchased from the Collier family of South Florida. Other small inholdings were acquired over the past 25 years and the refuge now totals 26,609 acres.

The purchase of the property culminated a five-year acquisition effort. In April 1985, the U.S. Fish and Wildlife Service published an EA entitled *Fakahatchee Strand: A Florida Panther Habitat Preservation Proposal*, which identified 88,000 acres of important panther habitat in Collier County surrounding the Fakahatchee Strand State Preserve (USFWS 1985). The document provided the legal basis for the U.S. Fish and Wildlife Service to begin refuge acquisition efforts.

The refuge area has long been known to be important to the Florida panther. Radio telemetry studies being conducted by the Florida Game and Freshwater Fish Commission (now the Florida Fish and Wildlife Conservation Commission, FWC) continue to document extensive use of the area by the endangered cats. The refuge forms the core of several cat home ranges and also functions as a travel corridor for animals traveling between the northern regions of Big Cypress National Preserve (BICY) and the Fakahatchee Strand State Preserve.

The original Florida Panther NWR Comprehensive Conservation Plan (CCP) was completed in September 2000. Much has changed since that time. In 2014, the refuge began public scoping to revise the 2000 CCP and received nearly 5,000 public comments. Many of the comments were directed at visitor services and recreational access. After considerable assessment, the

Service chose to develop a VSP and a Hunt and Fish Plan that supports and expands upon the original goals of the 2000 CCP while continuing to revise and update the CCP. The VSP revision and supporting documents outline a vision for the future of the visitor services program.

During the past several years, hunting and fishing have been increasing as outdoor enthusiasts seek safe and effective access to public lands. The refuge currently receives approximately 5,000 visitors per year. These visitors take part in a variety of public use activities, primarily wildlife observation and wildlife photography, which include hiking and birdwatching. Environmental education and interpretation are also current public uses on Florida Panther NWR.

Currently there are no hunting or fishing opportunities on Florida Panther NWR. However, archery, muzzle loading, and general gun seasons are allowed on the nearby BICY, where the typical game species include white-tailed deer, wild turkey and wild hogs. Additionally, archery and gun hunts are permitted at the Dinner Island Wildlife Management Area, which is less than 20 miles northeast of the Refuge. Fishing opportunities exist adjacent to the refuge in the State Road (SR) 29 canal, Fakahatchee Strand State Park and Preserve, Picayune Strand State Forest, Big Cypress National Preserve, Everglades National Park, and Ten Thousand Islands National Wildlife Refuge.

It is a priority of the Service to provide for wildlife-dependent recreation opportunities, including hunting and fishing, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the National Wildlife Refuge System.

## **II. Statement of Objectives**

Hunting and fishing in the state of Florida are long-standing traditional activities and are an integral part of Florida culture. We propose to open annual spring turkey hunting opportunities within 25,560 acres of the refuge. The turkey hunt will also help build support for refuge management and indirectly support other refuge management goals and objectives in the VSP. We also propose opening 19 acre Pistol Pond to fishing from the bank.

The turkey hunt and fishing will support refuge management objectives described in Goals 3 and 4 of the VSP, as listed.

### **Visitor Services Goal 3: Hunting**

*Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads to greater understanding and appreciation of wildlife resources; and 3) aids in the conservation of wildlife populations and their habitats.*

#### **Visitor Services Plan Objective 3.1**

Ensure all informational resources, staff-based services, and public use infrastructure support quality hunting opportunities.

#### **Strategies**

##### **Public Use Infrastructure**

- Maintain current hunting information and regulations at the Visitor Contact Station.
- Establish designated parking areas and maintain parking lots.
- Provide safe egress and ingress of State Road 29.

#### Informational Resources

- Maintain current hunting information on Refuge web site.
- Publish posts on Facebook to notify the public of Refuge hunting activities and seasons.
- Maintain current hunting information and regulations on kiosks and signs.
- Maintain and annually update the hunting brochure with Refuge.

#### Staff-based Services

- Provide hunt program training to all visitor services staff and volunteers.
- Expand hunter skills workshops as resources allow.
- Collaborate between workgroups to ensure accurate and efficient information is disseminated to the public.

#### **Visitor Services Plan Goal 4: Fishing**

*Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads to greater understanding and appreciation of aquatic resources; 3) aids in the conservation of fish populations and their habitats.*

#### Visitor Services Plan Objective 4.1

Provide opportunities for high quality recreational and educational fishing experiences.

#### **Strategies**

- Open Pistol Pond to bank fishing, submit a fishing opening package to the Service's Southeast Region and Headquarters for publication in the annual Refuge-specific Hunting and Fishing Regulation Rule.
- Expand areas open to fishing where compatible.

#### Visitor Services Plan Objective 4.2

- Maintain viable, diverse populations of fish based on sound biological principles and data that maintain fish populations at sustainable levels.

### **III. Description of Hunting Program**

#### **A. AREAS TO BE OPENED TO HUNTING AND FISHING**

The Service assessed hunting and sport fishing opportunities and regulations using the Service's Hunt/Fish Opportunity Tool (SHOT). Information in this report can be used to promote regulatory alignment for hunting and sport fishing; alignment of Service regulations between stations; and new or expanded hunting and sport fishing opportunities on Service lands and water. The Service assessed regulatory alignment of hunting and sport fishing regulations with general state regulations, based on species open, season dates, method of take, and bag/creel limits. Hunting assessments included a hunt-unit level analysis of these factors. Sport fishing assessments included analyses of all fishable waters, fresh and marine/tidal. Additional factors assessed included alignment to State land regulations; general public access; limits on the number of people who can hunt or fish; and how permits are issued, including drawings, lotteries, and first-come first-serve; and demographics such as youth and people with disabilities. Hunting in Florida is regulated by pertinent State regulations. All pertinent State laws and regulations contained in these codes also apply to the refuge hunting program. (Section VII.A of this Hunt and Fish Plan

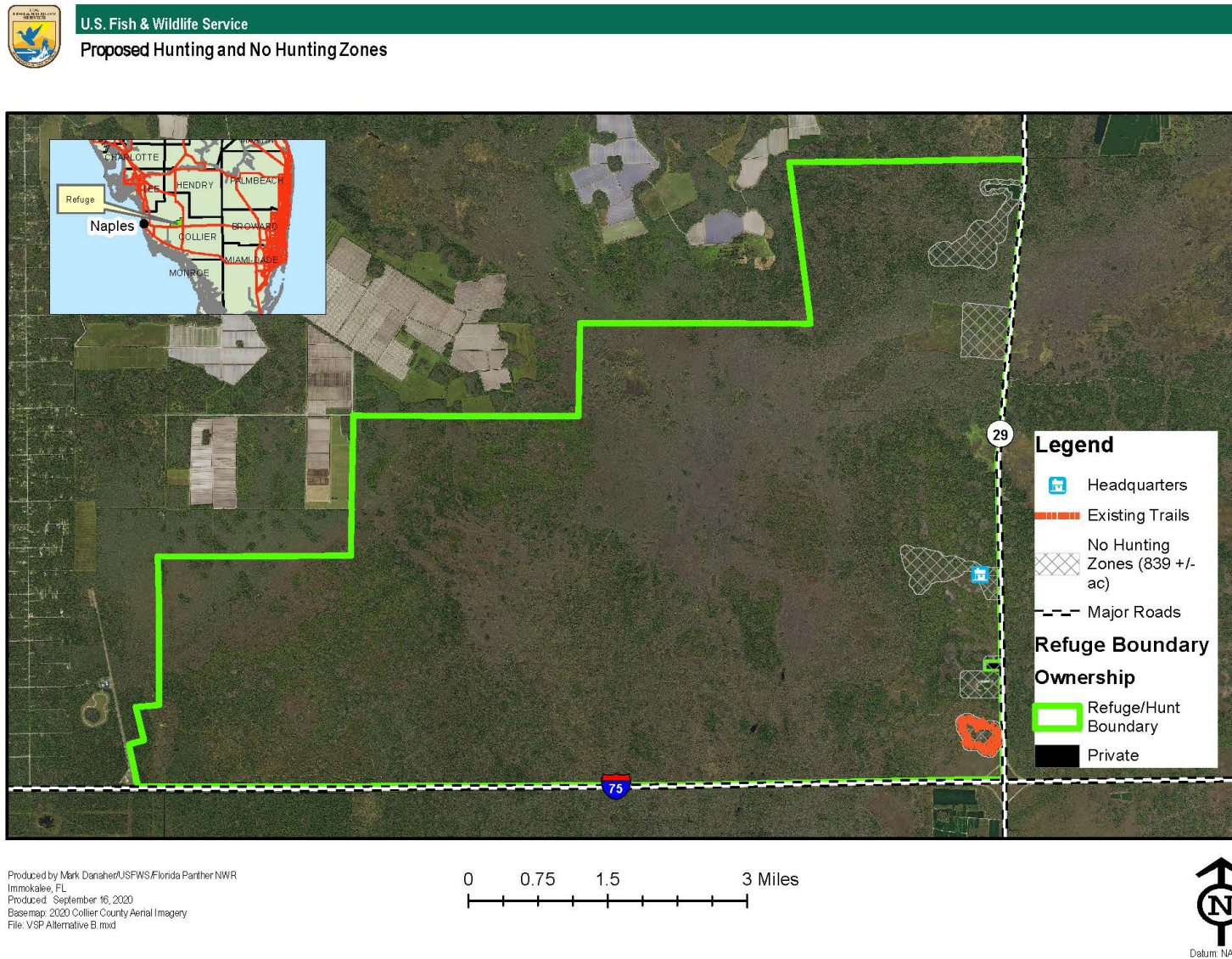
outlines the refuge-specific regulations that will apply to the hunt.) The hunting and fishing program will be reviewed annually.

The hunting activity in this Hunt and Fish Plan includes a spring Osceola wild turkey (*Meleagris gallopavo osceola*) hunt and opening the refuge to fishing on Pistol Pond.

The turkey hunt will occur during the spring turkey hunting season in accordance with the state of Florida's hunting rules and regulations. The vast majority of Florida Panther NWR's 26,609 acres will be open for turkey hunting during permitted hunts. We specifically propose to annually open 25,560 acres of the refuge. Areas not included in hunt areas (approximately 829 acres) include buffer strips surrounding developed and highly used areas (e.g., refuge headquarters, Roth Work Center, refuge housing, and public access trails). These areas will be posted as "Area Closed to Hunting" for safety purposes (Figure 1).

Previously, fishing has not been allowed at the Refuge. Changes in this hunt and fish plan will open Pistol Pond for fishing access. Pistol Pond is a 19 acre borrow pit pond that was originally dug to mine limestone and sand for the construction of roads in the late 1950s and 60s. The pond is 15-20 foot of depth depending on seasonality of rainfall. There are no streams flowing to or from the pond and its water is completely dependent upon rainfall (Figure 2).

**Figure 16. Hunting and No Hunting Zones**



The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

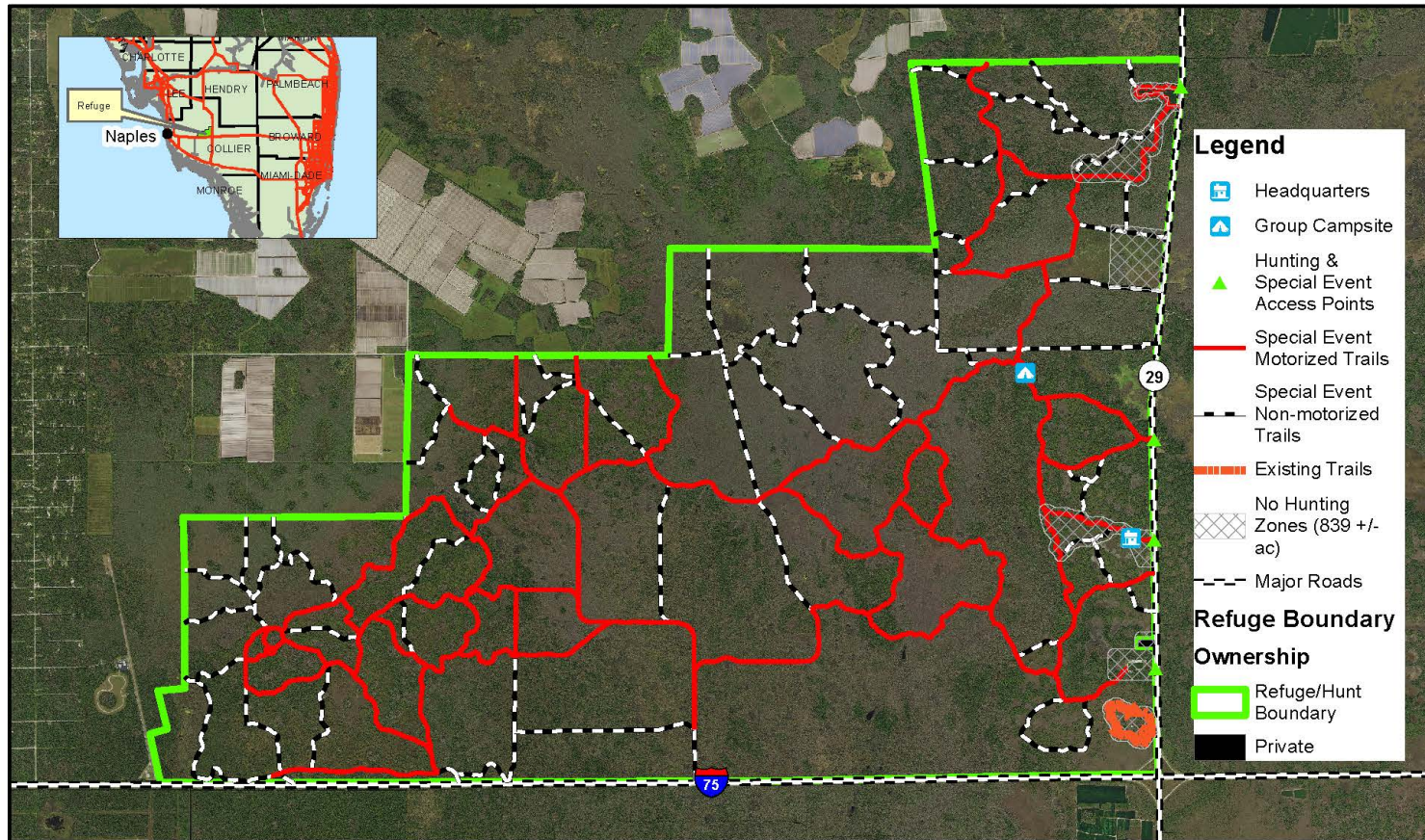
This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

**Figure 17. Hunt and Special Event Trails and Access Points**



U.S. Fish & Wildlife Service

Proposed Hunt and Special Event Trails & Access Points



Produced by Mark Danaher/USFWS/Florida Panther NWR  
 Immokalee, FL  
 Produced September 16, 2020  
 Base map: 2020 Collier County Aerial Imagery  
 File: VSP Alternative B.mxd

0 0.75 1.5 3 Miles



Datum: NAD 83

The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.

This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

## **B. SPECIES TO BE TAKEN, HUNTING PERIODS, HUNTING ACCESS**

### *Hunting*

Florida hosts two subspecies of wild turkey: Eastern and Osceola. The species found on Florida Panther NWR is the Osceola wild turkey. The Osceola lives on the Florida peninsula and nowhere else in the world, making it extremely popular with out-of-state hunters. It's similar to the eastern subspecies (found in the Panhandle), but tends to be a bit smaller and typically has a darker shade with less white barring on the flight feathers of its wings. The white bars on the Osceola are narrower, with an irregular, broken pattern, and they don't extend to the feather shaft. It's the black bars of the Osceola that actually dominate the feather. In conjunction, secondary wing feathers also are darker. When the wings are folded across the back, the whitish triangular patch formed is less visible on the Osceola. Osceola feathers also show more iridescent green and red colors, with less bronze than the eastern (FWC 2008).

A limited Osceola wild turkey hunt will be held during three weekends of the Florida Spring Turkey Season, and only bearded turkeys will be harvested. The refuge hunt will adopt FWC regulations at nearby State Wildlife Management Areas, and also add federal regulations specific to the refuge (as outlined in Section IV.B of this Hunt Plan).

Three hunt weekends (2 limited/quota hunts and 1 limited family hunt weekend) are proposed. A Family Quota Permit is defined by FWC as a type of limited entry permit required for an adult and up to two youths age 8 to 15 to participate. The following information provides further details on specific information regarding these permits. The maximum number of quota permits that will be issued annually will not exceed 50 individual quota permits and 10 family permits consisting of 2 permits per family. However, Florida Panther NWR will monitor the turkey population and hunter access to allow for adaptive management in the number of permits issued annually. Every hunter (including out-of-state hunters) must comply with current FWC Hunter Education Certification law. Proof of certification, exemption, or possession of an apprentice license will be required to be carried by the hunter while in the field.

The bag limit will be one bearded turkey per hunt permit.

Baiting is prohibited. Shooting turkeys in roost trees is prohibited.

Legal weapons only include bows, crossbows, PCP air guns propelling a bolt or arrow, and shotguns using #2 or smaller shot size.

The refuge hunt area will be accessed through designated sites off State Road (SR) 29. General public use of the hunting area will be closed during the weekend hunts. Access to the entire refuge except for the areas detailed in Section IV.B. will be open to turkey hunting. Hunters will be provided maps showing trails and roads, access points, and designated parking areas for unloading off-road vehicles.

The use of ORVs (a 4-wheeled all-terrain vehicle or recreational off-highway vehicle including Swamp Buggies, ATVs, and UTVs) will be permitted on designated trails, when operated by individuals with a valid state driver's license, a valid hunting license and in

possession of all three required permits (as outlined in Section IV). Trails may be temporally closed due to high water events or other management needs. All other tracked vehicles, boats, and motorcycles will be prohibited on the refuge. Pre-hunt scouting on foot or bicycle will be allowed during daylight hours throughout the spring turkey season for permitted hunters only. The use of ORVs, tracked vehicles, vessels (except canoes or kayaks) or unlicensed and unregistered motorcycles is prohibited, except ORVs may be operated only by individuals participating in the limited entry/quota hunt. ORVs will be operated by participants in the limited entry/quota hunt and operated only on designated roads/trails/firebreaks 1 week prior to an individual's permitted hunt.

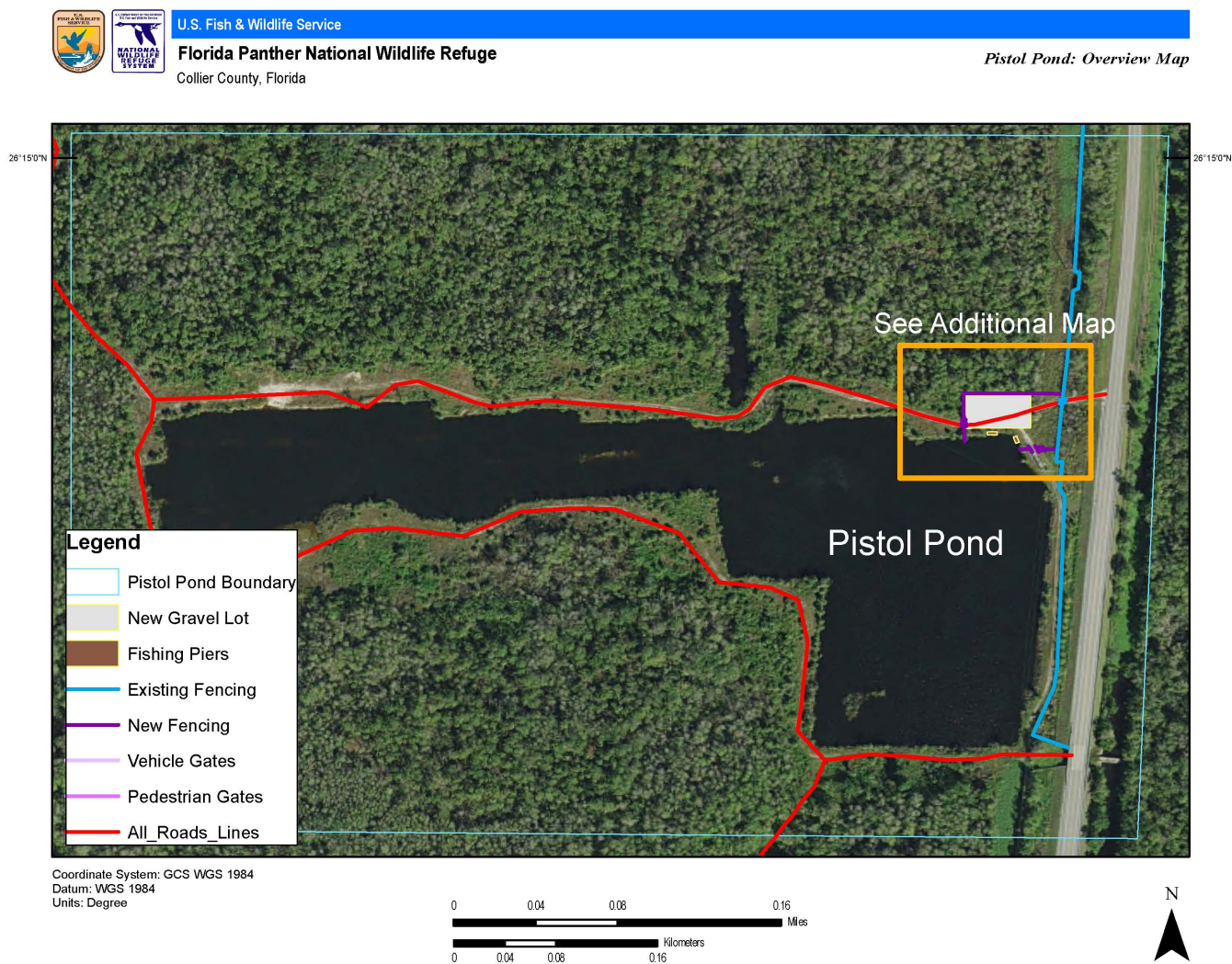
Licensed and permitted mobility-impaired hunters will be welcome during the Refuge Spring Turkey Hunts. Hunters requiring special provisions will need to contact refuge officials for additional details, and refuge officials will work with these hunters prior to the start of the spring turkey season to arrange for appropriate special provisions. Examples of special provisions may include the opening/closure of gated roads to allow mobility-impaired hunters to drive a vehicle further into the hunt area, and/or be afforded assistance by a non-hunting adult who is not otherwise authorized to participate in the hunt. If a public hunt participant informs refuge staff in advance that he/she has special needs or limitations, every reasonable effort will be made to address those concerns so the person may fully participate and have an enjoyable experience.

### *Fishing*

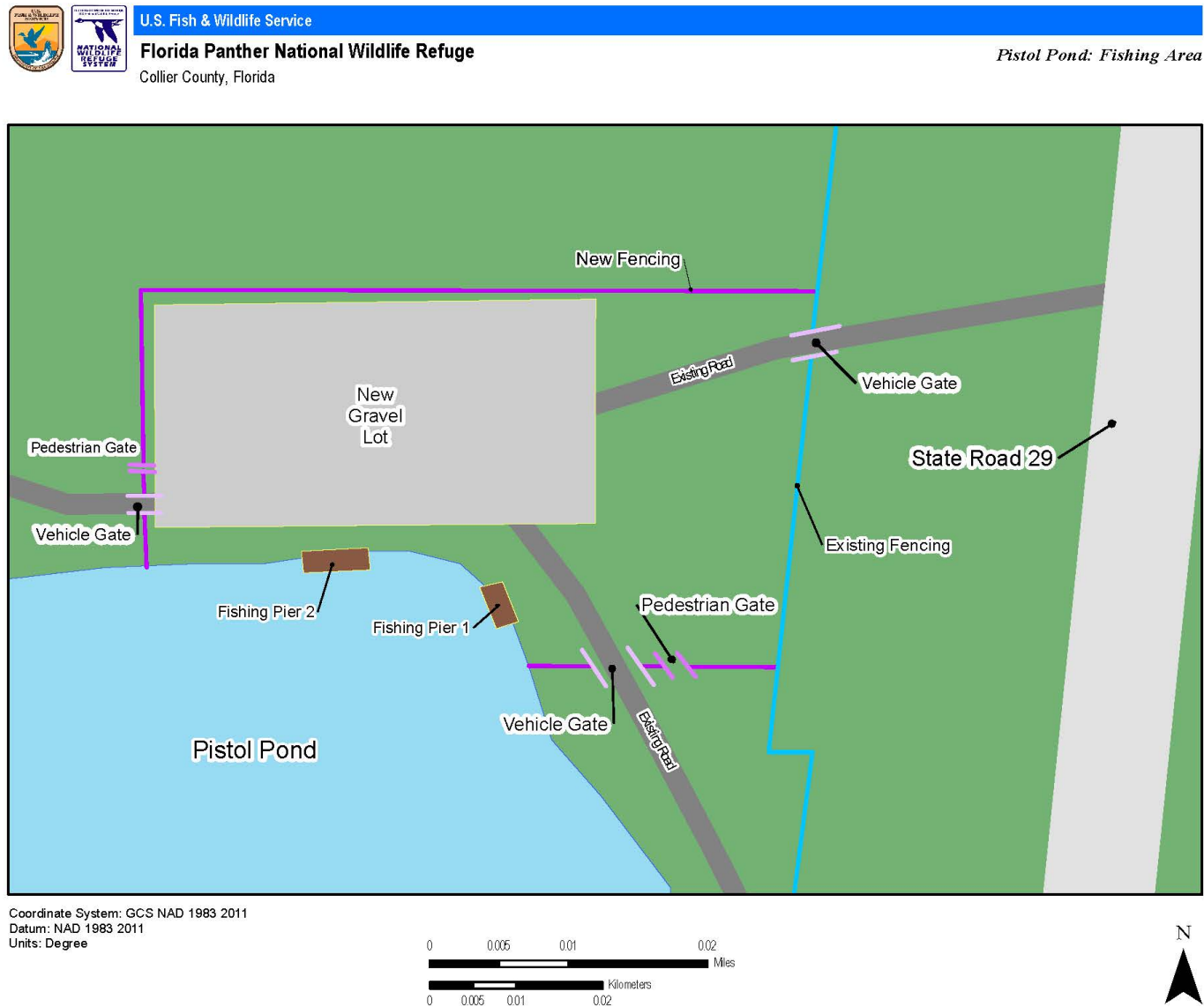
Previously, fishing has not been allowed at the Refuge. This Plan proposes adding 19 acres for fishing opportunities at Pistol Pond in accordance with existing State license requirements (Figure 3). Fishing at Pistol pond will be open year round sunrise to sunset and accessible through a gate in the Department of Transportation wildlife protection fencing along SR29 (Figure 4). A parking area on the northwest side of the pond will facilitate access to the fishing platforms and bank fishing surrounding the pond. Fishing regulations will align with current State regulations for species-specific requirements for freshwater fishing licenses and freshwater bag and length limits. Only attended hook and line fishing will be permitted in the harvest of fish species.

Based on previous sampling, both native and exotic species are available in Pistol Pond as catchable creel. Native species include bluegill (*Lepomis macrochirus*), largemouth bass (*Micropterus salmoides*), redear sunfish (*Lepomis microlophus*), warmouth (*Lepomis gulosus*), and brown bullhead (*Ameiurus nebulosus*). Exotic species include mayan cichlid (*Cichlasoma urophthlmus*), black acara (*Cichlasoma bimaculatum*), Oscar (*Astronotus ocellatus*), and spotted tilapia (*Tilapia mariae*). Prior sampling of some native species from Pistol Pond has revealed elevated mercury contamination in their flesh, and the refuge fishing brochure will reference check the FWC fish consumption advisory guidance in the Florida freshwater fishing guide (Richards et al. 1994).

**Figure 18. Fishing Area Map**



**Figure 19. Fishing Area Facilities Map**



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## **C. HUNTER AND ANGLER PERMIT REQUIREMENTS**

Hunters must carry a valid Florida Hunting License and Hunter Safety Certification Card, as applicable, when hunting on the refuge. Additionally, three permits will be required to hunt turkey at Florida Panther NWR, as listed.

1. The Florida Panther Refuge Hunt brochure (signed), available through the refuge and from participating local distributors.
2. The Florida Turkey Permit, purchased from FWC.
3. The Florida Spring Turkey Quota Permit issued by FWC

Anglers who are eligible to fish under Florida law will be eligible to fish at Pistol Pond. Anglers must possess a Florida fishing license as required and follow Florida state laws, limits, and refuge rules. There is no refuge permit required for fishing at Pistol Pond.

## **D. CONSULTATION AND COORDINATION WITH THE STATE**

The Service held a hunt coordination meeting with FWC on January 5, 2017 to discuss the development of this Plan. Additional meetings were held with FWC and other interested organizations and individuals during the public scoping for the refuge's CCP between 2014 and 2017.

Public scoping comments on the Comprehensive Conservation Plan (CCP) for Florida Panther National Wildlife Refuge (NWR, refuge) were accepted by the U.S. Fish and Wildlife Service (Service) through several different platforms including email, formal letters, comment cards at a public scoping meeting and an online public engagement platform on Mindmixer.com.

Annual consultation with the State will finalize refuge regulations to ensure that any changes are properly coordinated and all changes and hunt details will be detailed in the refuge's annual hunt brochure. When designing the refuge hunt, seasons and bag limits may be more restrictive on the refuge, but sideboards will not be more liberal than the seasons and bag limits set by the State.

The refuge will continue to work with FWC to ensure safe and enjoyable recreational hunting opportunities. Established hunter training, hunter ethics, and hunter responsibilities help ensure hunters continue to use good judgment related to humaneness and animal welfare.

## **E. LAW ENFORCEMENT**

The refuge's law enforcement program is organized and supervised by the South Florida Zone Officer. The zone has 10 Fish and Wildlife Officers working throughout the zone. FWC law enforcement also enforce all applicable State regulations on the refuge. Other law enforcement agencies such as Collier County Sheriff's Office and the National Park Service are additional resources available. Law enforcement in relation to this hunt plan will include field compliance checks for licenses, permits, legal means and methods, and legal equipment.

The following strategies will be used to manage public use and enforce regulations:

- The hunting and fishing areas will be clearly marked on maps;
- An orientation kiosk at hunter access points, and Pistol Pond parking area will feature a Refuge maps and brochures.

- A Refuge fishing brochure will provide a map of the fishing area and basic fishing information, including refuge specific rules.
- The Refuge website will provide information for anglers including links to State websites relative to regulations and obtaining fishing licenses;

## F. FUNDING AND STAFFING REQUIREMENTS

### *Hunting*

Expenses for conducting annual hunts will be borne through general refuge funds. The costs will include personnel costs to facilitate hunts, annual management planning and turkey monitoring, additional law enforcement patrols, early gate opening and closure, maintenance of boundary posting and gates, installing and maintaining information panels, posting and removing signs, preparing the hunt brochure, maintaining roads, and covering all related fuel costs. These annual costs are estimated to run about \$17,500. This costs estimate does not cover the cost of habitat management such as prescribed fire and invasive species management.

Fees from turkey hunting may annually average an estimated \$2,000; they could be higher, dependent upon permit costs and quota levels. Though this revenue amount is insufficient to cover the cost of managing the hunt program, the relatively low cost of this program can easily be covered using station funds. Some additional costs may be defrayed by cooperating with partners; for example, FWC may provide Law Enforcement Officer for patrols during hunts.

**Table 9. Funding and Staffing Requirements for hunting**

Identifier	Cost
Staff (Maintenance Workers, Biologist, and Refuge Managers)	\$6,000
Maintain roads, parking lots, trails*	\$3,000
News releases, fact sheets, and reports	\$500
Maintain signage	\$2,000
Law Enforcement	\$6,000
<b>Total Annual Cost</b>	<b>\$17,500</b>
*Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for trail/road maintenance on the refuge and are reflective of the percentage of trail/road use for hunting and fishing. Volunteers account for some maintenance hours and help to reduce overall cost of the program.	

### *Fishing*

There will be costs associated with the development of infrastructure to support fishing at Pistol Pond and it will invariably follow a phased progress plan. Following the Plan approval, a suite of site improvements will be implemented, including an improved entrance road with modified fencing, an unimproved gravel parking area, an initial fishing platform, and an orientation kiosk. This initial facility infrastructure will be sufficient for opening a safe fishing opportunity that could be used for special events such as The Annual Refuge Open House, National Public Lands Day, and a special purpose fishing day like the SW Florida Cooperative Invasive Species Management Area fish rodeo. This initial infrastructure will be available on a refuge managed schedule. When the Refuge budget is capable and staff time is available for coordinating development, a more complete development will include installation of a new automated gate,

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complete area signage, purchase and placement of recycling and trash containers, improved parking area (gravel and parking bumpers), additional fishing platforms, interior fencing around the parking area with additional access gates to the hiking trails, and a vaulted restroom facility. This complete development (\$164,000) will enable fishing year-round.

Refuge staff will work with Regional Archaeologist and Historic Preservation Officer Rick Kanaski and associated USFWS cultural resource preservation staff to ensure all improvements and their associated construction meet Section 106 compliance requiring federal agencies to consider the effects on historic properties of projects they carry out, assist, fund, permit, license, or approve throughout the country.

Annual costs to administer the fishing program at Pistol Pond, including salary, equipment, and maintenance, totals approximately \$10,000. Expenses will consist primarily of posting and maintaining “Public Fishing Area” signs, maintenance of the access road surfaces, law enforcement patrols, retrieval of monofilament line deposited in recycle containers, and production and dissemination of materials regarding fishing access and regulations.

**Table 10. Costs to Administer a Fishing Program at Florida Panther National Wildlife Refuge.**

Identifier	Expense
Kiosk & Signage	\$10,000
Vaulted restroom, trash & recycling containers, fishing platform(s)	\$100,000
Access improvements (gravel, gates)	\$25,000
Fencing (includes slide gate, maintenance of gate operator)	\$29,000
<b>Total infrastructure improvements</b>	<b>\$164,000</b>
Annual Maintenance (Parking lot, signs, fencing)	5,000
Law Enforcement (annual reoccurring)	\$5,000
<b>Annual Reoccurring Total</b>	<b>\$10,000</b>

#### IV. Conduct of the Hunting and Fishing Program

##### **A. HUNTER AND ANGLER PERMIT APPLICATION, SELECTION, AND/OR REGISTRATION PROCEDURES**

Turkey hunts will be managed through FWC’s Recreational License Issuance Services program. Applicants will be required to pay an application fee to FWC to enter the Limited Entry Hunts drawing, and this fee is non-refundable and retained by the State. All application periods open at 10 a.m. Eastern on the first day of the application period listed and available through 11:59 p.m. on the final day. Application periods and deadlines can be found at <https://myfwc.com/license/limited-entry/apply/>. Applications can be submitted online at GoOutdoorsFlorida by signing on and choosing “Apply for Limited Entry/Quota Permit” or by completing an application worksheet and presenting it to any [tax collector's office](#). Drawing results are typically posted within three business days of an application period closing, and most permits can be printed directly from an individual’s [GoOutdoorsFlorida](#) account.

Successful applicants who are drawn for the Limited Entry Hunt for turkey at Florida Panther NWR will be required to pay a federal user fee for each permit, which is collected by FWC and transferred to Florida Panther NWR. The federal user fee will be waived for all youth hunt participants (less than

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16 years of age). Fees generated through a recreation fee program will be used to defray some of hunt administration and management costs. Remaining costs will be paid for by administrative and visitor services refuge accounts.

Florida Panther NWR and FWC will monitor the turkey population on the refuge and hunter success to allow for adaptive management and reduce or increase the number of permits offered as needed for sound management. The maximum number of quota permits that will be issued annually will not exceed 50 individual quota permits and 10 family permits consisting of 2 permits per family.

Anglers are not required to obtain a refuge-specific fishing permit, but they must have in their possession a valid FWC fishing license.

## **B. REFUGE-SPECIFIC HUNTING REGULATIONS**

To ensure compatibility with refuge purposes and the mission of the Refuge System, hunting must be conducted in accordance with State and Federal regulations, as supplemented by refuge-specific regulations, and information sheets/brochures. Stipulations are detailed in the Hunting Compatibility Determination (Appendix C). The following hunting procedures apply at Florida Panther NWR:

We allow hunting of turkey on designated areas of the refuge subject to the listed conditions.

1. We require a valid Florida Panther National Wildlife Refuge Big Game Quota Hunt Permit purchased through the Florida Fish and Wildlife Conservation Commission. The quota hunt permit is a limited entry quota permit, and is nontransferable.
2. You must have a signed Florida Panther NWR Turkey hunt brochure, which is free and non-transferable.
3. Each limited quota permit is issued for the take of 1 bearded turkey. Family hunt/camp experience permits are issued for the take of 2 bearded turkeys.
4. We allow bows, crossbows, PCP air guns propelling a bolt or arrow, and shotguns using #2 or smaller shot size.
5. We require an adult, age 18 or older, to supervise hunters age 15 and younger. The adult must remain within sight and normal voice contact of the youth hunter.
6. Youth hunters and adults must both wear hunter orange clothing meeting or exceeding the minimum State requirements.
7. We prohibit the use of any bait for turkeys.
8. Hunters possessing a valid permit may access the refuge no earlier than 2 hours before legal sunrise and must leave the refuge no later than legal sunset.
9. We allow hunting from ½ hour before legal sunrise until 1 pm.
10. Only federally approved non-toxic shot is allowed.
11. We only allow permitted hunters participating in the limited entry quota hunt to operate ORVs (swamp buggies, ATV and UTV) on designate roads/trails/firebreaks
12. We allow permitted hunters to scout 7 days prior to the individual's permitted hunt
13. No turkey may be dismembered in the field or camp.

## **C. Refuge-Specific Fishing Regulations**

To ensure compatibility with refuge purposes and the mission of the Refuge System, fishing must be conducted in accordance with State and Federal regulations, as supplemented by refuge-specific regulations, and information sheets/brochures. Stipulations are detailed in the Fishing Compatibility Determination (Appendix C).

We allow fishing in designated ponds on the refuge subject to the following conditions:

- 
1. We allow fishing from legal sunrise to legal sunset.
  2. We only allow hook and line, we prohibit snatch hooks, cast nets, seines, trotlines, jugs, and yo yos.
  3. We prohibit fish cleaning on the refuge.
  4. We prohibit the take of frogs and turtles on the refuge.

#### **D. RELEVANT STATE REGULATIONS**

The refuge conducts the hunting and fishing program within the framework of State and Federal regulations. Hunting and fishing on the refuge is at least as restrictive as the State of Florida and in some cases more restrictive. Additionally, the refuge coordinates with the State as needed to maintain regulations and programs that are consistent with the State's management programs. All relevant refuge-specific regulations are listed above in Section IV, subsection B and C.

State Freshwater fishing regulations can be referenced here:  
<https://myfwc.com/fishing/freshwater/regulations/>

#### **E. OTHER REFUGE RULES AND REGULATIONS FOR HUNTING AND FISHING**

1. Regulations - Refuge-specific regulations will be provided to hunters in the form of an annual hunting brochure, posted signs, and through the general use of the State's WMA hunting regulations regarding bag limit and method of take.
  - a. The launching of non-motor and motorized boats from the refuge is prohibited. There are no boat launches on the refuge; launching boats from the bank will cause unacceptable erosion and harm to resources within on the refuge.
2. Equipment - Legal weapons for wild turkeys will be bows, crossbows, PCP air guns propelling a bolt or arrow, and shotguns using #2 or smaller shot size. Baiting is prohibited. Shooting turkeys in roost trees is prohibited. Only federally approved non-toxic shot may be used and possessed while hunting on the refuge.
3. License and Permits - All hunters must possess a valid State of Florida hunting license (or proof of exemption), a required State turkey permit, and a free refuge hunt brochure (signed). Hunters drawn from the quota lottery will receive an official letter and permit stating that they have been drawn to participate in this hunt.
4. Hunter Education Certification - Every hunter (including out-of-state hunters) must comply with current FWC Hunter Education Certification law. Proof of certification, exemption, or possession of an apprentice license will be required to be carried by the hunter while in the field.
5. Youth Hunting - Youth hunters must be accompanied by, and in the immediate presence of, a non-hunting mentor 18 years of age or older on the day of the permitted hunt.

#### **V. Public Engagement**

##### **A. OUTREACH FOR ANNOUNCING AND PUBLICIZING THE HUNTING AND FISHING PROGRAM**

A notice of intent to revise the existing 2000 CCP and prepare an EA was published in the Federal Register on April 23, 2014 (79 Federal Register 22697). At that time, the refuge launched

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an online community engagement website on Mindmixer.com under the domain [www.floridapantherplan.com](http://www.floridapantherplan.com) to start engaging the public on their ideas for future refuge management. The online engagement tool generated 71 individual ideas with 111 comments on those ideas for consideration, and generated 8,707 page views over 6 months of public scoping. In addition to this online engagement tool, we held a stakeholder informational meeting attended by local non-profit organizations with representatives from the Florida Wildlife Federation, Conservancy of Southwest Florida, Friends of the Florida Panther NWR, Collier Audubon, Big Cypress Sportsmen's Alliance, Sierra Club, Everglades Coordinating Council, South Florida Wildlands Association, and Florida Sportsmen's Conservation Association on July 11, 2014. A separate scoping meeting was conducted with representatives from local, State, and federal agencies on July 15, 2014. This was followed by a public scoping meeting on July 16, 2014 with 51 attendees. Comments were encouraged to be written and submitted by mail and email or through the online engagement website. A subsequent notice of intent was published in the Federal Register on July 21, 2014 (79 Federal Register 42349) extending the comment period an additional 60 days. A total of 4,778 comments were submitted at the public workshop, email, mail, and website and were used to inform the development of this VSP and EA.

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

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## **B. ANTICIPATED PUBLIC REACTION TO THE HUNTING AND FISHING PROGRAM**

With the addition of fishing and a limited turkey hunt, the refuge will be open to all six of the NWRs's priority public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education, and environmental interpretation). Based on the comments received during the public scoping period of the draft CCP (currently in-progress), including the visitor services program, opening additional hunting opportunities was requested by numerous individuals and hunting advocates. Many other individuals commented that hunting should not be allowed in the refuge. It is anticipated that the new hunting opportunities will be highly desirable and appreciated by consumptive users, while other organizations will remain opposed to any hunting access.

## **C. HOW HUNTERS AND ANGLERS WILL BE INFORMED OF RELEVANT RULES AND REGULATIONS**

The refuge has a list of local media contacts for all information bulletins. Hunting information and/or a link to the permitting site can be found on the Florida Panther NWR website. An information bulletin announcing all limited hunts, including the process and deadlines, will be sent to local newspapers. Minor administrative updates or changes to the Florida Panther NWR hunting program will be published in the annual refuge hunt brochure.

General information regarding turkey hunting and other public uses can be obtained at the Florida Panther NWR Headquarters at 12085 SR 29 S. Immokalee, FL 34142, by calling (239) 657-8001, or via email at [FloridaPanther@fws.gov](mailto:FloridaPanther@fws.gov).

Hunters may also get relevant information regarding hunter applications from FWC on [GoOutdoorsFlorida.com](http://GoOutdoorsFlorida.com).

## **VI. Compatibility Determination**

Compatibility Determinations for hunting and fishing were prepared and are available in Appendix C of this document.

## **VII. References**

Cherry, Michael J., Crawford, Daniel J., Engebretson, Kristin N., Abernathy-Conners, Heather N., Ellsworth, Hunter W., Stiffler, Lydia, L., Bled, Florent, Garrison, Elina P., Miller, Karl V., Warren, Robert J., Conner, Mike, and Richard B. Chandler 2019 South Florida Deer Study, Final Report to the Florida Fish and Wildlife Conservation Commission. Warnell School of Forestry and Natural Resources, University of Georgia. (South Florida Deer Project, Contract No. 14003).

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- U.S. Fish and Wildlife Service. 2000. Comprehensive Conservation Plan for Florida Panther National Wildlife Refuge. Atlanta GA.
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## APPENDIX B: Acronyms and Abbreviations

ADA	Americans with Disabilities Act
ATV	All-terrain Vehicle
AV	Audiovisual
BMP	Best Management Practices
CCP	Comprehensive Conservation Plan
CD	Compatibility Determination
CFR	Code of Federal Regulations
CEQ	Council on Environmental Quality
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
COA	Certificate of Authorization
CRADA	Cooperative Research and Development Agreement
DMU	Deer Management Unit
DOI	Department of the Interior
EA	Environmental Assessment
EAA	Everglades Agricultural Area
EE	Environmental Education
FAA	Federal Aviation Administration
FLREA	Federal Lands Recreation Enhancement Act of 2004
FOA	Finding of Appropriateness
FONSI	Finding of No Significant Impact
FP	Fishing Plan
FP&L	Florida Power & Light
FWC	Florida Fish and Wildlife Conservation Commission
GPS	Global Positioning System
HP	Hunt Plan
JROTC	Junior Reserve Officers' Training Corps
NCTC	National Conservation Training Center
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
NPS	National Park Service
NWR	National Wildlife Refuge
NWRSAA	National Wildlife Refuge System Administration Act
NWRS	National Wildlife Refuge System
ORV	Off Road Vehicle (ATV, UTV, Swamp Buggy)
PFD	Personal Floatation Device
Refuge	Florida Panther National Wildlife Refuge
RISE	Resources in Science Education
RV	Recreational Vehicle
SFWMD	South Florida Water Management District
SFESO	South Florida Ecological Service Office
STA	Stormwater Treatment Area
STEM	Science, Technology, Engineering, and Mathematics
SUP	Special Use Permit
UAS	Unmanned Aerial System
USC	United States Code
USDA-APHIS	U.S. Department of Agriculture-Animal and Plant Health Inspection
USFWS	U.S. Fish and Wildlife Service

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UTV  
VSP  
WCA

Utility Task Vehicle  
Visitor Services Plan  
Water Conservation Area

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## **APPENDIX C: Compatibility Determinations**

### **Florida Panther National Wildlife Refuge Compatibility Determination**

#### COMPATIBILITY DETERMINATION

USE: Bicycling (non-motorized)

REFUGE NAME: Florida Panther National Wildlife Refuge

DATE ESTABLISHED: June 20, 1989

#### ESTABLISHING and ACQUISITION AUTHORITY(IES):

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

1. Endangered Species Act of 1973 (16 U.S.C. §1534)
2. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
3. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

#### REFUGE PURPOSE(S):

The Florida Panther NWR (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

#### NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Refuge System Improvement Act of 1997, Public Law 105-57).

#### DESCRIPTION OF USE:

- a) ***What are the uses? Are they priority public uses?*** Recreational bicycling, including e-bikes, as a mode of transportation facilitates travel and access to the Refuge for priority public uses such as wildlife observation and photography. Bicycling is not a priority public use as defined by the National Wildlife Refuge Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997. Secretarial Order 3376 Increasing Recreational Opportunities through the use of Electric Bikes, directs the Service to determine the compatibility of use of e-bikes on NWRs. E-bikes are defined as;
- "Class 1 electric bicycle" shall mean an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour;
  - "Class 2 electric bicycle" shall mean an electric bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of 20 miles per hour; and
  - "Class 3 electric bicycle" shall mean an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour.
- b) ***Where would the uses be conducted?*** Bicycle use will be permitted on designated trails. Most visitors to the refuge who will use a bicycle could do so on newly designated trails identified in the FPNWR Visitor Services Plan (VSP). These trails are open daylight hours only. Refuge brochures and maps provide the public with the locations of visitor facilities and associated restrictions.
- c) ***When would the uses be conducted?*** Bicycle use will be permitted daily from Sunrise to Sunset year-round on designated trails and seasonally on seasonal trails.
- d) ***How would the uses be conducted?*** Access to refuge trails are open daily; the VSP also proposes some seasonal trails for hiking and bicycling to facilitate wildlife observation, photography, as well as hunting. The refuge may temporarily close access to trails for purposes of management activities (i.e. prescribed fire), or for occasions of unusual or critical conditions affecting land, water, vegetation, wildlife populations, or public safety. Organized rides and club rides involving more than 10 bicycles will be required to obtain a SUP as these large groups may require greater management to prevent negative interactions with other public users and wildlife.
- e) ***Why are these uses being proposed?*** Bicycling as a lone activity is not identified as a priority public use of the NWRS under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57). Bicycles are considered legal modes of transportation on local state and county roads. Like walking, bicycling can be used as transportation to wildlife observation and photography areas. Increasing numbers of visitors are using bicycles on the Refuge as a form of exercise.

#### **AVAILABILITY OF RESOURCES:**

Implementation of this use costs approximately \$3,000 per year including staff time and maintenance. Maintenance, periodic upgrades, and improvements to public use facilities and

roads will continue to be a major component of Refuge activities. The human resources to conduct a successful public use program will be provided by staff, volunteers, and partners. The Service will not have to provide upgraded facilities or require a significant commitment in staff to be able to provide bicycling opportunities. Annual requirements in time, materials and supplies needed to manage and ensure the success of this area can be obtained from within existing Refuge resources. Costs associated with the use of bicycling will be shared with those of Wildlife observation, photography such as maintaining roads and trails for public access. Less than 1 percent of staff time will be used to administer bicycle use.

Item	Cost
Refuge staff administration, oversight, scheduling	\$1,000
Maintenance	\$2,000
<b>Total Annual Costs</b>	<b>\$3,000</b>

Off-setting Revenue: None

### **ANTICIPATED IMPACTS OF THE USE:**

Disturbance can cause shifts in habitat use, abandonment of habitat, and increased energy demands on affected wildlife (Knight and Cole, 1991). Flight in response to disturbance can lower nesting productivity and cause disease and death. Hammitt and Cole (1998) conclude that the frequent presence of humans in "wildland" areas can dramatically change the normal behavior of wildlife mostly through "unintentional harassment." Seasonal sensitivities can compound the effect of disturbance on wildlife. Examples include regularly flushing birds during nesting or causing mammals to flee during winter months, thereby consuming large amounts of stored fat reserves. Hammitt and Cole (1998) note that females with young (such as white-tailed deer) are more likely to flee from a disturbance than those without young. Several studies have examined the effects of recreationists on birds using shallow-water habitats adjacent to trails and roads through wildlife refuges and coastal habitats in the eastern United States (Burger 1981; Burger 1986; Klein 1993; Burger et al. 1995; Klein et al. 1995; Rodgers & Smith 1995, 1997; Burger & Gochfeld 1998). Overall, the existing research clearly demonstrates that disturbance from recreation activities always have at least temporary effects on the behavior and movement of birds within a habitat or localized area (Burger 1981, 1986; Klein 1993; Burger et al. 1995; Klein et al. 1995; Rodgers & Smith 1997; Burger & Gochfeld 1998). The findings that were reported in these studies are summarized as follows in terms of visitor activity and avian response to disturbance.

Presence: Birds avoided places where people were present and when visitor activity was high (Burger 1981; Klein et al. 1995; Burger & Gochfeld 1998).

Distance: Disturbance increased with decreased distance between visitors and species (Burger 1986), though exact measurements were not reported. Approach Angle: Visitors directly approaching birds on foot caused more disturbance than visitors driving by in vehicles, stopping vehicles near birds, and stopping vehicles and getting out without approaching birds (Klein 1993). Direct approaches may also cause greater disturbance than tangential approaches to birds (Burger & Gochfeld 1981; Burger et al. 1995; Knight & Cole 1995a; Rodgers & Smith 1995, 1997).

Type and Speed of Activity: Joggers and landscapers caused birds to flush more than fishermen, sunbathers, and some pedestrians, possibly because the former groups move

quickly (joggers) or create more noise (landscapers). The latter groups tend to move more slowly or stay in one place for longer periods, and thus birds likely perceive these activities as less threatening (Burger 1981, 1986; Burger et al. 1995; Knight and Cole 1995a). Alternatively, birds may tolerate passing by with unabated speed whereas if the activity stops or slows birds may flush (Burger et al. 1995).

Noise: Noise caused by visitors resulted in increased levels of disturbance (Burger 1986; Klein 1993; Burger & Gochfeld 1998), though noise was not correlated with visitor group size (Burger & Gochfeld 1998).

This disturbance is minimized by the restricted area where the use will be allowed and the low intensity of users engaged in the activity is low. Speed of bicycles will be naturally slow due to the flat terrain and unimproved surfaces of limestone caprock and mud, thus minimizing the potential for any significant disturbance to wildlife.

Please provide information on how these disturbance will be minimized so as to be able to find the use compatible.

### **Cumulative Effects**

Due to the limitations, (e.g. only allowed on designated roads and trails) put on this activity; bicycle use is not expected to greatly increase the disturbance to wildlife. Cumulatively, high volumes of bike traffic will have a small effect on soil erosion. Mountain bike activities, off-trail, will be prohibited so as not to have any cumulative effect on vegetation. The quantity of trail miles provides abundant opportunity to the user at a low density of use from bicyclers and other users, therefore there is little conflict with other users anticipated. Collectively, impacts on visitor use and experience will be long term, and beneficial.

### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C),

determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

\_\_\_\_\_ Use is not compatible

\_\_\_X\_\_\_ Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

Bicycling will occur only in designated areas specifically developed to prevent the erosion and degradation of wetlands or water quality and ensure public safety.

Bicycles will be allowed to facilitate access for wildlife observation, photography or hunting on designated trails.

Bicycles will be prohibited on the Leslie Duncan memorial trail, due to the narrow width of the trail and conflict with other users.

Biking activities off designated trails will be prohibited.

Bicycle riding as a general mode of transportation will be allowed on designated trails.

Cyclists are allowed on the refuge from sunrise to sunset.

Organized rides and club rides involving more than 10 bicycles will be required to obtain a SUP as these large groups may require greater management to prevent negative interactions with other public users and wildlife.

**JUSTIFICATION:**

Hunting, fishing wildlife observation and photography, and environmental education and interpretation are the six priority public uses of the Refuge System, and have been determined to be compatible activities on many refuges nationwide. The Refuge System Improvement Act of 1997 instructs refuge managers to seek ways to accommodate those six uses. Bicycling is allowed as a means to facilitate these priority public uses. Bicycling activities when considered with the stipulations listed, will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the refuge was established and is based on sound professional judgement and best available science. Bicycling will not pose significant adverse effects on refuge resources; interfere with public use of the refuge; nor cause an undue administrative burden.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

### **LITERATURE CITED:**

#### References:

Burger, J. 1981. Effect of human activity on birds at a coastal bay. *Biol. Conserv.* 21:231-241.

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## **MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

### COMPATIBILITY DETERMINATION

USE: Camping

REFUGE NAME: Florida Panther National Wildlife Refuge

DATE ESTABLISHED: June 20, 1989

ESTABLISHING and ACQUISITION AUTHORITY(IES):

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

2. Endangered Species Act of 1973 (16 U.S.C. §1534)
3. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
4. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

REFUGE PURPOSE(S):

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- “... for the conservation of threatened and endangered species ...” (16 U.S.C. §1534) (Endangered Species Act of 1973)
- “... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- “... for the benefit and recovery of the endangered Florida panther ...” (Fakahatchee Strand Environmental Assessment 1985)

#### NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Refuge System Improvement Act of 1997, Public Law 105-57).

#### DESCRIPTION OF USE:

**(a) What is the use? Is the use a priority public use?** The use is overnight camping at McBrides Cabin. Camping is a new use and is not a priority public use of the National Wildlife Refuge System (Refuge System) under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), and the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57). Camping is a secondary use that facilitates and supports wildlife-dependent priority public uses including Hunting, wildlife observation and photography.

**(b) Where would the use be conducted?** The McBride's Cabin area will facilitate a group camp site in much of the same way the area was used prior to refuge establishment. This is the site of the Fakahatchee Conservation Club, which operated as a private hunting club for several decades. Remnants of the club include an old smoker pit bar-b-que structure and a fire pit with concrete apron. No permanent restrooms or drinking water sources exist in the area.

**(c) When would the use be conducted?** Camping will be allowed during the family wild turkey hunt for those with a quota permit. Campers will be allowed to set up camp no earlier than noon on the Friday before their permitted family hunt and must remove all camp gear no later than 5:00 PM on the Sunday of the hunt. Small groups of Boy and Girl scouts will also be permitted to camp at McBride's Cabin, December- February for a maximum of 2 nights with a Special Use Permit.

**(d) How would the use be conducted?** A limited semi-primitive overnight camping opportunity is proposed to facilitate the family wild turkey hunt and small scouting groups. McBride's cabin area is equipped with a fire ring, has a mowed grass surface, and port-a-potties. There is no water or power source at the area. Campers are limited to no more than 20 persons per night.

Access to the campsite will be possible by vehicle entering off State Road 29, and a parking lot at the campsite already exists. All campsites will be semi-primitive in nature, with no running water or electricity. Portable toilets are available on-site. Camping will be "pack-in/pack-out", therefore all trash and waste will need to be removed, since no trash receptacles or permanent bathroom facilities will be on site.

Campers will be required to stay on trails and use the designated camp areas to stay overnight. Overnight stays will be by Special Use Permit only, based on advanced reservations, and limited by number. Specific restrictions and guidelines will prevent visitors from becoming lost during their visit and reduce the number of emergency rescues by law enforcement staff. If mandatory rescue missions become too numerous, the camping experience will be modified or closed. Further stipulations may be made to assure wildlife and habitat is not disturbed, including ending the overnight option.

**(e) Why is the use being proposed?** Camping is a popular local and visitor recreational activity in Florida. While camping is not a wildlife-dependent recreational use, it supports greater

opportunity for hunting, environmental education, wildlife observation, and photography. The Refuge supports facilitating these opportunities for the community and visitors as it promotes the associated wildlife-dependent recreation. The use also support CCP Goal 4.0 to provide opportunities for compatible public use in accordance with the National Wildlife Refuge System Improvement Act of 1997.

Camping opportunities will allow each user group to learn about the greater Everglades ecosystem, the unique opportunity to observe by sight and sound nocturnal wildlife, observe celestial phenomenon away from urban light pollution, and an opportunity to recognize the uniqueness of the ecosystem.

### **AVAILABILITY OF RESOURCES:**

Annual costs for administering this use on the refuge including staff time, equipment, facilities, maintenance and monitoring is estimated at \$13,000. The resources necessary to provide and administer this use are available within current and anticipated Refuge budgets.

- a) Resources involved in the administration and management of the use: Refuge staff will need to prepare and administer permits. Federal Wildlife Officers will spend time enforcing Refuge regulations. This duty is already part of their everyday tasks and will not substantially increase his/her workload. Administration of SUPs associated with this activity consists of approximately 5 staff days or less than 1% of staff time.
- b) Special equipment, facilities, or improvements necessary to support the use: The Refuge will need to enhance the camping area.
- c) Maintenance costs: Refuge staff will need to maintain levee camping sites, canoe trails, and camping platforms. Staff and volunteers may spend around 12 hours a week performing this maintenance in support of camping, along with other refuge objectives and uses.
- d) Monitoring costs: Existing staff and volunteers monitor effects of current operations during the normal course of their duties such as mowing, trash pickup, wildlife surveys, or compliance checks by Federal Wildlife Officers.
- e) Offsetting revenue: A nominal fee will be associated with scout group camping permits ranging from \$50 to \$150. Hunting fees will also help offset the cost to administer a family hunt/camp weekend. We anticipate approximate \$2,000 annually will be collected from users to offset the costs activity.

Item	Cost
Refuge staff administration, oversight, scheduling	\$5,000
Refuge Managers – program oversight monitoring	\$3,000
Maintenance	\$5,000
<b>Total Annual Costs</b>	<b>\$13,000</b>

### **ANTICIPATED IMPACTS OF THE USE:**

Described below are the potential impacts of camping, as reported in the literature. Impacts may be locally significant, but are usually restricted to a relatively small area (i.e., the campsite itself) (Marion and Cole 1996). Substantial impacts on vegetation and soil generally occur quickly, even with light use (Cole 1981).

**Soil:** Camping results in soil compaction. It may reduce or remove the organic litter and soil layer and run-off, and soil erosion may increase. Those changes affect soil invertebrates and microbial processes, as well as inhibit plant growth. Fine-textured soils are particularly susceptible to compaction.

**Vegetation:** Trampling resistant vegetation (often grasses or exotics) tend to replace existing understory vegetation (forbs) (Marion and Cole 1996). The indirect effects of vegetation disturbance include microclimate changes and increased erosion. The extent of camping impacts on vegetation is generally related to the frequency sites are used, their durability, and group size (Cole 1995). Larger groups are usually responsible for enlarging campsites more than small groups (Cole 1992, Marion 2003). Campsite enlargement is particularly a problem when campsites are located on flat, open sites. Campers may also enlarge the affected area by developing multiple, uncontrolled “social trails” between tents, to water sources, to viewing points, or favored fishing locations. Some visitors have a much greater impact on vegetation than others, because they may cut down vegetation, dig trenches around tents, and otherwise modify the sites. Many of these potential impacts will be mitigated with this proposal given that there is only one large group campsite available and it will be limited in tents/visitor numbers. These effects are also mitigated by the general disturbance and use of the site throughout the last 50 years as it operated as a hunting camp for the Fakahatchee Hunt/Gun Club prior to the refuge’s establishment.

**Wildlife:** Camping can alter or destroy wildlife habitat, or displace wildlife from proposed habitat or resources (food, water, nest sites). Camping may also modify or disrupt wildlife behavior. Larger groups are generally more likely to disturb wildlife (Marion 2003). The restrictions on the number of tents and occupants should assist with limiting the level of impacts.

Disturbance related to camping may also affect wildlife health, fitness, reproduction, and mortality rates (Leung and Marion 2000). Indirect effects may include a change in vertebrate species composition near the campsite. Changes in vertebrate communities at campgrounds (as compared to control sites) have been reported for birds (Blakesley and Reese 1988, Garton et al. 1977, Foin et al. 1977, Knight and Gutzwiller 1995) and small mammals (Clevenger and Workman 1977). In the case of songbirds, changes in species composition were due primarily to a reduction in ground cover vegetation (for nesting, feeding) at campsites and different levels of sensitivity to human disturbance. Rarer species are generally absent from campgrounds. The presence of humans attracts some species, while others avoid it. The availability of food generally differs between campgrounds and undisturbed areas. Natural foods may decrease in availability, while foods supplied by humans may increase. Humans may intentionally supply foods to wildlife, or unintentionally, because of littering, accidental spillage, or improper food storage (Garton et al. 1977). Human foods may be unhealthy for wildlife or promote scavenging behavior, which may increase vulnerability of animals to predation. Rodent populations often increase at campsites, in response to increased availability of human food, and may negatively affect nesting songbirds. Alligators and other scavengers may be attracted to improperly stored food and may damage property or threaten visitor safety (Garton et al. 1977).

The Refuge will provide outreach to the public through the permitting process, to educate campers on how to avoid disturbing wildlife, the importance of not feeding wildlife, and proper food storage. Some disturbance to wildlife and habitat will initially occur with the construction of the sites, platforms, and development of a trail extension. Long-term disturbance will be minimal based on the amount of people permitted and number of campsites allowed in designated areas.

**Visitor Conflicts:** Litter, noise, large group sizes, and crowding may impair the Refuge experience for some visitors. A limited number of group camping permits will reduce conflicts with other users. Therefore, conflicts with other users are not anticipated to be significant. Public outreach may help reduce potential conflicts by reducing littering and promoting considerate camping. Overall, the impacts associated with this use will be confined to less than 2 acres of the Refuge, in the immediate vicinity of the campsite. Periodic closures, when warranted, and the stipulations listed below, should ensure that disturbance of wildlife and impacts on Refuge resources are minimal.

### **Cumulative Effects**

Cumulative camping impacts occur in areas that receive intensive repeated camping use where the proliferation in number of sites and expansion of the site's size can cause tree damage, loss of vegetation cover, and recreation of soils (Leung et al, 2004). Cumulative impacts are not anticipated on wildlife, their behaviors, or their habitat. Camping will occur on ruderal communities that can withstand repetitive use. Due to the low use, less than 20 nights per year, the cumulative effect of soil compaction and trampling of vegetation cover is minimal. Prior to the refuge's establishment, the campsite was used a hunting camp by the Fakahatchee Gun Club. Containing the campsite to a small 2-acre disturbed portion of the refuge also lessens the potential for negative effects associated with traditional camp grounds. The use is also contained to on specific seasons and by permitted users which offsets the concerns for the use to proliferate or expand to other more sensitive areas of the refuge.

### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State

Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

☐ Use is not compatible

☒ Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

The Refuge Manager may close campsites to prevent conflict with wildlife species, including threatened and endangered species. The Refuge Manager will limit all access to protect denning panther, or for other management purposes, when necessary.

1. Camping will only be allowed for permitted hunters during the Family/hunt camp weekend, and for scout groups of twenty (20) or less.
2. Camping is only allowed at the designated campsite at the Conservation Club (McBrides Cabin).
3. No wood gathering or vegetation removal will be permitted without a permit.
4. Feeding wildlife is not permitted.
5. All trash and waste must be carried out and properly disposed off-site.
6. Pets are not authorized.
7. The site is available on a first-come basis by permit.
8. The maximum length of stay is two nights.
9. The maximum number of people occupying the group campsite is twenty.
10. No fires are allowed outside of the fire ring.
11. A nominal fee will be associated with camping permits.

**JUSTIFICATION:**

Camping provides an increased opportunity for the public to participate in priority public uses in a remote setting. Providing the public with an opportunity to experience the Refuge wildlife and natural resources through camping, along with a public educational outreach program, will help motivate visitors to understand and develop a commitment to protecting healthy ecosystems. Experiencing the Refuge through camping and education are tools that can help build a land ethic and conservation support. The Refuge expects the impacts of camping on vegetation and wildlife to be minor and localized.

Based on the limited detrimental impacts of this use and the stipulations above, overnight camping at limited levels will not materially interfere with or detract from the mission of the Refuge System or the purposes for which the Refuge was established. This Compatibility Determination is based on the best available science and sound professional judgement.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

X   Environmental Assessment and Finding of No Significant Impact

       Environmental Impact Statement and Record of Decision

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Marion, J.L. and D.N. Cole. 1996. Spatial and temporal variation in soil and vegetation impacts on campsites. *Ecol. Applic.* 6(2): 520-530.

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**MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

**COMPATIBILITY DETERMINATION**

USE: Commercial Videography, Photography and Audio Recording

REFUGE NAME: Florida Panther National Wildlife Refuge

DATE ESTABLISHED: June 20, 1989

ESTABLISHING and ACQUISITION AUTHORITY(IES):

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

3. Endangered Species Act of 1973 (16 U.S.C. §1534)
5. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
4. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

REFUGE PURPOSE(S):

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States

for the benefit of present and future generations of Americans” (Refuge System Improvement Act of 1997, Public Law 105-57).

### **DESCRIPTION OF USE:**

#### **(a) What is the use? Is the use a priority public use?**

The use is commercial recording (digital or film) including videography, photography, and audio recording [collectively called “commercial recording” for the purposes of this compatibility determination (CD)]. Commercial recording is an existing economic use on the Refuge that is not a priority public use; however, it promotes and facilitates certain priority public uses. The use typically involves recording (both still and motion) wildlife or natural landscapes or recording natural sounds for commercial or educational purposes. “Commercial recording” means the film, electronic, magnetic, digital, or other recording of a moving image by a person, business, or other entity for a market audience that involves the advertisement of a product or service, the creation of a product for sale, or the use of actors, models, sets, or props (43 CFR 5.12). For the purposes of this definition, creation of a product for sale includes a film, video, television broadcast, or documentary of historic events, wildlife, natural events, features, subjects, or participants in a sporting or recreation event created for the purpose of generating income, such as for a documentary, television or feature film, advertisement, radio, print, audio, or similar project.

Recordings of a non-commercial nature are addressed under a separate CD for Wildlife observation, photography, environmental education and interpretation. Additionally, this CD does not apply to news media activities, which are regulated by 8 RM 16.

**(b) Where would the use be conducted?** The Refuge is comprised of 26,609 acres in the western side of the greater Everglades ecosystem. Natural communities found at the Refuge are characteristic of wetland habitats and include wet prairie, cypress swamp, hydric pine flatwoods and hardwood hammocks. The Refuge provides important roosting, foraging, and nesting habitats for many birds, mammals, reptiles, and amphibians. In addition to the various migratory birds and other wildlife commonly found in wetland habitats, keystone species that inhabit the Refuge include Florida Panthers, alligators, white-tailed deer, Wild turkeys, bobcats, wading birds, and secretive marsh birds. Threatened or endangered species that regularly utilize the Refuge include the Florida Panther, Audobon’s Crested Caracara and woodstorks. The specific locations of the use will be detailed in each special use permit.

**(c) When would the use be conducted?** Recording may occur year-round during the public operating hours of the Refuge, may take from one day to multiple days, and may involve multiple periods throughout the year. Requests for nighttime or after hours recording will be considered on an individual basis and reviewed carefully to minimize impacts on wildlife. Requests for recording during periods of nesting for threatened or endangered species or shore birds may be denied, scheduled to a more appropriate time, or permitted with a SUP outlining additional restrictions to maintain compatibility.

**(d) How would the use be conducted?** Commercial recording projects are required to apply for a SUP reviewed by the Refuge Manager. Special needs (e.g. access to closed areas or night recording) will be considered on a case-by-case basis, are subject to the Refuge Manager’s approval, and may include a secondary component negotiated to ensure compatibility (if appropriate). All SUPs will have outlined the conditions in which the use can be conducted, and Refuge staff will ensure that each permittee maintains compliance with the SUP. A diversity of equipment may be used to record images and sounds, which may also include unmanned aerial

systems (UAS or drones). The use of UAS may be authorized when in compliance of FAA regulations and with stipulations included in the SUP. Use of UAS will be conducted according to the USFWS 603 FW 1 (Appropriate Use), 50 CFR 27.34 (Harassment of Wildlife) and other applicable laws, regulations and policies. Access around sensitive resources (e.g. wading bird colonies, bald eagle nest sites, snail kite nests) may be granted and shall require Refuge staff accompaniment to ensure protection of the resources from inadvertent harm or harassment. Recording activities may occur in publicly accessible areas via biking, hiking, motorboat, kayak, canoe, or other approved means. The Refuge Manager may approve other requested modes of travel if deemed appropriate and compatible. Recording in areas closed to the public may require staff or their designees to be present to escort the group via approved modes of transportation when resources are available. "Still photography" conducted on lands managed by Department of the Interior (DOI) agencies requires a permit when it involves models or props that are not a part of the site's natural or cultural resources or administrative facilities, or when it takes place at a location where members of the public generally are not allowed, or where additional administrative costs are likely. The land use fee for still photography will apply only to still photography that requires a Special Use Permit (SUP).

Commercial recording is guided by the following policies:

- 16 U.S.C. 668dd, 50 CFR 27.71. Motion or Sound Pictures The taking or filming of any motion or sound pictures on a national wildlife refuge for subsequent commercial use is prohibited except as may be authorized under the provisions of 43 CFR part 5.
- 16 U.S.C. 668dd, 50 CFR 27.97. Private Operations Soliciting business or conducting a commercial enterprise on any national wildlife refuge is prohibited except as may be authorized by special permit.
- 16 U.S.C. 668dd, 50 CFR, Subpart A, 29.1 Allowing Economic Uses on National Wildlife Refuges. We may only authorize public or private economic use of the natural resources of any national wildlife refuge, in accordance with 16 U.S.C. 715s, where we determine that the use contributes to the achievement of the national wildlife refuge purposes or the Refuge System mission.
- 8 RM 16, Audio Visual Productions 5 RM 17, Commercial & Economic Uses on National Wildlife Refuges
- 43 CFR Part 5, Making Pictures, Television Productions or Sound Tracks on Certain Areas Under the Jurisdiction of the Department of the Interior
- Public Law 106-206, Commercial Filming

Commercial recording projects that are in support of conservation, Refuge purposes, the National Wildlife Refuge System (NWRS) mission, or for educational and interpretation purposes will be given first priority. Other filming may be approved if it does not interfere with Refuge operations or the Refuge's mission and goals. Requests that do not directly support these will be considered on a case-by-case basis to see if a secondary component can be considered to ensure compatibility and appropriateness

**(e) Why is the use being proposed?** This use is an existing use being re-evaluated on the Refuge. Commercial recording activities have been an approved use on the Refuge since the early 1990's, re-evaluated and deemed compatible in 2000 (USFWS 2000). Since the previous analysis, environmental conditions have not changed substantially. The USFWS provides the general public opportunities to participate in compatible wildlife-dependent recreation to appreciate the value of and need for fish and wildlife conservation. Commercial recording endeavors can be an excellent platform for exposing young people and urban dwellers to the unique sounds of the marsh, the beauty of nature, and the unique settings of the Refuge.

Because of their accessibility to major urban areas, the Refuge is attractive to commercial operations. This CD updates and replaces the Refuge's 2000 CD for Commercial Filming (USFWS 2000).

### **AVAILABILITY OF RESOURCES:**

Resources required for implementation of this use on the refuge are estimated at \$9,000 annually including staff time, monitoring and enforcement, and maintenance. Issuing and monitoring SUPs for this use is within the resources available through the Visitor Services program at the Refuge, Law Enforcement personnel, and/or the Refuge Manager of the Refuge. Based on the history of requests and number of SUPs in relation to this activity, the Refuge has sufficient resources for managing current and expected levels of uses associated with commercial recording.

*Resources involved in the administration and management of the use* – Staff responsibilities for projects by non-USFWS entities will primarily be limited to the following: review of proposals, preparation of permits and other compliance documents (e.g., Section 7 of the Endangered Species Act of 1973, Section 106 of the National Historic Preservation Act), and monitoring of project implementation to ensure that impacts and conflicts remain within acceptable levels (compatible) over time. Compliance with the terms of the permit is within the regular duties of Refuge staff and law enforcement officers. It is assumed that the permittee will provide appropriate support staff, equipment, and resources to accomplish tasks and objectives. If a permittee will need assistance from Refuge staff, the permittee must request the assistance in writing when applying for the SUP. Staff and resource availability will be determined by the Refuge Manager based on current Refuge priorities and work plans. The Refuge will not directly supply personnel or equipment for the use unless arrangements have been made prior to the issuance of the SUP and the Refuge Manager has deemed it to benefit of the Refuge. Administration of SUPs associated with this activity consists of approximately 10 staff days or less than 3 percent of staff time.

*Special equipment, facilities, or improvements necessary to support the use* – None proposed.

*Maintenance costs* – None. Maintenance that may be associated with this use is already performed by staff and/or volunteers throughout the year, during the normal course of their duties. Examples include mowing, trail/levee maintenance, signage, parking areas, structure maintenance (observation blind, kiosks, boat ramps, boardwalks). This use should not incur any additional maintenance needs. Staff and volunteers spend around 30 hours a week performing this maintenance in support of multiple Refuge objectives and uses.

*Monitoring costs* – None. Existing staff monitors effects of current operations during the normal course of their duties such as compliance checks of permit conditions and periodic inspections by staff. Voluntary evaluations are provided to teachers and visitors for feedback on educational programs and experiences.

*Offsetting revenue* – Fees associated with the SUP will be determined and assigned on a case-by-case basis, which will likely offset any incidental costs incurred. The proposed fee schedule for Commercial Filming and Photography may be used as guidance (Congressional Research Service 2014). Special Use Permits associated with this use starts at \$150 and additional fees may apply depending on the level of oversight or government resources needed to administer the special use. We anticipate less than \$1000 per year will be generated to offset the expense.

Item	Cost
Refuge Biologist administration and oversight	\$3,000
Refuge Managers – program oversight monitoring	\$4,000
Maintenance	\$2,000
<b>Total Annual Costs</b>	<b>\$9,000</b>

### **ANTICIPATED IMPACTS OF THE USE:**

Any public use activity has the potential for impacts; however, the Refuge attempts to minimize any potential impacts to negligible or acceptable limits for all uses allowed. Possible impacts from this use include disturbance to nesting and resting birds and disturbance to other wildlife and visitors. The potential to disturb any threatened or endangered species on the Refuge during this use is extremely low, unless they are a focus of the product, in which case, further review will be required and addressed in the issuance of a SUP. Commercial recording can result in both positive and negative impacts. Conducting this use will cause negligible or short-term impacts to localized soils and waters, and may cause short-term impacts/disturbance to flora or fauna. This use should not result in long-term impacts that adversely affect the purposes for which the Refuge was established or alter any existing or proposed uses as stipulated in its Comprehensive Conservation Plans (CCP).

Some requests may require further analysis of the impacts of the proposed activity which may also require additional compliance with the National Environmental Policy Act (NEPA) and consultation under any other relevant laws. It is important to note that wildlife recording by professionals or amateurs can often cause disturbance depending on the manner in which it is pursued. SUP conditions and associated monitoring of permitted activities will be designed to minimize wildlife and habitat impacts of this use.

Wildlife photography can negatively impact wildlife by altering wildlife behavior, reproduction, distribution, and habitat (Purdy et al. 1987, Knight and Cole 1995). Of the wildlife observation techniques, photographers tend to have the largest disturbance impacts (Klein 1993, Morton 1995, Dobb 1998). While wildlife observers frequently stop to view species, wildlife photographers are more likely to approach wildlife (Klein 1993). Even a slow approach by photographers tends to have behavioral consequences to wildlife species (Klein 1993). Other impacts include the potential for photographers to remain close to wildlife for extended periods of time in an attempt to habituate the wildlife subject to their presence (Dobb 1998), and the tendency of casual photographers, with low power lenses, to get much closer to their subjects than other activities will require (Morton 1995), including wandering off trails. This can result in increased disturbance to wildlife and habitat and/or trampling of vegetation. Klein (1993) recommended that Refuges provide observation and photography blinds to reduce these disturbances by visitors. Lighting for nighttime recording could potentially impact wildlife, including disorienting, momentary blindness, migration (in birds), circadian rhythms, preventing movement through the landscape, and even melatonin production to name a few (NIH 2017).

This use will have minimal impacts to water quality because commercial recording will be managed in a way that ensures minimal physical disruption to natural resources. Unless required by the production, commercial recording will be conducted in areas away from waterways and bodies of water. In instances where close proximity to water is required, stringent permit conditions and careful monitoring will limit impacts.

UAS/Drones are increasingly being tested or used as wildlife management tools across the globe (Goebel et al., 2015; Hodgson et al., 2013; Koh and Wich, 2012; Mulero-Pazmany et al., 2014; Sarda-Palomera et al., 2011). Yet, the science regarding wildlife effects associated with use of UAS remains young. Vas et al. (2015) studied the behavioral effects of a quadricopter drone on mallards (*Anas platyrhynchos*), flamingos (*Phoenicopterus roseus*), and common greenshanks (*Tringa nebularia*). The birds had no significant reactions to different drone speeds or different colored drones, and there appeared to be no cumulative effects of successive flights. Also, the birds had very little reaction to lower approach angles, but consistently reacted when the drones approached from directly overhead. These results are consistent with those of Sarda-Palomera et al. (2011) who monitored the effects among gulls of a UAS used for population monitoring; and with results of Goebel et al. (2015) who found no reaction among penguins or seals of UAS used for population monitoring. More powerful drones of larger size that make more noise may have a greater effect on birds and other wildlife. In addition to reviewing potential impacts on wildlife species in general the Refuge staff initiated a consultation with the South Florida Ecological Services Field Office. With the implementation of Best Management Practices (BMP), a no effect determination was found to be appropriate and no further consultation was needed under section 7 of the Endangered Species Act. The above determination can be found in a "Note to File" Memorandum in the Refuge digital files. BMPs include, but are not limited to, following the recommended buffers around all nesting sites during flight operations, conducting flights outside of nesting season if required, and systematic review of all photography or video documentation taken during flights. Should any unanticipated behavior be observed indicating adverse effects, the project approach will be reassessed and a Section 7 consultation will be initiated immediately.

Commercial activities may also result in long-term beneficial impacts to the visitor experience. Indirectly, the products (films, photographs, and educational media) of these activities will expose more people to the purpose, mission, and resources of the Refuge. Commercial operators could bring new visitors to the Refuge and enhance the experience of repeat visitors by providing them with high quality, environmental education, interpretation, wildlife photography, and wildlife observation programs. These activities will increase the participant's understanding and appreciation of wildlife and their habitat as well as the role of the NWRS in resource conservation.

### **Cumulative Effects**

Cumulative impacts may be seen from the combination of uses on the refuge including hunting, wildlife observation, photography, education, interpretation, habitat management and research. Conflicting programs that occur in the same space and time can cause decreased satisfaction from user groups and increase disturbance to wildlife from frequent human visitation, consumptive or non-consumptive. Management actions such as prescribed fire, water management and timber management are necessary aspects of refuge management but may not be compatible with hunting activities. Likewise, research which may require undisturbed areas to allow scientific rigor. The refuge considers all uses as activities are planned on a yearly basis and programs are structured to allow multiple uses with high quality while not overlapping. Hunting seasons and locations allow for hunters to pursue this public use while other uses may be located in other areas of the refuge or at other times to reduce conflicts.

There are no anticipated adverse cumulative impacts resulting from commercial recording. This activity will result in beneficial cumulative impacts by increasing public awareness about conservation issues and the NWRS. Ultimately, this will benefit the USFWS's mission, the Refuge purposes, and the Refuge visions.

**PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

☐ Use is not compatible

☒ Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

Each request must comply with Special Conditions attached to the SUP to ensure compatibility. At minimum, the following standard SUP Special Conditions will be included. Additional stipulations can and will be identified for each individual request in the SUP. The Refuge will modify or eliminate any use that results in unacceptable impacts.

1. Any person(s) or entities conducting a commercial recording operation on the Refuge must possess a SUP issued by the Refuge Manager. This requirement ensures that private businesses are not unfairly making a profit from public lands and provides a mechanism to regulate where and when commercial activities occur.

2. Permittee shall provide a detailed written proposal on company letterhead including specifics such as site-specific location, support equipment, number of persons involved, client name, description of the project theme and key messages, and other details that will allow for evaluation of the project.
3. All activities must comply with 8 RM 16 and 43 CFR, Subtitle A, Section 5.1 and may require completion of a Commercial Audio-Visual Production Application and posting of a bond.
4. The permit is not transferable except for sub-contractors that have contact information included with the permit.
5. Production company must give at least a 72-hour advance notice of recording date following issuance of an SUP.
6. Failure to comply with all SUP conditions may result in the suspension or revocation of the permit, including the possible loss of future SUP privileges. Permit fees are not refundable.
7. The Refuge reserves the right to postpone or cancel any activity that may interfere with public safety or Refuge management activities.
8. Permittee must have the SUP in their possession at all times while on the Refuge. A copy of the permit must also be prominently displayed on the dash of permittee's vehicle(s) at all times while on the Refuge. The permit must be presented to Refuge personnel upon request.
9. Permittee's vehicle(s) must remain on designated roads and be parked in designated Refuge lots.
10. Recordings taken in areas of the Refuge closed to the public may require staff or their designees to be present to escort the group.
11. Production company will limit the crew size to the smallest number possible and necessary for recording.
12. Permittee(s), designated representatives, and associates will comply with all Refuge rules, regulations, and the conditions of the SUP as provided by the Refuge Manager.
13. Production activities will be conducted so as not to impact or interfere with the resource. Plants and animals will not be disturbed, harassed, or injured. Any damage to landscape (tire rutting, damage to plants, etc.) or facilities will be repaired at the expense of the permittee and to the satisfaction of the Refuge Manager within ten working days after expiration of the permit.
  - a. No domestic or foreign plants or animals will be introduced into the Refuge.
14. Permittee is responsible for acquiring and/or renewing any necessary state and federal permits prior to beginning or continuing the project.
15. Additional stipulations and documentation may be required when requesting the use of drones.
16. Staging of equipment for use on the project must be approved by the Refuge Manager.
17. All methodologies, e.g., aerial photography via drone or helicopter, must be requested and approved through the SUP process prior to recording.
18. Permittee will be responsible for keeping the Refuge clear of all associated trash or litter.
19. All disturbances, including light and sound, should be minimized to the greatest extent possible.
20. Disturbing, injuring, destroying or collecting or attempting to disturb, injure, destroy or collect any plant or animal is prohibited without specific written permission from the Service.
21. Permittee will not capture or retain wildlife without specific written permission from the Service, as well as having all required permits.

22. Permittee will not clear, trim, cut, or disturb vegetation nor erect any facilities or structures, whether temporary or permanent, without written approval of the Refuge Manager.
23. Priority consideration is extended to producers of wildlife and natural resource related audio or visual materials. Producer's credentials will be verified by the appropriate Refuge personnel.
24. Production activities will be conducted so as to minimize impact or interference with Refuge visitors, public use programs, wildlife or natural and/or cultural resources within the Refuge.
25. If a prop firearm is used, it must be clearly identified as a prop and kept cased when not in use.
26. Permittee may be required to provide public safety assets such as crowd or traffic control in coordination with the Refuge Manager.
27. Proper credit will be given for all commercial recording, including commercial recording of images and sounds collected on the Refuge. Permittee will give credit to the DOI, USFWS, and Refuge through the use of an appropriate title or announcement. The use of the logo of the USFWS will be consistent with the purpose, mission and goals of the USFWS, as well as any and all applicable laws, and will only be used with permission from the Service. It is not permissible for use of the logo in any combination with the business products or services of the permitted company or its subsidiaries, brands, affiliates, partners, or customers. The permitted company shall take all reasonably necessary steps to avoid endangering the validity or goodwill of the logo and use all reasonable efforts to maintain the validity and distinctiveness of the logo and to enhance the goodwill symbolized by the logo.
28. The USFWS is not responsible for any mishaps or injuries that may occur during recording and associated activities. The permittee acknowledges and agrees to provide appropriate safety equipment and training to all people participating in the recording and associated activities with regard to hazards likely to be encountered on the Refuge.
29. Permittee assumes full responsibility for themselves, their associates, and their representative's production equipment and gear in the event of loss or damage. Permittee agrees to strictly follow safety procedures and any other protocols as requested orally and in writing by USFWS employees. Failure to follow any protocols, oral or written, may result in immediate termination of the issued SUP. Should a situation occur in which USFWS deems participation by permittee and associates as inappropriate or unsafe, the permittees and associates shall immediately defer to any and all instructions given by USFWS. Attendance and participation to all safety briefings given by USFWS will be required by permittee crew members for the shoot because of the nature of the equipment involved.
30. Permittee shall provide the Refuge Manager with a copy of the final product of the commercial recording project within 180 days of completion of the project.
31. Footage shot with the assistance of the USFWS shall not be reused for or sold to other production companies without specific USFWS government approval.
32. Indemnification: The permittee shall save, hold harmless, defend and indemnify the United States of America, its agents, and employees for losses, damages, or judgments and expenses on account of fire or other peril, bodily injury, death, or property damage, or claims for bodily injury, death, or property damage of any nature whatsoever, and by whomsoever made, arising out of the activities of the permittee, its employees, subcontractors, or agents under this SUP.
33. Insurance

- a. The permittee shall purchase at a minimum the types and amounts of insurance coverage as stated herein and agrees to comply with any revised insurance limits that the Refuge Manager may require during the term of this SUP.
  - b. Upon request of the Refuge Manager, the permittee shall provide a statement of Insurance and Certificate of Insurance.
  - c. The U.S. Fish and Wildlife Service will not be responsible for any omissions or inadequacies of insurance coverages and amounts if such prove to be inadequate or otherwise insufficient for any reason whatsoever.
34. Public Liability. The permittee shall provide comprehensive general liability insurance against claims occasioned by actions or omissions of the permittee or its designees in carrying out the activities and operations authorized hereunder. Such insurance shall be in the amount commensurate with the degree of risk and the scope and size of such activities authorized herein, but in any event, the limits of liability shall not be less than (\$300,000) per occurrence covering both bodily injury and property damage. If claims reduce available insurance below the required per occurrence limits, the permittee shall obtain additional insurance to restore the required limits. An umbrella or excess liability policy, in addition to a comprehensive general liability policy, may be used to achieve the required limits.
- a. All liability policies shall specify that the insurance company shall have no right of subrogation against the United States of America or shall provide that the United States of America is named an additional insured.
  - b. The permittee agrees that the U.S. Fish and Wildlife Service does not take any responsibility or liability for the security, loss, damage, or otherwise of any vehicle, machinery, equipment, or other goods or property owned by, or under the control of, the permittee.
35. All other Refuge rules and regulations remain in force.

Additional Special Conditions for UAS – the below conditions may be altered as new policies and directives are approved

- To minimize disturbance to plants, wildlife, and habitats, all UAS activities involving recording wildlife will be coordinated with the Senior Wildlife Biologist (or designee) or Refuge Manager. Specifically, the permittee(s) shall be very well organized, know exactly what they will do and how to do it before they initiate recordings.
- UAS activities may not occur within one-half mile of the Visitor Center, Refuge housing, , trails, observation tower or blind, and I without specific consent of the Refuge Manager.
- No threatened or endangered species may be monitored without appropriate federal or state permits and specific consent of the Refuge Manager.
- When the purpose of the project is to monitor wildlife during critical times (i.e. nesting), the use of UAS must be the less disrupting option than other methods of monitoring.
- Copies of the following documents are required at a minimum of 36 hours in advance of the first UAS flight:
  - Pictures and specs of the specific UAS platform employed.
  - A copy of the Federal Aviation Administration (FAA)-approved Certificate of Authorization (COA), Section 333 Exemption, or Remote Pilot Certification.
  - Aviation Risk Management or a Project Aviation Safety Plan document.
- UAS operators are responsible for meeting and following the minimum FAA rules and requirements in accordance with their certification: (a) keep the aircraft in sight (visual line-of-sight); (b) fly under 400 feet; (c) fly during daytime only; (d) fly at or below 100 mph; (e) yield right of way to manned aircraft; (f) do NOT fly over people, and (g) do NOT fly from a moving vehicle. Additional or varying stipulations may apply per the

specific certification being used. These regulations are subject to change and permittees are responsible for keeping apprised of regulation changes.

- Service personnel may be present for any UAS mission conducted on the Refuge.
- UAS operators shall report any wildlife disturbance to Refuge personnel and provide a narrative similar to a “white paper”, photography or videography (captured during the flight) within 3 days after completion of the UAS flight.
  - If there are any sensitive species in the area when performing any authorized activity, the activity shall cease until the animal(s) depart the area, except as permitted for specific management of that species.
  - During descent, the UAS operator will ensure that no sensitive species are in the retrieval area.
  - Interactions with birds and other wildlife will be closely monitored; should significant interactions occur, operations will be halted.
  - Wildlife impacts will be assessed and analyzed on site and protocols modified accordingly.
  - In the event of a bird strike, the UAS should immediately return to ground control station to remove the threat of disturbance and assess damage to the aircraft.
- In the instance of a crash, the UAS operator is responsible for reporting it per FAA policy and shall provide copies of any documentation to the Refuge.
- Additional special conditions shall be stipulated in the SUP as needed to further minimize impacts. If adverse impacts to Refuge resources associated with UAS activities are identified in future years, modifications to that part of the program in question will be implemented immediately to minimize that impact. All current or future Refuge specific rules and regulations apply to the proposed use.

#### **JUSTIFICATION:**

Compatible commercial recording in its various forms provides an excellent opportunity to inform and educate the public and promote the Refuge and the NWRS. Since production activities will be greatly limited, any disturbances associated with recording will be minimal and readily controlled through the proper selection of locations, timing of production, and stringent SUP conditions and monitoring. While commercial recording is a secondary public use, it may support and enhance the priority public uses of wildlife photography, environmental education, and interpretation. By allowing commercial recording, the public may gain a better understanding and appreciation for America’s flora and fauna, wildlife conservation, and the USFWS’s role in managing and protecting natural resources. Furthermore, permitting appropriate and compatible commercial recording is consistent with the goals of the NWRS, the intent and purposes of the Refuge, and supports the CCPs’ educational, interpretive, and recreational goals and objectives. The actions or effects of this use implemented with the stipulations identified are not expected to interfere with or detract from the mission of the NWRS nor diminish the purposes for which the Refuge was established. This use will not pose substantial adverse effects on Refuge resources, interfere with public use of the Refuge, nor cause an undue administrative burden. This activity is a compatible use of the Refuge. This CD is based on sound professional judgement.

#### **NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

### **LITERATURE CITED:**

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**MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

**COMPATIBILITY DETERMINATION**

USE: Commercial Tours (Wildlife Observation, Education and Interpretation Guiding and Outfitting)

REFUGE NAME: Florida Panther National Wildlife Refuge

DATE ESTABLISHED: June 20, 1989

ESTABLISHING and ACQUISITION AUTHORITY(IES):

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

4. Endangered Species Act of 1973 (16 U.S.C. §1534)
6. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
5. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

REFUGE PURPOSE(S):

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).

- “... for the benefit and recovery of the endangered Florida panther ...” (Fakahatchee Strand Environmental Assessment 1985)

#### NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

“The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Refuge System Improvement Act of 1997, Public Law 105-57).

#### DESCRIPTION OF USE:

- What are the uses? Are they priority public uses?*** Commercial tours for non-consumptive use directed toward environmental education, interpretation, and/or observation of wildlife and habitats is an existing, economic use on the Refuge. The use is not a priority public use; however, it promotes and facilitates several priority public uses. Commercial tours include, but are not limited to, wilderness excursions, wildlife observation/photography excursions, environmental education, and guided field trips. Non-consumptive commercial tours generally involve larger groups and more organized transportation services than other uses; therefore, they may be limited in size, type or number of commercial vehicles.
- Where would the uses be conducted?*** The Refuge is comprised of over 26,609 acres. Commercial tours that do not require a Refuge staff escort may be conducted in all areas open to the public. With proper notice, the Visitor Contact station, McBride’s cabin or other future facilities may be reserved.
- When would the uses be conducted?*** Tours may occur throughout the year during the public operating hours of the Refuge. Requests for tours near known locations of threatened or endangered species or during periods of nesting may be denied, scheduled to a more appropriate time, or permitted with a SUP outlining additional restrictions to maintain compatibility.
- How would the uses be conducted?*** Title 50, Code of Federal Regulations, 27.97, Private Operations, prohibits soliciting business or conducting a commercial enterprise on any national wildlife refuge except as may be authorized by special permit. Thus, commercial tours are required to obtain a SUP from the Refuge Manager. All SUPs will outline the conditions in which the use will be conducted, and Refuge staff will ensure that each permittee maintains compliance with the SUP. SUPs for commercial tours will be a minimum of \$150.00 per permit additional charges depend on the operation identified in the SUP application. Commercial tours in some circumstances may also require concession contracts, Cooperative Agreements, or Memorandums of Understanding. Commercial tours may be conducted by foot, or ORV ie swamp buggy. The use will be limited to 1 commercial tour per month.
- Why are these uses being proposed?*** The Service provides the public with opportunities to participate in compatible wildlife-dependent recreation to appreciate the value of and need for fish, wildlife, and plant conservation. Visitors participating in commercial tours are educated about the mission, habitats, and the ecosystem in such a manner as to leave them with a better understanding of resources. The experience can instill an appreciation for future stewards of the environment. Commercial tours can be an excellent interpretive activity, exposing young people, urban dwellers, and the community to the unique sounds of the marsh, the beauty of nature, and the distinctive setting of the Refuge and may expand the reach of the Refuge’s

environmental education programs. Commercial tours on the Refuge will benefit and promote the goals of the VSP.

#### **AVAILABILITY OF RESOURCES:**

Resources required to implement this use on an annual basis are estimated to cost \$11,000 including staff time, monitoring, and maintenance. Resources required for this use is within the resources available through the Visitor Services program at the Refuge. Refuge staff responsibilities for commercial tours will primarily be limited to the following: review of proposals, preparation of SUPs and other compliance documents (e.g., Section 7 of the Endangered Species Act of 1973, Section 106 of the National Historic Preservation Act), and monitoring of implementation to ensure that impacts and conflicts remain within acceptable levels (compatible) over time. It is necessary for the permittee to provide appropriate support staff, equipment, and resources to accomplish tour objectives. If a permittee will need assistance from Refuge staff, the permittee must request the assistance in writing when applying for the SUP.

Staff and resource availability will be determined by the Refuge Manager based on current Refuge priorities and work plans. The Refuge will not directly supply personnel or equipment for the proposed use unless arrangements have been made prior to the issuance of the SUP and the Refuge Manager has deemed it to benefit of the Refuge. Based on the history of requests and number of SUPs in relation to this activity, the Refuge has sufficient resources for managing current and expected levels of uses associated with commercial tours. Administration of SUPs associated with this activity consists of approximately 10 staff days or less than 3% of staff time.

Item	Cost
Refuge Management oversight and SUP	\$5,000
Habitat monitoring	\$3,000
Maintenance of roads/trails	\$3,000
<b>Total Annual Costs</b>	<b>\$11,000</b>

We estimate 10 commercial tour permits per year at \$150.00 each, totaling \$1,500.00 in off-setting revenue.

#### **ANTICIPATED IMPACTS OF THE USE:**

Short-term impacts may be realized to wildlife, vegetation, or soil including temporary damage resulting from trampling, disturbance to nesting birds, and disturbance to feeding or resting birds or other wildlife in the proximity. Consistent disturbance to wildlife may cause shifts in habitat use, abandonment of habitat, increased energy demands on affected wildlife, changes in nesting and reproductive success, and singing behavior (MacDonald 2015, Snetsinger and White 2009, Reed and Merenlender 2008, Gill et al. 2001, Miller et al. 1998, Gill et al. 1996, Schulz and Stock 1993, Knight and Cole 1991, Arrese 1987). Hammitt and Cole (1998) note that females with young are more likely to flee from a disturbance than those without young.

Several studies have examined the effects of recreationists on birds using shallow-water habitats adjacent to trails and roads through wildlife refuges and coastal habitats in the eastern United States (Burger 1981; Burger 1986; Klein 1993; Burger et al. 1995; Klein et al. 1995; Rodgers & Smith 1995, 1997; Burger & Gochfeld 1998). Hammitt and Cole (1998) conclude that

the frequent presence of humans in “wildland” areas can dramatically change the normal behavior of wildlife mostly through “unintentional harassment.” Overall, the existing research clearly demonstrates that disturbance from recreation activities always has at least temporary effects on the behavior and movement of birds within a habitat or localized area (Burger 1981, 1986; Klein 1993; Burger et al. 1995; Klein et al. 1995; Rodgers & Smith 1997; Burger & Gochfeld 1998).

Any public use activity has the potential for impacts; however, the Refuge attempts to minimize any potential impacts to negligible or acceptable limits for all uses allowed. In general, impacts from commercial tours will be similar to those expected from similar non-commercial recreational uses, however commercial uses could be more disturbing because commercial uses tend to occur in larger groups of people.

The refuge has network of firebreaks and trails that have a history of being used by refuge management and researchers using ORV's to gain access to remote parts of the refuge. Impacts on the vegetation community such as trampling and loss of plant material due to the use of ORVs could occur, however, will be minimal, and localized by using existing trails and firebreaks.

Regular off-road vehicle operation through sawgrass and wet prairie habitats creates trails, which are open areas where native vegetation is more sparse than surrounding areas due to physical disturbance and soil erosion (Pernas 1995; Duever et al. 1981; Duever et al. 1986). In a 2014 study within Big Cypress NP, an area with designated ORV trails, found that variations in panther distances to trails appear to be driven by hydrology rather than hunter ORV use. (McCarty et al 2014). The results of this study also suggest that hunter ORV use may have small effects on resource selection by male panthers, but does not appear to alter panther habitat use near trails, at the measured scale. (McCarty et al 2014).

The potential to disturb any threatened or endangered species on the Refuge during this use is extremely low, unless they are a focus of the tour, in which case, further review and oversight will be required by Refuge staff. This use should not result in long-term impacts that adversely affect wildlife, wildlife populations, or the purposes for which the Refuge was established. With a conservative approach in allowing this use on the Refuge, cumulative impacts on the habitat are expected to be minimal or negligible and within acceptable limits.

### **Cumulative Effects**

Commercial tours by use of a swamp buggy, will offer similar cumulative effects as discussed on the use of ORV's for hunting CD. The use is limited to 1 commercial tour per month, therefore, there are no anticipated adverse cumulative impacts resulting from commercial tours. This activity will result in beneficial cumulative impacts by increasing public awareness about conservation issues and the NWRS. Ultimately, this will benefit the USFWS's mission, the Refuge purposes, and the Refuge visions.

Soils and herbaceous plant communities are most directly disturbed by ORVs use (Duever et al. 1986). Heavily used areas are damaged in ways that are visually apparent—including an irregular topographic surface, excessively muddled soils, and decreased to nonexistent plant cover. Long-term effects in these areas are thought to include loss of herbaceous prairie habitat (plant loss and marl disturbance), alteration of surface water regimes through channelization and increased exposure of surface waters to evapotranspiration, and decreased primary production due to destruction of floating algal mats called periphyton (Sobczak et al. 2002).

Using an existing and established trail system that is currently used for refuge management purposes will negate the further loss of soils or herbaceous plants due to limited ORV use for up to 12 commercial tours per year.

Cumulative impacts are not anticipated on wildlife, their behaviors, or their habitat. Travel will occur on ruderal communities that can withstand repetitive use. A slight increase in gas emissions may occur due to the increase in vehicular traffic. The Refuge Manager will use professional judgment in ensuring that the request will have no considerable negative impacts; will not violate Refuge regulations; and that it will contribute to the achievement of the Refuge purpose and the NWRS mission. Stipulations may be placed on the size of the group or modes of transportation to reduce the potential for negative impacts, depending on the activity. Special needs will be considered on a case-by-case basis and are subject to the Refuge Manager's approval and may be modified to ensure compatibility (if appropriate). Any approved SUP will outline the conditions in which the use may be conducted, and Refuge staff will ensure compliance with the permit.

#### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

#### **DETERMINATION (CHECK ONE BELOW):**

\_\_\_\_\_ Use is not compatible

  X   Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

Conditions attached to their SUP to ensure compatibility. At minimum, the following standard SUP Special Conditions will be included.

- Proof of general liability insurance coverage with the Refuge named as co-insured must be provided prior to the issuance of the SUP.
- The Refuge Manager, or his/her designated representative, has the right to accompany any commercial tour visit, with proper notice, as an observer.
- The permittee(s) will disclose during all tours that this area is part of the NWRS administered by the Service. The Service's and NWRS's missions will also be summarized. Leaflets and brochures will be provided through the Visitor Center or headquarters prior to scheduled tours.
- All Refuge regulations will be adhered to by the permittee(s) and all commercial tour participants. Any violations of regulations witnessed by the permittee(s) will be reported to the Refuge Manager.
- For youth environmental education commercial visits, the Refuge requires that the students be supervised by a ratio of one adult for every ten students. Youth being defined as all minors under the age of 18.
- Permittee(s) or designated commercial representative will notify the Refuge at least two weeks in advance of any scheduled tours and give expected arrival time, date, number of participants, and the name of the tour leader. A copy of the permit will be carried by the permittee(s) or designated representative during each tour and presented on request to any Refuge official.
- Entry will be authorized only during normal operating hours and into open public use areas unless special permission has been granted by the Refuge Manager.
- The permittee(s) will provide the Refuge with a summary of visits conducted, number of participants, fees assessed, and tour or curriculum presented for the period covered by the SUP. This summary report is due to the Refuge's administration office no later than one month after permit expires. Failure to provide a timely summary report may result in the denial of future permits.
- Advertisements concerning events must be approved by the Refuge Manager prior to printing or distribution.
- Permittee or designated representative will be required to sign and date a waiver and release of liability form.

**JUSTIFICATION:**

Wildlife observation, education and interpretation guiding and outfitting is not a priority public use of the refuge system as identified by the National Wildlife Refuge System Improvement Act of 1997, however the use supports the priority uses of environmental education, interpretation, and wildlife observation. This use supports the Service's goal of Connecting People with Nature in addition to multiple objectives and strategies stated in the Refuge's VSP. Specifically Commercial tours are a means to achieve VSP objective 7.1 to Upgrade and expand the interpretive program, portraying the significance of the Refuge and threats affecting the Refuge

and the South Florida ecosystem and Recovery of the Florida panther. Also VSP Goal 13 to Institute an effective Commercial Recreational Use Program that contributes to the achievement of the Refuge purpose or the mission of the Refuge System. Guided tours provide visitors an organized educational opportunity to view wildlife safely under the use stipulations. Commercial tours provide a safe and informative educational experience for visitors that have no or little experience in nature and desire a more controlled and informative visit to the refuge. Commercial tours provide a mechanism to educate large groups of visitors about refuge resources, management and conservation. With limited staff at the Refuge commercial tours are a way to inform and educate the public in a cost effective way. Thus, the use will not materially interfere with or detract from the NWRS mission, or the purposes for which the Refuge was established. This determination is based on sound professional judgement and best available science.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

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**MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

**COMPATIBILITY DETERMINATION**

**USE:** Sport Fishing

**REFUGE NAME:** Florida Panther National Wildlife Refuge

**DATE ESTABLISHED:** June 20, 1989

**ESTABLISHING and ACQUISITION AUTHORITY(IES):**

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

1. Endangered Species Act of 1973 (16 U.S.C. §1534)
2. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
3. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

**REFUGE PURPOSE(S):**

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

**NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for

the benefit of present and future generations of Americans” (Refuge System Improvement Act of 1997, Public Law 105-57).

#### **DESCRIPTION OF USE:**

**(a) What is the use? Is the use a priority public use?** Fishing at FPNWR is a new use. Fishing was identified as one of six priority public uses of the Refuge System by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), when found to be compatible.

**(b) Where would the use be conducted?** Fishing will be permitted along the shoreline in Pistol Pond. Pistol pond is a 19-acre freshwater pond on the refuges northeast boundary adjacent to SR 29.

**(c) When would the use be conducted?** Fishing will be permitted year round from sunrise to sunset.

**(d) How would the use be conducted?**

All recreational anglers must possess a valid Florida fishing license in accordance with the laws of the state of Florida. Daily bag and possession limits are in accordance with Florida regulations, unless Refuge-specific regulations have been set (50 CFR §32.28(D)).

Access to Pistol Pond is directly off State Road 29 at the northeast corner of the refuge, A parking facility at Pistol Pond along SR 29 will need to be constructed with an automatic gate to open and close at Sunrise and Sunset.

Fishing will be permitted from the shoreline. Fishing by boat in Pistol Pond will be prohibited.

**(e) Why is the use being proposed?** The use is being proposed by the refuge to promote one of the priority public uses of the Refuge System. Providing recreational fishing opportunities will promote stewardship of our natural resources and increase public appreciation and support for the refuge.

During the 2014 public scoping effort, the Refuge received nearly 5,000 comments. Through these comments, the Service identified a number of priority issues, concerns, and opportunities related to fish and wildlife protection; habitat restoration; public recreation and access; and management of threatened and endangered species. All public comments received during scoping were reviewed. Additionally, the planning team considered federal and state mandates and applicable local ordinances, regulations, and plans. Substantive comments address the increased demand for additional public access to the Refuge, including hunting, fishing, wildlife observation and photography, and environmental education and interpretation. This feedback was used to inform the development of a VSP, Hunt and Fish Plan and EA

In addition, this use is consistent with goal 4 in the Refuge’s Visitor Services Plan (VSP).

*Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads to greater understanding and appreciation of aquatic resources; and 3) aids in the conservation of fish populations and their habitats.*

Also, on September 15, 2017, the Secretary of the Interior signed Secretarial Order 3356 with specific directives “to support and expand hunting and fishing, enhance conservation stewardship, improve wildlife management, and increase outdoor recreation opportunities for all Americans”(DOI 2017). This use further aligns the refuge with the State of Florida fishing

regulations and addresses Secretarial Order 3356 while fulfilling the Goals of the FPNWR CCP (USFWS 2010).

#### **AVAILABILITY OF RESOURCES:**

The financial and staff resources necessary to provide and administer this use at its current level and at the proposed level are sufficient, and we expect the use to continue in the future subject to availability of appropriated funds.

Annual costs to administer the fishing program at Pistol Pond, including salary, equipment, and maintenance, totals approximately \$10,000. Expenses will consist primarily of posting and maintaining “Public Fishing Area” signs, maintenance of the access road surfaces, law enforcement patrols, retrieval of monofilament line deposited in recycle containers, and production and dissemination of materials regarding fishing access and regulations.

There will be costs associated with the development of infrastructure to support fishing at Pistol Pond and it will invariably follow a phased progress plan. Following the approval of a fishing opening package, a suite of site improvements will be implemented, including an improved entrance road with modified fencing, an unimproved gravel parking area, an initial fishing platform, and an orientation kiosk. This initial facility infrastructure will be sufficient for opening a safe fishing opportunity that could be used for special events such as The Annual Refuge Open House, National Public Lands Day, and a special purpose fishing day like the SW Florida Cooperative Invasive Species Management Area fish rodeo. This initial infrastructure will be available on a refuge managed schedule. When the Refuge budget is capable and staff time is available for coordinating development, a more complete development will include installation of a new automated gate, complete area signage, purchase and placement of recycling and trash containers, improved parking area (gravel and parking bumpers), additional fishing platforms, interior fencing around the parking area with additional access gates to the hiking trails, and a vaulted restroom facility. This complete development (\$164,000) will enable fishing year-round.

Identifier	Expense
Kiosk & Signage	\$10,000
Vaulted restroom, trash & recycling containers, fishing platform(s)	\$100,000
Access improvements (gravel, gates)	\$25,000
Fencing (includes slide gate, maintenance of gate operator)	\$29,000
<b>Total infrastructure improvements</b>	<b>\$164,000</b>
Annual Maintenance (Parking lot, signs, fencing)	5,000
Law Enforcement (annual reoccurring)	\$5,000
<b>Annual Reoccurring Total</b>	<b>\$10,000</b>

#### **ANTICIPATED IMPACTS OF THE USE:**

Any public use activity has the potential for impacts; however, the Refuge attempts to minimize any potential impacts to negligible or acceptable limits for all uses allowed.

Pistol pond is a manmade dredged spoil pond dug to construct State Road 29. The area surrounding the pond is highly disturbed, therefore opening this site to visitor uses will not

further degrade wildlife habitat and could be a catalyst to make needed improvements, such as improve littoral zones of the pond and treatment of invasive plants.

Recreational fishing could potentially cause negative impacts to fish populations if it occurs at unsustainably high levels or is not managed properly. Potential impacts include direct mortality from harvest, catch and release injury, changes in age and size class distribution, changes in reproductive capacity and success, loss of genetic diversity, altered behavior, and changes in ecosystems and food webs (Lewin et al. 2006, Cline et al. 2007). Fishing generally removes individuals from a population at high levels and can lead to reduced population sizes and loss of genetic diversity. The loss of genetic diversity can ultimately reduce a population's fitness, resilience, and ability to adapt to environmental changes and stressors. The higher the fishing mortality, the greater these types of impacts will be (Lewin et al. 2006).

All environmental impacts resulting from fishing and associated infrastructure projects for fishing at Pistol Pond are expected to be insignificant due to the fact that the project site is located on a previously significantly altered quarry site, no public vehicle access will be allowed to occur outside of the parking area.

### **Cumulative Impacts**

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time. Any accumulation of trash can be mitigated by volunteer clean up days and increasing law enforcement patrols at the site. The refuge fishing program is designed to be sustainable through time, given relatively stable conditions, particularly because of close coordination with the Florida Fish and Wildlife Conservation Commission.

### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73

participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

☐ Use is not compatible

☒ Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

To ensure compatibility with refuge purpose(s) and Refuge System mission, fishing can occur at Florida Panther NWR in accordance with State and Federal regulations, and special refuge-specific restrictions to ensure that wildlife and habitat management goals are achieved, and that the program is providing a safe, high-quality fishing experience for participants.

The limited-area access will avoid sensitive sites and sensitive wildlife populations. Not all areas around the pond will be developed for fishing. Access surrounding the pond are limited by terrain. Periodic evaluations of the fishing site and the overall program will be conducted periodically to assess if objectives are being met and that the natural resources are not being adversely impacted.

The following stipulations are necessary to ensure compatibility:

- Fishing is allowed in designated areas (I.e. Pistol pond).
- Fishing by boat in Pistol Pond will be prohibited.
- Fishing will be allowed Sunrise to Sunset only.
- Fishing regulations will align with current State regulations for species-specific requirements for freshwater fishing licenses and freshwater bag and length limits.
- No refuge-specific permits are required; however, all anglers must have in their possession a State fishing license. The license must be carried on the person at all times and must be exhibited to Federal and State officers upon request.
- Cleaning of fish on the refuge is prohibited.
- Only attended hook and line fishing will be permitted in the harvest of fish species.
- Frog gigging, cast nets, seines, trotlines, jugs, and yo yos will be prohibited as they are largely non-selective for forage fish populations, are wasteful in removing critical forage biomass, exert deleterious mortality on forage fish, and promote unattended line fishing.
- This fishing program will be monitored and potentially modified or eliminated if any the program's components are found not compatible.
- Interpretive materials (e.g., brochures, signs, kiosk panels, and digital devices) proper fishing stewardship and wildlife etiquette will be stressed.
- Take of frogs and turtles is prohibited.

**JUSTIFICATION:**

The Refuge System Improvement Act of 1997 identifies fishing as a priority public use. Priority public uses are to receive enhanced consideration when developing goals and objectives for refuges if they are determined to be compatible. Providing fishing opportunities will promote public appreciation and support for the refuge. A small, limited access recreational fishing program on designated ponds will not materially interfere with or detract from the mission of the Refuge System or the purposes for which the refuge was established. Therefore, through this compatibility determination process, we have determined that fishing on the refuge, in accordance with the stipulations provided above, is a compatible use that will not materially interfere with, or detract from, the fulfillment of the Refuge System mission or the purpose(s) of the refuge.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

- ☐ Categorical Exclusion Without Environmental Action Statement
- ☐ Categorical Exclusion and Environmental Action Statement
- ☒ Environmental Assessment and Finding of No Significant Impact
- ☐ Environmental Impact Statement and Record of Decision

## **LITERATURE CITED:**

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## **MANDATORY 15 YEAR RE-EVALUATION DATE: 2036**

### **COMPATIBILITY DETERMINATION**

**USE:** Hunting Big Game

**REFUGE NAME:** Florida Panther National Wildlife Refuge

**DATE ESTABLISHED:** June 20, 1989

**ESTABLISHING and ACQUISITION AUTHORITY(IES):**

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

1. Endangered Species Act of 1973 (16 U.S.C. §1534)
2. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
3. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

### **REFUGE PURPOSE(S):**

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Refuge System Improvement Act of 1997, Public Law 105-57).

### **DESCRIPTION OF USE:**

**(a) What is the use? Is the use a priority public use?** The use is public hunting of Osceola Turkey, *Meleagris gallopavo osceola*, on Florida Panther NWR. Hunting was identified as one of six priority public uses of the Refuge System by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), when found to be compatible.

**(b) Where would the use be conducted?** All portions of the Refuge, with the exception of areas adjacent to refuge facilities and hiking trails are being proposed for hunting depicted in the Hunt Plan. This opens an additional 25,560 acres of the Refuge to the public for increased wildlife-dependent recreation.

**(c) When would the use be conducted?** A limited wild turkey hunt will be held during three weekends of the Florida Spring Turkey Season. The refuge hunt will adopt Florida Wildlife Commission (FWC) regulations at nearby State Wildlife Management Areas, and also add federal regulations specific to the refuge.

**(d) How would the use be conducted?** Hunting will occur on Saturdays and Sundays during three scheduled hunt weekends (2 limited/quota hunts and 1 limited family hunt weekend). A Family Quota Permit is defined by FWC as a type of limited entry permit that is required for an adult and up to two youths age 8 to 15 to participate. (for example: a family group consisting of two adults could hunt with no more than four children ages 8-15.) The following information provides further details on specific information regarding these permits.

1. Family Hunt – The family hunt camp weekend will occur on opening weekend of the state spring season with 2 permits per family group with a maximum 10 family groups. Permitted family groups can camp at the group camp site located at the Conservation Club starting the evening prior to the Saturday Hunt. All camping equipment, and trash must be removed by 5:00 pm Sunday.
2. Weekend Hunt - Two other weekend hunts are available for up to 25 permitted hunters within the State's spring turkey season.

The bag limit will be one bearded turkey per hunt permit. Baiting is prohibited. Shooting turkeys in roost trees is prohibited. Legal weapons only include bows, crossbows, PCP air guns propelling a bolt or arrow, and shotguns using #2 or smaller shot size. The refuge hunt area will be accessed through designated sites off State Road (SR) 29. General public use of the hunting area will be closed during the weekend hunts. Access to the entire refuge except for the areas detailed in Section IV.B. of the Hunt and Fish Plan will be open to turkey hunting. Hunters will be provided maps showing trails and roads, access points and designated parking areas for unloading off-road vehicles.

The use of ORVs (a 4-wheeled all-terrain vehicle or recreational off-highway vehicle including Swamp Buggies, ATVs, and UTVs) is permitted on designated trails, when operated by

individuals with a valid state driver's license, a valid hunting license and in possession of all three required permits (as outlined in Section IV of the Hunt and Fish Plan). Trails may be temporally closed due to high water events or other management needs. All other tracked vehicles, boats, or motorcycles are prohibited on the refuge. Pre-hunt scouting on foot or bicycle will be allowed during daylight hours throughout the spring turkey season for permitted hunters only. The use of ORVs, tracked vehicles, vessels (except canoes or kayaks) or unlicensed and unregistered motorcycles is prohibited, except ORVs may be operated only by individuals participating in the limited entry/quota hunt. ORVs may be operated by participants in the limited entry/quota hunt and operated only on designate roads/trails/firebreaks 1 week prior to the individual's permitted hunt.

Licensed and permitted mobility-impaired hunters will be welcome during the Refuge Spring Turkey Hunts. Hunters requiring special provisions will need to contact refuge officials for additional details, and refuge officials will work with these hunters prior to the start of the spring turkey season to arrange for appropriate special provisions. Examples of special provisions may include the opening/closure of gated roads to allow mobility-impaired hunters to drive a vehicle further into the hunt area, and/or be afforded assistance by a non-hunting adult who is not otherwise authorized to participate in the hunt. If a public hunt participant informs refuge staff in advance that he/she has special needs or limitations, every reasonable effort will be made to address those concerns so the person may fully participate and have an enjoyable experience.

**(e) Why is the use being proposed?** The use is being proposed by the refuge to promote one of the priority public uses of the Refuge System. The Service supports and encourages priority uses when they are appropriate and compatible on national wildlife refuge lands. Hunting is a healthy, traditional, recreational use of renewable natural resources that is deeply rooted in America's heritage.

During the 2014 public scoping effort, the Refuge received nearly 5,000 comments. Through these comments the Service identified a number of priority issues, concerns, and opportunities related to fish and wildlife protection; habitat restoration; public recreation and access; and management of threatened and endangered species. All public comments received during scoping were reviewed. Additionally, the planning team considered federal and state mandates and applicable local ordinances, regulations, and plans. Substantive comments address the increased demand for additional public access to the Refuge, including hunting, fishing, wildlife observation and photography, and environmental education and interpretation and used to inform the development of a VSP, Hunt and Fish Plan and EA.

In addition, this use is consistent with goal 3 in the Refuge's Visitor Services Plan (VSP). Develop and conduct a quality and biologically sound program that: 1) leads to enjoyable recreation experiences; 2) leads to greater understanding and appreciation of wildlife resources; and 3) aids in the conservation of wildlife populations and their habitats.

The purpose of the action will further align the refuge with the Department of the Interior's Secretarial Order 3356, which directs the Service to enhance and expand public access to lands and waters on national wildlife refuges for hunting, fishing, recreational shooting, and other forms of outdoor recreation. The action will promote one of the priority public uses of the Refuge System. Hunting will also promote the stewardship of our natural resources and increase the public's appreciation and support for the refuge (DOI 2017).

### **AVAILABILITY OF RESOURCES:**

Expenses for conducting annual hunts will be borne through general refuge funds. The costs will include personnel costs to facilitate hunts, annual management planning and turkey monitoring, additional law enforcement patrols, early gate opening and closure, maintenance of boundary posting and gates, installing and maintaining information panels, posting and removing signs, preparing the hunt brochure, maintaining roads, and covering all related fuel costs. These annual costs are estimated to run about \$17,500. This costs estimate does not cover the cost of habitat management such as prescribed fire and invasive species management. The selection process for permits will be processed through the existing state (FWC) system.

Fees from turkey hunting may annually average an estimated \$2,000; they could be higher, dependent upon permit costs and quota levels. Though this revenue amount is insufficient to cover the cost of managing the hunt program, the relatively low cost of this program can easily be covered using station funds. Some additional costs may be defrayed by cooperating with partners; for example, FWC may provide Law Enforcement Officers for patrols during hunts.

Table 1. Funding and Staffing Requirements

Identifier	Cost
Staff (Maintenance Workers, Biologist, and Refuge Managers) Hunt Program	\$6,000
Maintain roads, parking lots, trails*	\$3,000
News releases, fact sheets, reports for Hunt Program	\$500
Maintain hunting signs	\$2,000
Law Enforcement	\$6,000
<b>Total Annual Cost</b>	<b>\$17,500</b>
<i>*Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for trail/road maintenance on the refuge and are reflective of the percentage of trail/road use for hunting and fishing. Volunteers account for some maintenance hours and help to reduce overall cost of the program.</i>	

### **ANTICIPATED IMPACTS OF THE USE:**

Anticipated impacts were identified and evaluated based on best professional judgment and published scientific papers. By design, turkey hunting activities on Florida Panther NWR is anticipated to have minimal impacts to habitat and wildlife populations. The local turkey population has withstood hunting on surrounding public and private lands for decades without a negative cumulative effect on turkey populations (Roger Shields, FWC Turkey Biologist, personal communication).

Many of the impacts associated with turkey hunting are similar to those considered for other public use activities, such as wildlife viewing and photography, with the exception of direct mortality to game species, and travel through the hunt area. Direct mortality can impact isolated, resident game species populations by reducing breeding populations to a point where the isolated population can no longer be sustained. This can result in localized extirpation of isolated populations.

Considering the separation between the upland hunt and wetland habitats, the use of lead shot will be prohibited due to the fact that most of the refuge consist of wetlands and hydric soils. Off road vehicles will be restricted to existing trails and firebreaks. Given the small numbers of

hunters expected during the spring turkey season, no soil compaction or vegetation disturbance is expected. Parking will occur in temporary sites designated along existing trails. While there are no known active eagle nests on the refuge at this time, hunting will not occur within 1,500 feet of any active eagle nest.

To facilitate the traditional use of hunting on the refuge, semi-primitive camping at the former site of the Fakahatchee Conservation Club will be considered in conjunction with this use. Traditionally, it served as a gathering spot for the club, where members used as a base camp for weekend hunts. This site could facilitate the same set up for family hunting/outdoor weekends during the Spring turkey season, therefore concentrating the impact of early morning and late evening activity to a small portion of the refuge.

### **Wild Turkey**

Federal and State regulations will apply in the refuge hunt. Hunting turkey on the refuge will reduce the total numbers of birds on the refuge, but harvest will be within allowable limits as determined by the FWC and Service annually. Based on FWC reported hunter success rates for the 2019 Special-Opportunity Turkey Hunts, average hunter days per harvested turkey was 8.1 days (FWC 2019).

Should hunting pressure increase on the refuge to negatively affect populations; restrictions on quota, permits, number of allowable hunt days, or restrictions on certain hunt areas can be utilized to limit impacts. This latitude, coupled with monitoring of wildlife populations and habitat conditions by the Service and the FWC will help ensure that long-term negative impacts to either wildlife populations and/or habitats on the refuge will be unlikely.

Hunting turkey on the refuge will make the birds more skittish and prone to disturbance, reduce the amount of time they spend foraging and resting, and alter their habitat usage patterns. Disturbance to non-target birds and resident wildlife will likely occur from hunting and associated hunter activity, but will be short-term and temporary. Overall, the effects of turkey hunting are expected to be minimal.

### **Cumulative Impacts**

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time. The refuge hunt program is designed to be sustainable through time, given relatively stable conditions, particularly because of close coordination with FWC. The limited hunt duration and number of days will not conflict with most other uses of the refuge and will not be anticipated to result in negative cumulative impacts to refuge resources. Hunt areas will be closed to other uses during the hunting days to create a safe buffer distance around concentrated areas of public use and facilities.

There will be minor to no impact to geology, topography, soils, water quality and quantity, air quality, and hydrology due to the limited minor increase in motor vehicle during the dry season. No new roads or trails, are proposed to accommodate hunting on the refuge. The use of existing roads and trails will accommodate turkey hunting. Any negative impacts to the physical environment will be mitigated by additional restrictions on ORVs, and the limited number of permits issued.

The cumulative impacts of hunting on Wild Turkey populations at the refuge are negligible. The proportion of the refuge's harvest of these species is negligible when compared to local, regional, and State-wide populations and harvest. Based on FWC reported hunter success rates for the 2019 Special-Opportunity Turkey Hunts, average hunter days per harvested turkey was 8.1 days (FWC 2019).

Because of the regulatory process for harvest management in place within the Service, the setting of hunting seasons largely outside of the breeding seasons of resident and migratory wildlife, the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, and the wide geographic separation of individual refuges, we anticipate no direct or indirect cumulative impacts on resident wildlife, migratory birds, and non-hunted wildlife of by use of hunting on the refuge.

Minor positive impacts to the surrounding community will be expected from gaining an additional recreational opportunity on the refuge. These impacts could have long term effects on hunter retention and recruitment providing a positive hunting experience to youth and others that may not have other opportunities to hunt.

Cumulative impacts may be seen from the combination of uses on the refuge including hunting, wildlife observation, photography, education, interpretation, habitat management and research. Conflicting programs that occur in the same space and time can cause decreased satisfaction from user groups and increase disturbance to wildlife from frequent human visitation, consumptive or non-consumptive. Management actions such as prescribed fire, water management and timber management are necessary aspects of refuge management but may not be compatible with hunting activities. Likewise, research which may require undisturbed areas to allow scientific rigor. The refuge considers all uses as activities are planned on a yearly basis and programs are structured to allow multiple uses with high quality while not overlapping. -Hunting seasons and locations allow for hunters to pursue this public use while other uses may be located in other areas of the refuge or at other times to reduce conflicts.

#### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe

of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

\_\_\_\_\_ Use is not compatible

\_\_\_\_\_ ☒ Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

To ensure compatibility with refuge purpose(s) and Refuge System mission, hunting can occur at Florida Panther NWR in accordance with State and Federal regulations, and special refuge-specific restrictions to ensure that wildlife and habitat management goals are achieved, and that the program is providing a safe, high-quality hunting experience for participants. This hunting program will be monitored and potentially modified or eliminated if any the program's components are found not compatible.

Hunting will be allowed in accordance with all applicable federal and state regulations. Hunting will occur within the hunting season framework established by the Florida Fish and Wildlife Conservation Commission (FWC). Federal regulations in 50 CFR pertaining to the National Wildlife Refuge System Administration Act of 1966, as well as existing Refuge-specific regulations will apply. However, the Refuge Manager may, upon annual review of the hunting program and in coordination with the FWC, impose further restrictions on hunting, recommend that the Refuge be closed to hunting, or further liberalize hunting regulations within the limits of state seasons and regulations, or as otherwise approved by FWC. The Refuge Manager may restrict hunting opportunities if it conflicts with other, higher priority Refuge programs or endangers Refuge resources or public safety. This use could be suspended or terminated at any time at the discretion of the Refuge Manager for Refuge management, safety, or other reasons.

**Big Game Hunting.**

We allow hunting of turkey on designated areas of the refuge subject to the following conditions:

- i. We require a valid Florida Panther National Wildlife Refuge Big Game Quota Hunt Permit purchased through the Florida Fish and Wildlife Conservation Commission. The quota hunt permit is a limited entry quota permit, and is nontransferable.
- ii. You must have a signed Florida Panther NWR Turkey hunt brochure (signed), which is free and non transferable.
- iii. Each permit is issued for the take of 1 bearded turkey. Family hunt/camp experience permit is issued for take of 2 bearded turkeys.

- iv. We allow bows, crossbows, PCP air guns propelling a bolt or arrow, and shotguns using #2 or smaller shot size.
- v. We require an adult, age 18 or older, to supervise hunters age 15 and younger. The adult must remain within sight and normal voice contact of the youth hunter.
- vi. Hunters possessing a valid permit may access the refuge no earlier than 2 hours before legal sunrise and must leave the refuge no later than legal sunset; unless permitted for the family hunt/camp experience.
- vii. We allow hunting from ½ hour before legal sunrise until 1 pm.
- viii. Only federally approved non-toxic shot is allowed.
- ix. We only allow permitted hunters participating in the limited entry quota hunt to operate ORVs (swamp buggies, ATV and UTV) on designate roads/trails/firebreaks
- x. We allow permitted hunters to scout 7 days prior to the individual's permitted hunt

The following stipulations are necessary to ensure compatibility:

- No more than 25 permits at a time will be allowed.
- Climbing spikes and permanent stands will not be permitted.
- No flagging or trail marking will be permitted.
- Hunting with dogs will be prohibited.

### **JUSTIFICATION:**

Hunting is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife. Service policy is to provide expanded opportunities for wildlife-dependent uses when compatible and consistent with sound fish and wildlife management and ensure that they receive enhanced attention during planning and management.

Based on available science and best professional judgement, turkey hunting, as described and in accordance with the stipulations provided, was determined to be compatible, in view of the potential impacts that hunting can have on the Service's ability to achieve purposes and goals of the refuge, because:

- a. hunter densities and use levels will be relatively low during days the refuge is open to hunting as the focus will be on the quality hunt experience and not the number of hunters that use the refuge,
- b. the number of days open to hunting will be limited,
- c. the State of Florida FWC will be an active partner in facilitating the quota special opportunity hunt,
- d. hunting as described contributes to the overall goal of the refuge and NWRS in establishing and fostering a connected conservation community.

As outlined, turkey hunting will not materially interfere with or detract from fulfillment of the NWRS mission or the purposes of the refuge. Further, as outlined, turkey hunting will not conflict with national policy to maintain biological diversity, integrity, and environmental health of the refuge. Disturbance to other species will occur, but this disturbance is generally short-term. Suitable habitat exists on refuge lands to support hunting as proposed.

This activity will not conflict with any of the other priority public uses or adversely impact biological resources. Therefore, through this compatibility determination process, we have

determined that hunting on the refuge, in accordance with the stipulations provided above, is a compatible use that will not materially interfere with, or detract from, the fulfillment of the Refuge System mission or the purpose(s) of the refuge.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

- ☐ Categorical Exclusion Without Environmental Action Statement
- ☐ Categorical Exclusion and Environmental Action Statement
- ☒ Environmental Assessment and Finding of No Significant Impact
- ☐ Environmental Impact Statement and Record of Decision

**LITERATURE CITED:**

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## **MANDATORY 15 YEAR RE-EVALUATION DATE: 2036**

### **COMPATIBILITY DETERMINATION**

**USE:** Instructor Led Small Group Activities/ Interpretation not led by NWRS Staff or Authorized Agent

**REFUGE NAME:** Florida Panther National Wildlife Refuge

**DATE ESTABLISHED:** June 20, 1989

**ESTABLISHING and ACQUISITION AUTHORITY(IES):**

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

5. Endangered Species Act of 1973 (16 U.S.C. §1534)
7. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
6. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

**REFUGE PURPOSE(S):**

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

### NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

“The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Refuge System Improvement Act of 1997, Public Law 105-57).

### DESCRIPTION OF USE:

**(a) What is the use? Is the use a priority public use?** Instructor-led interpretive small group activities are new proposed uses on the Refuge and may include, but are not limited to yoga, artistry, astronomy, or natural areas-related instruction on various topics (i.e. edible plants). This use is not a priority public use of the NWRS under the Improvement Act of 1997.

**(b) Where would the use be conducted?** Locations of instructor-led small group activities will be evaluated on a case-by-case basis and must be pre-approved by the Refuge Manager at the Refuge. Locations at the Refuge may include McBride's Cabin and Public hiking trails. Instructor-led interpretive, small group activities will not be approved or permitted near the Headquarters office/Visitor contact station of the Refuge. Locations being occupied for these uses must not unduly prevent the general public from utilizing Refuge facilities or trails at any time.

**(c) When would the use be conducted?** Instructor-led small group activities may be conducted year-round, during public operating hours of the Refuge only. A maximum of two groups per week and eight per month will be permitted at the Refuge.

**(d) How would the use be conducted?** Title 50, Code of Federal Regulations, 27.97, Private Operations, prohibits soliciting business or conducting a commercial enterprise on any national wildlife refuge except as may be authorized by special permit. Thus, instructor-led small group activities are required to obtain a Special Use Permit (SUP) from the Refuge Manager. A minimum charge of \$150.00 is applied to Special Use Permits. The cost could increase depending on the amount of government resources needed to safely conduct the use. Special needs (e.g. access to closed areas or night classes) will be considered on a case-by-case basis, are subject to the Refuge Manager's approval, and may include a secondary component negotiated to ensure compatibility (if appropriate). All SUPs will outline the conditions under which the use can be conducted, and Refuge staff will ensure that each permittee maintains compliance with the SUP. The instructor(s) wishing to hold a class on the Refuge will be required to submit a SUP application giving the particulars, such as date, time, number in party, location, and any class-related supplies (i.e. mats, blankets, steps, blocks) they will like to use. The Refuge will review the request and provide any specific stipulations (Special Conditions) needed to avoid exceeding maximum capacity of specific locations and disturbance to wildlife or other priority public uses; requests may be denied that do not meet these conditions. Individuals or pairs engaging in these activities without instructors will not require a SUP, but may use the Refuge as other visitors do, at their leisure.

### **(e) Why is the use being proposed?**

Instructor-led small group activities are a newly proposed use of the Refuge in order to increase public use opportunities that may foster positive stakeholder and refuge relations. Ecotherapy is an umbrella term for all nature-based methods aimed at the re-establishment of human and ecosystem reciprocal well-being; a transdisciplinary and ecosystemic approach aimed at the collaborative enhancement of physical, psychological and social health for people, communities and ecosystems (Sempik et al., 2010). The concept of ecotherapy is becoming increasingly

popular and represents a commitment to the health of the population and the environment, and so has the potential to unite the environmental movement with health and health promotion interests (Lines 2013). Allowing instructor-led small group activities in natural areas can be an excellent opportunity to expose the next generation and urban dwellers to the unique sights and sounds of the local flora and fauna, the beauty of nature, and the secluded setting of the Refuge. Participants will be exposed to the Refuge and our mission in such a manner as to leave them with a better understanding of Refuge resources. The Refuge receives a maximum of ten requests for uses that fall into this category per year. Wildlife dependent activities (e.g. nature walks or canoe trips) following the non-traditional activity are encouraged to promote an appreciation and understanding for the Refuge, wildlife conservation, and the mission of the NWRS. In addition, because of the accessibility to urban areas, the Refuge is appealing to those looking for settings to enjoy outdoor pursuits in isolated areas.

### **AVAILABILITY OF RESOURCES:**

Implementation of this use is estimated to cost \$7,000 annually including staff time and monitoring. Issuing and monitoring SUPs for this use is within the resources available through the visitor services program at the Refuge and the Refuge Manager. Based on the history of requests and number of SUPs in relation to this activity, the Refuge has sufficient resources for managing current and expected levels of uses associated with instructor-led small group activities.

*Resources involved in the administration and management of the use* – Staff responsibilities for activities by non-Service entities will primarily be limited to the following: review of proposals, preparation of SUPs, and monitoring of activity implementation to ensure that impacts and conflicts remain within acceptable levels (compatible) over time. Compliance with the terms of the permit is within the regular duties of Refuge visitor services staff and Federal Wildlife Officers. The permittee must provide appropriate resources required for all activities. If a permittee will need assistance from Refuge staff, the permittee must request the assistance in writing when applying for the SUP. Staff and resource availability will be determined by the Refuge Manager based on current Refuge priorities and work plans. The Refuge will not directly supply personnel or equipment for the proposed use unless arrangements have been made prior to the issuance of the SUP and the Refuge Manager has deemed it to benefit the Refuge. Administration of SUPs associated with this activity consists of approximately 3 staff days or less than 1% of staff time.

*Special equipment, facilities, or improvements necessary to support the use* – Special equipment, facilities, or improvements to support this use are not proposed specifically to facilitate this use. However, new facilities could support this use. Facilities currently accessible on site will be available, including public hiking trails and McBrides Cabin).

*Maintenance costs* – Maintenance that may be associated with this use is already being performed by staff and volunteers throughout the year, during the normal course of their duties. Examples include: mowing, trail/levee maintenance, boardwalk maintenance, signage, parking areas, structure maintenance (observation blind, kiosks, boat ramps), and trash removal. This use should not incur any additional maintenance needs; however, it may influence the timing of when and how often maintenance should be performed.

*Monitoring costs* – Existing staff monitors effects of current operations during the normal course of their duties. Additional monitoring may be required to ensure compliance with SUP stipulations and is estimated at 2 staff days or less than 1 percent of staff time.

*Offsetting revenue* – A permit-term administrative fee may be required in addition to the standard Service commercial rate for entrance to the Refuge. Should the permit include multiple visits throughout the term of the permit, only entrance fees will be collected for subsequent visits. Administrative fees will be assessed on a case-by-case basis and may vary, depending on the size and complexity of the class, number and frequency of demands for this use, and other applicable details. Although there is no standard fee schedule at this time, fees will be comparable to other the Refuge use fees and Refuges in the vicinity. The Refuge will observe all future guidance and policies relating to fees on Refuges. A deposit may also be required. We anticipate a nominal amount, less than \$1,000, of offsetting revenue generated through the special use permits for this use.

Based on the availability of resources, the Refuge will have sufficient funds for managing current and expected levels of these uses associated with non-Refuge sponsored instructor-led small group activities.

Item	Cost
Refuge staff administration, oversight, scheduling	\$5,000
Refuge Managers – program oversight monitoring	\$2,000
<b>Total Annual Costs</b>	<b>\$7,000</b>

#### **ANTICIPATED IMPACTS OF THE USE:**

Instructor-led small group activities will most likely cause minimal disturbance to wildlife in the immediate vicinity of the event. . Short-term impacts may be realized to wildlife, vegetation, or soil including temporary damage resulting from trampling, disturbance to nesting birds, and disturbance to feeding or resting birds or other wildlife in the proximity. Wildlife observation for other visitors of the Refuge may be marginally affected due to a pavilion or small space being temporarily occupied and unavailable to persons not participating in group activities. Other anticipated impacts include increased maintenance of the spaces and parking areas utilized

There will be no to minimal anticipated negative impacts from this use; any SUP request that does not comply with the stipulations below or is determined to pose a risk of negative impacts will be denied. Due to the limited number of classes permitted, and since the areas are open to the public, minimal additional disturbance is anticipated. This use should not result in long-term impacts that adversely affect the purposes for which the Refuge was established or alter any existing or proposed uses as stipulated in the VSP (McCarthy et al 2014). The Refuge Manager's approval and may be modified to ensure compatibility (if appropriate). If adverse impacts on public use activities or wildlife and their behaviors are identified, modifications up to and including termination of permitted activities will be implemented to minimize such impacts.

#### **Cumulative Effects**

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time.

Cumulative impacts may be seen from the combination of uses on the refuge including hunting, wildlife observation, photography, education, interpretation, habitat management and research. Conflicting programs that occur in the same space and time can cause decreased satisfaction

from user groups and increase disturbance to wildlife from frequent human visitation, consumptive or non-consumptive. Management actions such as prescribed fire, water management and timber management are necessary aspects of refuge management but may not be compatible with hunting activities. Likewise, research, which may require undisturbed areas to allow scientific rigor. The refuge considers all uses as activities are planned on a yearly basis and programs are structured to allow multiple uses with high quality while not overlapping. Times and locations of instructor-led interpretive activities allow participants to pursue this public use while other uses may be located in other areas of the refuge or at other times to reduce conflicts.

Cumulative impacts in this setting are not anticipated on Panther, wildlife, their behaviors, or their habitat (McCarthy et al. 2014, Larson CL et al 2016). Travel will occur on rural communities that can withstand repetitive use. A slight increase in gas emissions may occur due to the increase in vehicular traffic. The Refuge Manager will use professional judgment in ensuring that the request will have no considerable negative impacts; will not violate Refuge regulations; and that it will contribute to the achievement of the Refuge purposes and the NWRs mission. Special needs will be considered on a case-by-case basis and are subject to

### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

\_\_\_\_\_ Use is not compatible

  X   Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

Each request must comply with Special Conditions attached to their SUP to ensure compatibility. At a minimum, the following standard SUP Special Conditions will be included.

- Each request must be submitted a minimum of 30 calendar days in advance of the first scheduled activity by completing an SUP application. Each request will then be evaluated for appropriateness and compatibility.
- Up to two (2) activities may be permitted per month. Preference will be given to new requests over repeat requests.
- Activities will not exceed two hours in duration, which includes set-up and breakdown. Activity length should be limited to the shortest amount of time reasonably required.
- It will be the responsibility of the permittee to provide and manage all activity-related resources and ensure that all participants remove litter and other activity-related materials from Refuge property immediately following conclusion of the session.
- Due to limitations on parking spaces, a maximum of 30 participants may be permitted for these activities.
- Permittee and activity participants will comply with all the Refuge regulations and additional instructions as provided by the Refuge Manager.
- Failure of the permittee to comply with any of these Special Conditions or with any State or Federal laws or special Refuge regulations will be sufficient cause for permit revocation and may result in denial of future SUPs.
- Permittee must have the SUP in their possession at all times while on the Refuge. A copy of the permit must also be prominently displayed on the dash of permittee's vehicle(s) at all times while on the Refuge. The permit must be presented to Refuge personnel upon request.
- All vehicles must park in designated spaces. No vehicles may be parked on the grass or other natural areas.
- Activity-related materials that are made from any type of plant (e.g. flower and plant arrangements) or animal (e.g. feathers, shells, etc.) materials need to be approved prior to the activity in order to maintain the environmental health of the Refuge and to prevent the introduction of any pests, pathogens, or invasive species to the Refuge.
- All activities will be conducted in such a manner as to minimize disturbance to wildlife, Refuge resources, and the visiting public. The following are specifically prohibited: 1) audio amplification devices; 2) adhering, fixing, or fastening decorations to vegetation and/or structures; 3) erecting self-supporting decorations, banners, flags, etc. in a manner that will obstruct the view of public areas or disturb wildlife; 4) throwing or scattering rice, bird seed, or similar products; and 5) the release of any type of wildlife (e.g. butterflies, doves, etc.), balloons, or lanterns.
- A NWRS fact sheet will be provided with every SUP and must be distributed by the permittee to all adult participants.
- The permittee agrees to forever hold harmless the United States, its officers, agents, employees, contractors and/or assigns from any and all damages to property or injuries to persons which arises or may be incidental to the activities associated with an SUP.

**JUSTIFICATION:**

One of the stated goals of the NWRS is to “foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats”. Ecotherapy is one example of the ways in which supporting the value of natural settings for well-being is likely to prompt greater ecological awareness and environmental care (Hartig, Kaiser, and Bowler, 2001). Allowing instructor-led small group activities on the Refuge will introduce the Refuge to new, non-traditional audiences. By acknowledging and supporting the community in their search for ecotherapy, the Service can foster positive public relations in our urban communities, which will ultimately benefit fish, wildlife and their habitats. Through their experience, new visitors may become aware of the value of national wildlife refuges and promote fish and wildlife conservation. This use is low impact, low cost, and highly controllable. The actions or effects of this use are not expected to interfere with or detract from the mission of the NWRS nor diminish the purposes for which the Refuge was established. This use, although not a priority public use, has been determined to be compatible, provided the SUP Special Conditions are followed, because it will increase the public’s exposure to, understanding, and appreciation of America’s flora, wildlife, wildlife conservation, and the Service’s role in managing and protecting natural resources. Instructor-led small group activities are not outlined in an approved plan; however, the uses do not conflict with Refuge CCP goals or objectives. Each request has different logistics and potential impacts, and therefore, will be evaluated on a case-by-case basis. This use will not pose substantial adverse effects on Refuge resources, interfere with public use of the Refuge, nor cause an undue administrative burden. This CD is based on sound professional judgement and best available science.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

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### **MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

### **COMPATIBILITY DETERMINATION**

USE: Off-Road Vehicle Use

REFUGE NAME: Florida Panther National Wildlife Refuge

DATE ESTABLISHED: June 20, 1989

ESTABLISHING and ACQUISITION AUTHORITY(IES):

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

6. Endangered Species Act of 1973 (16 U.S.C. §1534)
8. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
7. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)
- 8.

REFUGE PURPOSE(S):

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)

- “... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- “... for the benefit and recovery of the endangered Florida panther ...” (Fakahatchee Strand Environmental Assessment 1985)

#### NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

“The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (Refuge System Improvement Act of 1997, Public Law 105-57).

#### DESCRIPTION OF USE:

- What are the uses? Are they priority public uses?*** The use of Off-Road Vehicles, ORV, (swamp buggies, ATV, or UTV). ORV use is not a priority public use of the National Wildlife Refuge System (Refuge System) under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57). ORV use is a secondary use that facilitates and supports wildlife-dependent priority public uses including Hunting, Interpretation, Environmental Education, and scientific research.
- Where would the uses be conducted?*** ORV use will be allowed on special designated trails only. These trails are identified in Figure 5 of the Visitor Services Plan.
- When would the uses be conducted?*** The use will be permitted during the spring turkey hunt as proposed in the VSP and Hunt and Fish Plan. ORV's will also be used to provide interpretive tours, or to conduct environmental education programs to small groups throughout the year. Researchers may also use ORV's to access or conduct scientific research throughout the year with an approved special use permit.
- How would the uses be conducted?*** Hunters selected through the refuge hunt lottery system and in possession of a refuge hunting permit will be allowed to use an ORV on the refuge during approved hunts. No more than 25 hunt permits will be issued on the two refuge weekends hunts and no more than 10 permits will be issued on the family hunt camp weekend, specifically to facilitate turkey hunting. Each hunter issued a permit may operate an ORV during that permitted hunt. ORVs will be used to facilitate interpretive tours and environmental education programs conducted by Service staff, volunteers or cooperating organizations using Service equipment. Those conducting research on the refuge under an approved SUP may use ORV's to access research destinations or when conducting inventorying and monitoring.
- Why are these uses being proposed?*** On September 15, 2017, the Secretary of the Interior signed Secretarial Order 3356 with specific directives to “support and expand hunting and fishing, enhance conservation stewardship, improve wildlife management, and increase outdoor recreation opportunities for all Americans” (USFWS 2017). The Service provides the public with opportunities to participate in compatible wildlife-

dependent recreation to appreciate the value of and need for wildlife and plant conservation. Use of ORVs will facilitate accessibility by the public to hard to reach areas of the refuge. Public entry on to the refuge can only be done from Highway 29. In order to traverse across the refuge to hunt turkeys, an ORV is needed to get thru the cypress strands. Without ORV access hunters will be restricted to a small portion of the refuge. ORVs (Swamp buggies) used to facilitate interpretive tours or educational programs allow visitors to access tough terrain that most visitors will not be able to safely access by foot, vehicle or school bus.

### **AVAILABILITY OF RESOURCES:**

Anticipated yearly costs for implementing this use are estimated to be & 10,000 including staff time, monitoring and maintenance. Given the use will be restricted to hunters with permits on three weekends in March during the Turkey hunt, as well as researchers with Special Use Permits and occasional interpretive tours, refuge resources will be able to administer the use with little burden to existing resources. Administration will primarily involve enforcement of regulations, and habitat monitoring. Administration of SUPs associated with this activity consists of approximately 10 staff days or less than 3% of staff time.

Item	Cost
Administrative Staff time	\$1,000
Refuge law enforcement	\$3,000
Habitat monitoring	\$3,000
Maintenance of roads/trails	\$3,000
<b>Total Annual Costs</b>	<b>\$10,000</b>

### **ANTICIPATED IMPACTS OF THE USE:**

The refuge has network of firebreaks and trails that have a history of being used by refuge management and researchers using ORV's to gain access to remote parts of the refuge. Impacts on the vegetation community such as trampling and loss of plant material due to the use of ORVs could occur, however, will be minimal, and localized by using existing trails and firebreaks.

Regular off-road vehicle operation through sawgrass and wet prairie habitats creates trails, which are open areas where native vegetation is more sparse than surrounding areas due to physical disturbance and soil erosion (Pernas 1995; Duever et al. 1981; Duever et al. 1986).

In a 2014 study within Big Cypress NP, an area with designated ORV trails, found that variations in panther distances to trails appear to be driven by hydrology rather than hunter ORV use. (McCarty et al 2014). The results of this study also suggest that hunter ORV use may have small effects on resource selection by male panthers, but does not appear to alter panther habitat use near trails, at the measured scale. (McCarty et al 2014).

Motorized activities are often expected to be more harmful to animals because of vehicle speed and noise, but our results suggest the opposite across a wide range of study locations and taxa (Larson et al. 2016).

### **Cumulative Effects**

Soils and herbaceous plant communities are most directly disturbed by ORVs use (Duever et al. 1986). Heavily used areas are damaged in ways that are visually apparent—including an irregular topographic surface, excessively muddled soils, and decreased to nonexistent plant cover. Long-term effects in these areas are thought to include loss of herbaceous prairie habitat (plant loss and marl disturbance), alteration of surface water regimes through channelization and increased exposure of surface waters to evapotranspiration, and decreased primary production due to destruction of floating algal mats called periphyton (Sobczak et al. 2002). Using an existing and established trail system that is currently used for refuge management purposes will negate the further loss of soils or herbaceous plans due to limited ORV use during the spring turkey hunt or the interpretive tour. .

#### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

#### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is not compatible

☒ Use is compatible, with the following stipulations

## **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

Limiting ORV operation to specific trails and limiting the number of ORVs and operations to permitted hunters during 3 weeks of the Spring, as well using ORVs for occasional (not regularly scheduled) interpretive and educational programs is necessary. Additionally, monitoring of habitat conditions and wildlife response will document impacts from ORVs. Best management practices on the Refuge will include wildlife buffers, restricting operations to higher water level conditions, prohibiting the establishment of new trails/routes of travel through heavily vegetated areas, requirement of mufflers on all ORV's. If conditions indicate significant resource impacts, the use of ORV may be further restricted or removed entirely from the Refuge.

Types of Vehicles we consider to by ORV's

### **1. SWAMP BUGGY / OFF HIGHWAY VEHICLES (B)**

- All Tires Minimum of 9"
- Width 8' Max
- Working White Headlight(s)
- Working Red Tail Light
- Must not be registered by a state and therefore cannot operate legally on roadways.
- Must have 4 or more wheels
- No tracked or "skid steering" vehicles.
- Muffler works and noise must not exceed 60 decibels at 50 feet
- Weight will not exceed 4,000 lbs. and not cause damage to trails.
- Four-wheel drive capable
- Vehicles are unclassifiable that will allow them in class A, C, D or E

### **2. ATV / STRADDLE SEAT (C)**

- Must have 4 or more wheels
- Front Tire(s) 7" minimum
- Rear Tires 9" minimum
- Working White Headlight
- Working Red Tail Light
- VIN# & Title
- Muffler works and noise must not exceed 60 decibels at 50 ft.
- Four-wheel drive capable

### **3. UTV / SIDE BY SIDES (E)**

- All Tires Minimum of 9"
- Working White Headlights
- Working Red Tail Light
- Must have 4 or more wheels
- Width 8' Max
- Muffler works and noise must not exceed 60 decibels at 50 ft.
- VIN# & Title
- Four-wheel drive capable

## **JUSTIFICATION:**

ORV use supports the National Wildlife Refuge System's wildlife-dependent priority uses identified by the Improvement Act (1997) as appropriate and compatible. This activity meets

multiple objectives and strategies stated in the Refuge's VSP. Specifically this activity meets VSP objectives 3.5, 6.1, and 7.1 by supporting the refuge's hunting, interpretation and educational programs. Operating ORVs on the Refuge, visitors participate in wildlife-dependent recreational opportunities exposing them to habitats of the Greater Everglades ecosystem and contribute to a greater understanding and appreciation of natural resources, it also allows for safe access to disperse hunters across the refuge other than in the immediate area of the access points along State Highway 29. This Compatibility Determination is based on best available science and best professional judgement.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

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## **MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

### **COMPATIBILITY DETERMINATION**

**USE:** Scientific Research

**REFUGE NAME:** Florida Panther National Wildlife Refuge

**DATE ESTABLISHED:** June 20, 1989

**ESTABLISHING and ACQUISITION AUTHORITY(IES):**

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

7. Endangered Species Act of 1973 (16 U.S.C. §1534)
9. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
9. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

### REFUGE PURPOSE(S):

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

### NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Refuge System Improvement Act of 1997, Public Law 105-57).

### DESCRIPTION OF USE:

#### **(a) What is the use? Is the use a priority public use?**

The use is scientific research conducted by agencies, organizations, and research entities other than USFWS staff. Research is the planned, organized, and systematic gathering of data to discover or verify facts. The Refuge receives periodic requests from non-USFWS entities to conduct scientific research including, but not limited to: survey, monitoring, sampling, collecting, wildlife capture, banding, electrofishing, and biological control (or biocontrol) releases. The Refuge will support, for example, research of the Florida Panther, exotic plant and animal surveys and control techniques, wading birds, wood storks, neotropical migratory birds, amphibians and reptiles, fisheries, habitats, fire management and wildfire effects just to name a few. Occasionally, research activities may include the use of drones or unmanned aerial systems (UAS), where needed, for the project, and in compliance with all USFWS policies related to drone use. A separate Drone-use compatibility determination has been submitted for approval.

Research activities allowed under this determination must not result in long-term, negative alterations to wildlife behavior (e.g. result in wildlife leaving previously occupied areas for long periods; modifying their habitat use; or causing nest or young abandonment). Research-associated activities that will generally not be allowed include, but are not limited to, those that will result in widespread or long-term effects of soil compaction or erosion, significant negative impacts to plant or animal populations, degradation of water quality, cause public health or safety concerns, or result in conflicts with other compatible refuge uses.

Support of research directly related to Refuge goals and objectives may take the form of funding, in-kind services such as housing or use of other facilities, vehicles, boats or equipment, direct staff assistance with the project in the form of data collection, provision of historical records, conducting of management treatments, or other assistance as appropriate.

Research conducted by non-USFWS personnel is not a priority public use under the National Wildlife Refuge System (NWRS) Administration Act of 1997. However, research on the Refuge can provide information to help meet refuge purposes and goals, as well as support the NWRS mission and priority public uses such as hunting and fishing. Additionally, two provisions of the National Wildlife Refuge System Improvement Act of 1997 that supports research are to “maintain biological integrity, diversity, and environmental health” and to conduct “inventory and monitoring.”

**(b) Where would the use be conducted?**

The Refuge is comprised of 26,609 acres in the western side of the greater Everglades ecosystem. Scientific research locations will vary depending on the individual research project that is proposed. Scientific research activities and associated access may be allowed within all areas owned and/or managed by the USFWS as part of the Refuge, including any lands acquired in the future pursuant to modified comprehensive conservation plans. Specific scientific research study sites will be limited to those areas of the Refuge that are necessary to conduct the research project. The Refuge may limit areas and restrict times available for research, as necessary, to ensure the protection of trust resources and threatened/endangered species or reduce conflict with other compatible refuge uses. Specific scientific research studies associated with sensitive resources and their habitats will be granted only to those researchers directly involved with the projects and only for the purposes of approved research. Appropriate research sites and access points to study locations may be identified by Refuge staff.

**(c) When would the use be conducted?**

The timing of the research will depend entirely on the approved design of individual research projects. Scientific research will be allowed to occur on the Refuge throughout the year. An individual research project could be short-term in design, requiring only one or two visits over the course of a few days, or be a multiple year study that may require regular visits to the study site(s). Visits will be coordinated with Refuge staff to minimize wildlife disturbance, conflicts with other user groups, and to maintain safety during their fieldwork.

**(d) How would the use be conducted?**

The objectives, methods, and approach of each research project will be carefully scrutinized by USFWS biology staff and/or the refuge manager before it will be approved to be conducted on the Refuge. A Research and Monitoring Special Use Permit (SUP) application is required from parties interested in conducting research on the Refuge. Research applicants are required to describe the potential impacts their study may have on Refuge habitats and/or wildlife, including disturbance (short- and long-term), injury, or mortality in the SUP applications. If the proposed research methods will impact or potentially impact Refuge resources (habitat and/or wildlife), it must be demonstrated that the research is necessary or directly contributes to Refuge goals or management questions. Potential impacts will be reviewed by the refuge biology staff and reviewed by refuge manager. Mitigation measures to minimize potential impacts will be developed in conjunction with research applicants. Each request will be considered independently and if approved will be issued a SUP by the Refuge Manager that includes the stipulations in this determination. The Refuge Manager will use their best sound, professional judgment and ensure that the request will not materially interfere with or detract from the

fulfillment of the NWRS mission or the purpose(s) of the Refuge. The following are some of the things that will be considered in the determination of whether to issue a SUP:

- Will the project benefit the Refuge?
- Does the project address an issue of direct management concern to the Refuge?
- Is the activity compatible or appropriate with the purpose, goals or objectives of the Refuge?
- Will the use set a precedent that will be difficult to contain or control in the future?
- Is the project inconsistent with public safety?
- Does the applicant have the desired qualifications relating to the project?
- Is there a reasonable likelihood that the project will succeed?

The methods of the research will depend entirely on the individual research project that is conducted. In addition to walking and hiking, other modes of transportation for access will vary. It is often necessary to access remote parts of the Refuge via airboat, motor boat, ATV/ Utility task vehicle (UTV), argo, hydratrek, fixed-wing aircraft, or helicopter. Other modes for access may be approved on a case-by-case basis. A vast amount of acreage at Refuge is inaccessible via established roads that can be traveled using commonly used means. The use of UAS may be authorized for research projects when in compliance of FAA and USFWS regulations and with stipulations included in the SUP. Use of UAS will be also conducted according to the USFWS 603 FW 1 (Appropriate Use), 50 CFR 27.34 (Harassment of Wildlife) and other applicable laws, regulations and policies. Access around sensitive resources and research sites will be granted only to those researchers directly involved with those resources or projects and have obtained required permits. Projects that contribute to Refuge-specific needs for resource and/or management goals and objectives, where applicable, will be given a higher priority over other requests

Research proposals that raise concern for any of the following criteria are less likely to be approved for a SUP:

- Cause negative impacts to water, soils, native fish, wildlife, and habitats or cultural, archaeological, or historical resources beyond acceptable levels of impact.
- Detract from fulfilling the Refuge's purposes or conflicts with Refuge goals and objectives.
- Raise public health or safety concerns.
- Conflict with other compatible Refuge uses.
- Are unmanageable within the Refuge's available staff or budget time.
- Are not conducive to or interfere with other Refuge management activities.

Staff may determine that previously approved research SUPs be terminated:

- Due to unanticipated impacts such that impacts to Refuge resources are more severe or extensive than originally anticipated,
- Deviation from the approved study proposal,
- Failure to follow Special Conditions,
- Failure obey laws and regulations.

#### **(e) Why is the use being proposed?**

Scientific research activities are existing uses on the Refuge and require re-evaluation every 10 years. Although scientific research conducted by non-USFWS personnel is not identified as a

priority public use, the information provided is inherently valuable to the USFWS in benefiting Refuge resources and facilitating informed, science-driven management decisions. Allowing scientific research facilitates success of critical projects that may not be realized otherwise, thereby providing more scientific information available to the USFWS to aid in managing and conserving Refuge resources. Furthermore, the USFWS's Research and Management Studies (4 RM 6) and Appropriate Refuge Uses (603 FW1.10D(4)) policies indicate priority for scientific investigatory studies that contribute to the enhancement, protection, use, preservation, and management of native wildlife populations and their habitat as well as their natural diversity. . The Refuge also considers research for other purposes, which may not be directly related to Refuge-specific objectives, but contribute to the broader enhancement, protection, use, preservation and management of native populations of fish, wildlife and plants, and their natural diversity within the system, region, or flyway. These proposals must comply with the Service's compatibility policy.

#### **AVAILABILITY OF RESOURCES:**

Administration and monitoring of SUPs associated with this use consists of roughly 20 staff days or less than 10 percent of refuge biologist and management time, which costs approximately \$16,000 annually. This cost is miniscule compared to the time and cost it will require for research that directs management activities to be done by USFWS staff. Refuge staff responsibilities for projects by non-Service entities will primarily be limited to the following: review of proposals, preparation of SUPs and other compliance documents (e.g., Section 7 of the Endangered Species Act of 1973, Section 106 of the National Historic Preservation Act), and monitoring of project implementation to ensure that impacts and conflicts remain within acceptable levels (compatible) over time. In some cases, a research project may only require one day or less of staff time to write a SUP. In other cases, a research project may take many weeks, as the Refuge staff must coordinate with students and advisors and accompany some researchers' onsite visits. Additional administrative, logistical, and operational support, including transport, may also be provided depending on each specific request and benefit to the Refuge. These responsibilities are accounted for in budget and staffing plans. The resources necessary to provide and administer this use are available within current and anticipated budgets.

Item	Cost
Refuge Biologist administration and oversight	\$10,000
Refuge Managers – program oversight monitoring	\$6,000
<b>Total Annual Costs</b>	<b>\$16,000</b>
<b>10 year Total to implement</b>	<b>\$160,000</b>

#### **ANTICIPATED IMPACTS OF THE USE:**

Similar to impacts from recreational use, disturbance to wildlife, vegetation, water, soils, or cultural resources could occur while researchers are accessing study sites or while they are engaged in their project. Potential impacts include:

- Trampling, damage, and killing of vegetation from walking off-trail (Kuss 1986, Roovers et al. 2004, Hammitt and Cole 1998).
- Introducing or spreading seeds or spores of exotic invasive vegetation (McNeely 2001)
- Soil compaction, soil erosion, and changes in hydrology from hiking on and off trail (Kuss 1986, Roovers et al. 2004).

- Disturbance to wildlife that causes shifts in habitat use, abandonment of habitat, increased energy demands on affected wildlife, changes in nesting and reproductive success, and singing behavior (MacDonald 2015, Snetsinger and White 2009, Reed and Merenlender 2008, Gill et al. 2001, Miller et al. 1998, Gill et al. 1996, Schulz and Stock 1993, Knight and Cole 1991, Arrese 1987).

Impacts will be project- and site-specific, where they will vary depending upon nature and scope of the fieldwork. Non-intensive data collection techniques will generally have minimal animal mortality or disturbance, habitat destruction, no introduction of contaminants, or no introduction of non-indigenous species. In contrast, projects involving the collection of biotic samples (plants or animals) or requiring intensive ground-based data or sample collection will have short-term impacts.

Impacts may also occur from infrastructure necessary to support a projects (e.g., permanent transects or plot markers, enclosure devices, monitoring equipment, solar panels to power unattended monitoring equipment). Some level of disturbance is expected with these projects, especially if investigator(s) enter areas closed to the public and collect samples or handle wildlife. Project proposals will be reviewed during the SUP application process to assess the potential impacts (short, long-term, and cumulative) and mitigation measures put forward to minimize impacts and conflicts relative to benefits of the investigation into Refuge management issues and understanding of natural systems. Where long-term or cumulative unacceptable effects cannot be avoided, the project will not be found compatible and no permit will be issued. Projects that represent public or private economic use of the natural resources of any national wildlife refuge (e.g., bioprospecting), in accordance with 16 U.S.C. 715s, must contribute to the achievement of the national wildlife refuge purposes or the National Wildlife Refuge System mission to be compatible (50 C.F.R. 29.1).

Investigator(s) obtaining required State and Federal collecting permits will also ensure minimal impacts to fish, wildlife, plants, and their habitats. A Section 7 consultation under the Endangered Species Act (16 U.S.C. 1531-1544, 87 Stat. 884, as amended Public Law 93-205) will be required for activities that may affect a federally listed species and/or critical habitat.

The probability of this will be minimized or eliminated through SUP stipulations requiring proper cleaning of investigator equipment and clothing as well as quarantine methods, where necessary.

### **Cumulative Impacts**

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time.

Cumulative impacts may be seen from the combination of uses on the refuge including hunting, wildlife observation, photography, education, interpretation, habitat management and research. Conflicting programs that occur in the same space and time can cause decreased satisfaction from user groups and increase disturbance to wildlife from frequent human visitation, consumptive or non-consumptive. Management actions such as prescribed fire, water management and timber management are necessary aspects if refuge management but may not be compatible with hunting activities. Likewise, research which may require access undisturbed areas to allow scientific rigor. The refuge considers all uses as activities are

planned on a yearly basis and programs are structured to allow multiple uses with high quality while not overlapping.

Scientific research activities are expected to have negligible adverse cumulative impacts. On any given year, the Refuge may have approximately 10 on-going research projects and receives less than five new project requests annually. Research activities are generally limited by seasons (i.e. wet, dry, nesting) and visits on the Refuge are largely not consecutive which provides wildlife and habitat long periods for recovery and respite.

#### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

#### **DETERMINATION (CHECK ONE BELOW):**

☐ Use is not compatible

☒ Use is compatible, with the following stipulations

#### **STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

Each request must comply with Special Conditions attached to the SUP to ensure compatibility. At minimum, the following standard SUP Special Conditions will be included. Additional stipulations relevant to the project can and will be identified for each individual request in the SUP. The Refuge will modify or eliminate any use that results in unacceptable impacts. Annual or other short-term SUPs are preferred; however, permits may be issued for longer terms (up to five years), if needed, to allow completion of the project. All SUPs will have a definite termination date in accordance with 5 RM 17.11. Renewals will be subject to Refuge Manager review and approval based on timely submission of and content in progress reports, compliance with SUP stipulations, and required permits.

#### Minimum Special Conditions for SUPs

- All Refuge regulations apply unless otherwise stated.
- Projects will adhere to scientifically defensible protocols for data collection, where available and applicable.
- Permittee may not conduct any activity not related to the purposes for which this permit was issued while on the Refuge.
- Permittee must notify Refuge headquarters at least 24 hours in advance of each daytime entry and shall observe posted public entry hours unless otherwise allowed. Nighttime entry requires 72 hours advance notification.
- Permittee and designated sub-permittees shall keep a copy of this permit with him/her while on the Refuge and engaging in activities authorized by this permit. A copy of the fully signed SUP shall be placed on the vehicle dashboard when onsite.
- Refuge staff may accompany the permittee or investigator(s) in the field at any time.
- The permittee must: inform the Refuge regarding what equipment/supplies/chemicals will be brought onto the Refuge; be responsible for safe storage, transport, and removal of all materials brought onto the Refuge; obtain permission to temporarily store any materials or leave any equipment (traps, gauges, poles, supplies, etc.) onsite and/or in the Refuge Interior; and must adhere to further Refuge guidance regarding resources brought onto the Refuge.
- Sampling equipment as well as investigators' clothing and vehicles (e.g., ATV, boats) will be thoroughly cleaned (free of dirt and plant material) before being allowed for use on Refuge lands to prevent the introduction and/or spread of pests.
- Upon completion of the project or annually, all equipment and markers (unless required for long-term projects), must be removed and sites must be restored to the Refuge Manager's satisfaction. Conditions for clean-up and removal of equipment and physical markers will be stipulated in the SUP(s).
- Progress reports are required at least annually for multiple-year projects. The minimum required elements for a progress report will be provided to investigator(s).
- A Project Abstract (summary) shall be submitted at the completion of each calendar year's-worth of data collection. Details will be provided in the SUP.
- The NWRS, specific Refuge, names of Refuge staff and other USFWS personnel that supported or contributed to the project will be appropriately cited and acknowledged in all written and oral presentations resulting from projects on Refuge lands.
- The Refuge will be provided with copies of any final reports, publications, or manuscripts resulting from a Refuge project in electronic form.
- Any changes to the protocol or personnel shall be submitted for approval by the Refuge 30 days prior to change; otherwise, the SUP is voided.
- Renewals shall be requested in writing at least three weeks in advance of the end of the SUP.

- If unacceptable impacts to natural resources or if conflicts arise or are documented by Refuge staff, then the Refuge Manager can suspend, modify conditions of, or terminate an on-going project already permitted by SUP(s) on a Refuge(s).
- All federal and state collection permits shall be current and a copy shall be submitted to the Refuge.
- All vehicles must be clearly identified as official research vehicles.

#### Additional Special Conditions for ATV/UTV or Swamp Buggy

- Permittee will make every effort to minimize impacts by staying on existing trails, and avoiding driving through dense vegetation whenever practical.
- Collection activities should be planned to minimize the number of trips necessary to complete the tasks outlined in the project proposal.

#### Additional Special Conditions for Specimen Collection

- The permittee may use specimens collected under this permit, any components of any specimens (including natural organisms, enzymes, genetic materials or seeds), and research results derived from collected specimens for scientific or educational purposes only, and not for commercial purposes unless the permittee and USFWS have entered into a Cooperative Research and Development Agreement (CRADA). We prohibit the sale of collected research specimens or transfers to third parties for commercial purposes. Breach of any of the terms of this permit will be grounds for revocation of this permit and denial of future permits. Furthermore, if the permittee sells or otherwise transfers for commercial purposes collected specimens, any components thereof, or any products or research results developed from such specimens or their components without a CRADA, the permittee will pay USFWS a royalty rate of 20 percent of gross revenue from such sales. In addition to such royalty, we may seek other damages and injunctive relief against you.

#### Additional Special Conditions for Air Access

- All SUP holders who use aircraft to access the Refuge must provide, at least 48 hours in advance of the flight:
  - Type of aircraft and identification number
  - Name and contact information for the researchers
  - Name and phone number of the aircraft company or contractor
  - Expected flight elevation, duration of flight, time of flight, and date of flight
  - A map (or coordinates) of where the aircraft will be flying
- Refuge aviation operations may take precedence over other non-Refuge operations if airspace or other conflicts arise.

Additional Special Conditions for UAS is more thoroughly covered in a separate UAS compatibility determination– the below conditions may be altered as new policies and directives are approved:

- To minimize disturbance to plants, wildlife, and habitats, all activities will be coordinated with the Senior Wildlife Biologist (or designee) or Refuge Manager. Specifically, the permittee(s) shall have a plan describing what they will be doing and how they plan to do it before they initiate the proposed study or research.
- UAS activities by researchers may not occur within one-half mile of the Refuge office/Visitor Center, Roger Roth Work Center, Refuge housing, any inhabited dwelling adjacent to the Refuge, boardwalk trails, marsh trail, observation tower or blind, and canoe trail without specific consent of the Refuge Manager.

- No threatened or endangered species may be monitored without appropriate federal or state permits and specific consent of the Refuge Manager.
- Copies of the following documents are required at a minimum of 36 hours in advance of the first UAS flight:
  - Pictures and specs of the specific UAS platform employed.
  - A copy of the Federal Aviation Administration (FAA)-approved Certificate of Authorization (COA), Section 333 Exemption, or Remote Pilot Certification.
  - Aviation Risk Management or a Project Aviation Safety Plan document.
- UAS operators are responsible for meeting and following the minimum FAA rules and requirements in accordance with their certification: (a) keep the aircraft in sight (visual line-of-sight); (b) fly under 400 feet; (c) fly during daytime only; (d) fly at or below 100 mph; (e) yield right of way to manned aircraft; (f) do NOT fly over people, and (g) do NOT fly from a moving vehicle. Additional or varying stipulations may apply per the specific certification being used. These regulations are subject to change and permittees are responsible for keeping apprised of regulation changes.
- Service personnel may be present for any UAS mission conducted on the Refuge.
- UAS operators shall report any wildlife disturbance to Refuge personnel and provide a narrative (similar to a “white paper”), photo or video (captured during the flight) within 3 days after completion of the UAS flight.
  - If there are any sensitive species in the area when performing any authorized activity, the activity shall cease until the animal(s) depart the area, except as permitted for specific management of that species.
  - During descent, the UAS operator will ensure that no sensitive species are in the retrieval area.
  - Interactions with birds and other wildlife will be closely monitored; should significant interactions occur, operations will be halted.
  - Wildlife impacts will be assessed and analyzed on site and protocols modified accordingly.
  - In the event of a bird strike, the UAS should immediately return to its ground control station to remove the threat of disturbance and assess damage to the aircraft. The permittee must immediately notify Refuge staff in the event the UAS strikes any animal.
- In the instance of a crash, the UAS operator is responsible for reporting it per FAA policy and shall provide copies of any documentation to the Refuge.
- Additional special conditions shall be stipulated in the SUP as needed to further minimize impacts. If adverse impacts to Refuge resources associated with UAS activities are identified in future years, modifications to that part of the program will be implemented immediately to minimize future impacts.
- All current or future Refuge specific rules and regulations apply to the proposed use.

### **JUSTIFICATION:**

Use of the Refuge to conduct scientific research will generally provide information that will benefit fish, wildlife, plants, and their habitats. Scientific findings gained through these projects provide important information regarding life-history needs of species and species groups as well as identify or refine management actions to achieve resource management objectives in Refuge management plans. Reducing uncertainty regarding wildlife and habitat responses to Refuge management actions in order to achieve desired outcomes reflected in resource management objectives is essential for adaptive management in accordance with 522 DM 1. Scientific research on the Refuge is inherently valuable to the USFWS because it will expand scientific

information available for resource management decisions. Additionally, only projects that contribute (directly or indirectly) to the enhancement, protection, use, preservation, and management of wildlife populations and their habitats will be authorized. Permitting scientific research by non-USFWS personnel facilitates success of critical projects that may not be realized otherwise, thereby providing more scientific information available to the USFWS to aid in managing and conserving Refuge resources. By allowing the use to occur under the stipulations described above, it is anticipated that wildlife species which could be disturbed during the use will find sufficient food resources and resting places so their abundance and use will not be measurably lessened on the Refuge. Furthermore, it is anticipated that monitoring, as needed, will prevent unacceptable or irreversible impacts to fish, wildlife, plants, and their habitats. As a result, these projects will not materially interfere with or detract from fulfilling Refuge purpose(s); contributing to the Mission of the NWRS; and maintaining the biological integrity, diversity, and environmental health of the Refuge. This determination is based on best sound professional judgement.

This CD is based on sound professional judgement.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

**LITERATURE CITED:**

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### **MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

### **COMPATIBILITY DETERMINATION**

USE: Unmanned Aircraft (drones)

REFUGE NAME: Florida Panther National Wildlife Refuge

DATE ESTABLISHED: June 20, 1989

ESTABLISHING and ACQUISITION AUTHORITY(IES):

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

- 8. Endangered Species Act of 1973 (16 U.S.C. §1534)
- 10. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
- 10. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

REFUGE PURPOSE(S):

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA

(USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

#### NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Refuge System Improvement Act of 1997, Public Law 105-57).

#### DESCRIPTION OF USE:

- What are the uses? Are they priority public uses?*** This use is the remote piloting of an unmanned aerial vehicle (UAV) for use for commercial recording of photos/videos, record events for educational materials, inventory and monitoring wildlife, and/or research. The use is not a priority public use, however supports priority public uses.
- Where would the uses be conducted?*** The use will be conducted within the refuge's boundary and be reviewed on a case-by-case basis and approved by the refuge manager to ensure this use does not have the potential to disturb wildlife, impact refuge management, or interfere with scheduled programs. UAS activities may not occur within one-half mile of the Visitor Center, Refuge housing, any inhabited dwelling adjacent to the Refuge, boardwalk trails, marsh trail, observation tower or blind, and canoe trail without specific consent of the Refuge Manager.
- When would the uses be conducted?*** This use will be conducted year-round in authorized areas from sunrise to sunset.
- How would the uses be conducted?*** Only unmanned aerial systems that are in support of conservation, Refuge purposes, the Refuge System mission, or for educational and interpretation purposes will be permitted. Each request for this use for scientific data collection or for environmental education will be considered, and if appropriate, will be issued a special use permit (SUP) by the refuge manager. Each request must be presented in writing with details of who, what, where, when, why, and how the commercial operation will be conducted. Each request will be evaluated on its own merit. The refuge manager will use professional judgment and ensure that the request will have no considerable negative impacts to natural, cultural, or visitor services, does not violate refuge regulations, and contributes to the achievement of the refuge purpose or the Refuge System mission. Any approved SUP will outline the framework in which the use can be conducted and refuge staff will ensure compliance with the permit.

Permittee shall provide a detailed description of filming/photography plans, including site specific location, support equipment, number of persons involved, client name, description of the project theme and key messages, and other details that will allow for evaluation of the project. Additionally, the permittee must provide advance copies of the FAA-approved Certificate of Authorization (COA) or Section 333 Exemption, other mission-related documents including but not limited to plans, logs, reports, and publications, pictures and specs of the specific UAS platform employed, and Aviation Risk Management or Aviation Project Safety document shall be provided to the Project Leader. Before a refuge manager can consider permitting the use of a drone and prior to bureaus approving/issuing a special use permit for this type of mission the operator must be in compliance with the following FAA regulations:

- DOI operator follows provisions of the Small UAS Rule (sUAS rule; Part 107), a COA, an emergency COA, or the DOI-FAA MOA
- Non-DOI government agency/public university operator follows provisions of the sUAS Rule Part 107 or a COA (and provides a copy of COA to USFWS)
- Commercial operator follows provisions of the sUAS Rule (Part 107)

In addition to the FAA requirements, the operator must ensure they met all 50 CFR regulations regarding aircrafts. Once the operator has met all required regulations, then the permit may be issued on a case-by-case basis to ensure this use does not have the potential to disturb wildlife, impact refuge management, or interfere with scheduled programs.

The refuge will manage this activity within the existing priority public uses (photography, environmental education, and scientific research) in accordance with Federal and State regulations as well as the stipulations written in the compatibility determinations for these specific uses.

- e. ***Why are these uses being proposed?*** This use is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 Act of (16 1997. u.s.c: 668dd-668cc) as amended by the National Wildlife Refuge System Improvement Act of 1997. This activity however, can be linked to three of the six priority public uses: photography, environmental education and interpretation. This use has the potential to assist in scientific research, and Refuge Management actions such as inventory and monitoring.

This use could also record certain Refuge events adding a new dimension to the Refuge's ability to connect with people through social media e.g. Facebook, twitter, and other websites. As new technologies are developed, this use could also assist in scientific research, and Refuge management such as inventory and monitoring, fire management, storm damage detection, invasive species detection, documentation of habitat management activities, and other habitat management activities. Under very limited and controlled circumstances, allowing this use could expand the Refuge's ability to connect with new public audiences.

#### **AVAILABILITY OF RESOURCES:**

Implementation of this use is estimated to cost \$4,000 annually. Resources involved in the administration and management of the use includes personnel time associated with administration and law enforcement.

No special equipment, facilities, or improvements are necessary to support the uses. Maintenance costs are not directly attributable to these incidental uses on the refuge.

Minimal costs are associated with these uses to monitor impacts to wildlife from the Use of UAV.

A special use permit will be required, which obligates administrative time to complete. A SUP fee will be charged to recover the cost of administering this use. Existing staffing and funding are adequate to support these activities.

Item	Cost
Refuge Management oversight and SUP	\$2,000
Refuge law enforcement	\$2,000
<b>Total Annual Costs</b>	<b>\$4,000</b>

### **ANTICIPATED IMPACTS OF THE USE:**

Temporary disturbance to wildlife, specifically birds, exist during the UAS flight period. Vas et al. (2015) studied the behavioral effects of a quadcopter drone on mallards (*Anas platyrhynchos*), flamingos (*Phoenicopterus roseus*), and common greenshanks (*Tringa nebularia*). The birds had no significant reactions to different drone speeds or different colored drones, and it appeared to be no cumulative effects of successive flights. These species had very little reaction to lower approach angles, but consistently reacted when the drones approached from directly overhead. These results are consistent with those of Sarda-Palomera et al. (2011) who monitored the effects of UAS used for population monitoring of gulls and with results of Goebel et al. (2015) who found no reaction among penguins or seals when UAS were used for population monitoring. However, more powerful drones of larger size that make more noise may have a greater effect on birds and other wildlife. Intentional disturbance of wildlife during breeding, nesting, rearing of young or other critical life history functions cannot be tolerated and will be in violation of 50 CFR 27.34 and 27.51.

Aerially sourced data collection may be critical to the future understanding of many ecological systems, such as the use of remotely sensed satellite imagery to investigate the impacts of climate change or the migration changes of species (Bartlam-Brooks et al., 2013; Blanco et al., 2008; Felix, 2000; Mueller et al., 2011; Roshier & Rumbachs, 2004) or estimating population sizes using aerial photography (Bako, Tolnai & Takacs, 2014; Trathan, 2004). Another advantage of UAVs is that the aerial photography based approach provides a bank of images from which individual species can be independently counted, verified and archived for future analysis or audit. This transparent census technique can increase the usability and cost effectiveness of information gathered if images are made available to other researchers.

Unmanned aerial systems (UAS or drones) are increasingly being tested or used as wildlife management tools across the globe (Goebel et al., 2015; Hodgson et al., 2013; Koh and Wich, 2012; Mulero-Pazrnany et al., 2014; Sarda-Palomera et al., 2011) which informs current understanding of the effects of these systems on birds. The application of UAVs for wildlife surveys is a rapidly advancing field and in 2015 alone there have been several studies that have attempted to quantify the response of animals in wild situations to the presence of an overhead UAV (Chabot, Craik & Bird, 2015; Ditmer et al., 2015; Goebel et al., 2015; Pomeroy, O'Connor

& Davies, 2015; Vas et al., 2015). In the studies published to date that have examined this question, researchers have often relied on a single type of UAV (typically a small multirotor model) without comparing potential disturbance effects of the different fixed wing and multi-rotor UAVs that are commercially available. Given the different acoustic profiles, flight patterns and shape of available platforms, it will be unwise to extrapolate a focal species' response or tolerance between different models of UAVs, such as multirotor versus fixed wing configurations, as animals may react very differently to each type.

### **Cumulative Effects**

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time.

Cumulative impacts may be seen from the combination of uses on the refuge including hunting, wildlife observation, photography, education, interpretation, habitat management and research. Conflicting programs that occur in the same space and time can cause decreased satisfaction from user groups and increase disturbance to wildlife from frequent human visitation, consumptive or non-consumptive. Management actions such as prescribed fire, water management and timber management are necessary aspects of refuge management but may not be compatible with hunting activities. Likewise, research which may require undisturbed areas to allow scientific rigor. The refuge considers all uses as activities are planned on a yearly basis and programs are structured to allow multiple uses with high quality while not overlapping. Times and locations of drone activities allow participants to pursue this public use while other uses may be located in other areas of the refuge or at other times to reduce conflicts.

Cumulative impacts are not anticipated on wildlife, their behaviors, or their habitat. Travel will occur on ruderal communities that can withstand repetitive use. The Refuge Manager will use professional judgment in ensuring that the request will have no considerable negative impacts; will not violate Refuge regulations; and that it will contribute to the achievement of the Refuge purposes and the NWRS mission.

### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group,

Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

☐ Use is not compatible

☒ Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

To ensure compatibility with refuge purposes and the mission of the Refuge System, the following refuge-specific stipulations are examples which may be required by the Special Use Permit:

1. This use must be conducted in accordance with applicable State and Federal laws and regulations related to the use of UAS including but not limited to USFWS 603 FW 1 (Appropriate Use), 50 CFR 27.34 (Harassment of Wildlife), 14 CFR 21, 43, 61, 91, 101, 107, 119, 133, and 183 and other applicable laws, regulations and policies, as well as, FWS and special refuge specific regulations.
2. The public use program will be reviewed annually to ensure that it contributes to refuge objectives in managing quality recreational opportunities and protecting habitats, and is subject to modification if onsite monitoring by refuge personnel or other authorized personnel results in unanticipated negative impacts to natural communities, wildlife species, or their habitats. Refuge law enforcement officer(s) will promote compliance with refuge regulations, monitor public use patterns and public safety, and document visitor interactions. Refuge law enforcement personnel will monitor all areas and enforce all applicable State and Federal regulations.
3. Areas may be closed on the refuge to protect resources or prevent unwanted disturbance.
4. The public will not be allowed to fly their own UASs; only special use permitted UASs are authorized for use to observe wildlife, take photos/videos, record events for educational materials, inventory and monitoring, and/or research.
5. If disturbance of wildlife is noticed, the operator will cease and desist the flight.

Additional Special Conditions for UAS – the below conditions may be altered as new policies and directives are approved

- To minimize disturbance to plants, wildlife, and habitats, all UAS activities involving recording wildlife will be coordinated with the Senior Wildlife Biologist (or designee) or Refuge Manager. Specifically, the permittee(s) shall be very well organized, know exactly what they will do and how to do it before they initiate recordings.
- UAS activities may not occur within one-half mile of the Visitor Center, Refuge housing, any inhabited dwelling adjacent to the Refuge, boardwalk trails, marsh trail, observation tower or blind, and canoe trail without specific consent of the Refuge Manager.
- No threatened or endangered species may be monitored without appropriate federal or state permits and specific consent of the Refuge Manager.
- When the purpose of the project is to monitor wildlife during critical times (i.e. nesting), the use of UAS must be the less disrupting option than other methods of monitoring.
- Copies of the following documents are required at a minimum of 36 hours in advance of the first UAS flight:
  1. Pictures and specs of the specific UAS platform employed.
  2. A copy of the Federal Aviation Administration (FAA)-approved Certificate of Authorization (COA), Section 333 Exemption, or Remote Pilot Certification.
  3. Aviation Risk Management or a Project Aviation Safety Plan document.
- UAS operators are responsible for meeting and following the minimum FAA rules and requirements in accordance with their certification: (a) keep the aircraft in sight (visual line-of-sight); (b) fly under 400 feet; (c) fly during daytime only; (d) fly at or below 100 mph; (e) yield right of way to manned aircraft; (f) do NOT fly over people, and (g) do NOT fly from a moving vehicle. Additional or varying stipulations may apply per the specific certification being used. These regulations are subject to change and permittees are responsible for keeping apprised of regulation changes.
- Service personnel may be present for any UAS mission conducted on the Refuge.
- UAS operators shall report any wildlife disturbance to Refuge personnel and provide a narrative similar to a “white paper”, photography or videography (captured during the flight) within 3 days after completion of the UAS flight.
  1. If there are any sensitive species in the area when performing any authorized activity, the activity shall cease until the animal(s) depart the area, except as permitted for specific management of that species.
  2. During descent, the UAS operator will ensure that no sensitive species are in the retrieval area.
  3. Interactions with birds and other wildlife will be closely monitored; should significant interactions occur, operations will be halted.
  4. Wildlife impacts will be assessed and analyzed on site and protocols modified accordingly.
  5. In the event of a bird strike, the UAS should immediately return to ground control station to remove the threat of disturbance and assess damage to the aircraft.
- In the instance of a crash, the UAS operator is responsible for reporting it per FAA policy and shall provide copies of any documentation to the Refuge.
- Additional special conditions shall be stipulated in the SUP as needed to further minimize impacts. If adverse impacts to Refuge resources associated with UAS activities are identified in future years, modifications to that part of the program in question will be implemented immediately to minimize that impact. All current or future Refuge specific rules and regulations apply to the proposed use.

## **JUSTIFICATION:**

The National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, provides guidelines and directives for administration and management of all areas in the National Wildlife Refuge System, which includes "wildlife refuges, areas for the protection and conservation of fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas." In managing the National Wildlife Refuge System, the U.S. Fish and Wildlife Service (Service) must "assure that any present or future recreational use will be compatible with, and will not prevent accomplishment of, the primary purposes for which ... conservation areas were acquired or established.... "Congress has authorized the Secretary of the Interior "to administer such areas or parts thereof for public recreation when in his judgment public recreation can be an appropriate incidental or secondary use. "Thus, national wildlife refuges are considered "closed" to recreational uses unless and until a Refuge Manager makes a positive compatibility determination.

"All national wildlife refuges are maintained for the primary purpose of developing a national program of wildlife and ecological conservation and rehabilitation." Pursuant to its authority to limit recreational use of areas within the National Wildlife Refuge System, the Service has promulgated regulations, which prohibit refuge visitors from engaging in certain activities on refuge lands. Specific regulations that apply to the aforementioned determination include:

1) 50 C.F.R. § 27.34 prohibits "The unauthorized operation of aircraft, including sail planes, and hang gliders, at altitudes resulting in harassment of wildlife, or the unauthorized landing or take- off on a national wildlife refuge, except in an emergency, is prohibited." Importantly, there is no definition of "aircraft" in the National Wildlife Refuge System regulations at 50 C.F.R. Chapter I, Subchapter C, which covers the National Wildlife Refuge System. However, the term is defined in 50 C.F.R. Chapter I, part I 0, Subpart B. where "aircraft" is defined as "any contrivance used for flight in the air." This definition is consistent with Webster's Dictionary (2013) definition of "aircraft" as "any machine supported for flight in the air by buoyancy or the dynamic action of air on its surfaces, especially powered airplanes, gliders, and helicopters."

Thus, the common meaning of the term aircraft is broad enough to include manned and unmanned aircraft.

2) 50 C.F.R. § 27.51 prohibits "disturbing, injuring, spearing, poisoning, destroying, collecting or attempting to disturb, injure, spear, poison, destroy or collect any plant or animal on any national wildlife refuge ... except by special permit. . . ."

3) While 50 C.F.R. § 26.32 permits recreational uses, including "nature observation and photography" on refuge lands, but only after a finding by each Refuge Manager that the recreational uses are compatible with the purposes of that particular refuge. Visitors to refuge lands using unmanned aircraft while engaging in "commercial filming and still photography" must satisfy all applicable permit requirements set forth at 43 C.F.R. § 5.1, and failure to do so is a violation of 50 C.F.R. § 27.71. 43 C.F.R. § 5.12 defines "commercial filming" as "the recording of a moving image by a person, business, or other entity for a market audience with the intent of generating income." Under these regulations, those required to obtain a permit for such commercial activities must pay a fee and agree to reimburse the government for any costs it incurs.

The use of drones/UASs also is not consistent with goals and objectives of these refuges as identified in the CCP /HMPs' which focus on migratory birds, at risk species, and threatened and endangered species. This use is not a priority public use of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act of 1966 Act of (16 1997. u.s.c: 668dd-668cc) as amended by the National Wildlife Refuge System Improvement Act of 1997. This activity, however, can be linked to three of the six priority public uses: photography, environmental education and interpretation. This use has the potential to assist in scientific research, and Refuge Management actions such as inventory and monitoring.

Approving this use will not conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the Refuge, nor will this use materially interfere with or detract from the purposes of the Refuge, nor cause an undue administrative burden. Whether unmanned aerial systems are used for photography, environmental education/interpretation, Refuge management actions, or scientific research, the Refuge manager must ensure this use does not have the potential to disturb wildlife, impact refuge management, or interfere with scheduled programs. Each request for this use will be considered on a case-by-case basis.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

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**MANDATORY 10 YEAR RE-EVALUATION DATE: 2031**

## COMPATIBILITY DETERMINATION

USE: Wildlife Observation, Photography, Environmental Education and Interpretation

REFUGE NAME: Florida Panther National Wildlife Refuge

DATE ESTABLISHED: June 20, 1989

ESTABLISHING and ACQUISITION AUTHORITY(IES):

The refuge establishment and acquisition authorities for Florida Panther National Wildlife Refuge (NWR, refuge) are:

- 9. Endangered Species Act of 1973 (16 U.S.C. §1534)
- 11. Fish and Wildlife Act of 1956 16 U.S.C. §742f(a)(4)
- 11. Fish and Wildlife Act of 1956 16 U.S.C. §742f(b)(1)

REFUGE PURPOSE(S):

The Florida Panther National Wildlife Refuge (FPNWR) was authorized in 1985, under the authority of the Fish and Wildlife Act of 1956 and The Endangered Species Act of 1973, for the primary purpose of protecting the Florida panther and its habitat. Based on recommendations from the Recovery Plan for the Florida panther (USFWS 1981) and the Fakahatchee Strand EA (USFWS 1985), the Refuge was acquired for the benefit and recovery of the endangered Florida panther. FPNWR was administratively established in 1989 to conserve fish, wildlife and plants which are listed as threatened and/or endangered species and for the development, advancement, management, conservation and protection of fish and wildlife resources under the Endangered Species Act and the Fish and Wildlife Act.

- "... for the conservation of threatened and endangered species ..." (16 U.S.C. §1534) (Endangered Species Act of 1973)
- "... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. § 742f(a)(4) "... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956).
- "... for the benefit and recovery of the endangered Florida panther ..." (Fakahatchee Strand Environmental Assessment 1985)

NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

"The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (Refuge System Improvement Act of 1997, Public Law 105-57).

DESCRIPTION OF USE:

**(a) What is the use? Is the use a priority public use?** The use is wildlife observation and photography, interpretation, and environmental education (EE) at Florida Panther NWR. Wildlife observation and photography, interpretation, and environmental education (EE) were all identified as a priority public use of the Refuge System by the Refuge System Administration

Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), when found to be compatible.

The Visitor Services Plan (VSP) identifies an expansion of the environmental education program to a curriculum-based program that focuses on habitat diversity. Under current resources the opportunities are limited; however, over time the program will grow to provide a diverse range of onsite staff-led education programs. The programs will explore various habitats of the refuge (i.e., Forested wetlands, pine flatwoods, hardwood hammocks), as well as Florida Panthers and other wildlife leading to a better understanding of the value of these habitats to fish and wildlife resources, the human influence on the ecosystem, and the importance of these resources to society. The plan also identifies using the refuge as a site to facilitate outdoor skills workshops, amid to provide a high quality experiential learning setting the next generation of outdoor enthusiast. These outings could include limited camping opportunities at the old Fakahatchee Conservation Club.

The refuge has developed facilities such as McBride's Cabin at the site of the old Fakahatchee Conservation Club and the existing public use trails to support the program and will be developing curricula that allow students and families to explore and experience these habitats first hand. There is also an increasing demand for wildlife observation, photography and amateur Astronomy and night sky viewing for the purpose of education.

Environmental education program consist primarily of youth and adult education and interpretation of the natural resources of the refuge to increase public's knowledge and understanding of wildlife and the importance of habitat protection and management. Typical activities include teacher or staff-guided environmental education programs and onsite field trips, offsite programs in classrooms, and nature study, such as teacher and student workshops and curriculum-structured instruction. EE programs may involve the incidental collection of flora and fauna such as small fish, invertebrates, butterflies, caterpillars, leaves, seeds, stems, roots, flowers, soil, feathers, scat, discarded eggs, discarded fur, discarded hair, exoskeleton etc. Any sampling or collection activities by non-USFWS programs must be approved via a Special Use Permit (SUP), and samples collected shall be for use only on the Refuge for approved environmental education curricula.

The interpretation program strives to increase awareness and understanding of the refuge's natural features, habitat diversity, wildlife, human history, and refuge management activities. The VSP calls for minor changes, such as adding new signs, revising brochures, developing new interpretive panels and kiosks, and establishing a visitor contact station within the administrative building. The plan also calls for more extensive improvements such as developing a pine flatwoods interpretive trail at the administrative headquarters. The plan also describes group camping opportunities in the form of outdoor skills workshops and scouting groups as a form of environmental education.

Improvements to wildlife observation and photography access identified in the VSP will include, opening additional non-motorized trails, construction of a photography blinds and observation towers at the Administrative office. Opening a viewing area at the clear cut off of highway 29 and hiking trails at the Pistol Pond area.

**(b) Where would the use be conducted?** Most visitors to the refuge participate in wildlife observation and photography activities on the two existing public use hiking and interpretive trails located off State Road (SR) 29. These trails are open daylight hours only. Furthermore, wildlife observation and photography tours in other areas of the refuge are arranged for refuge

open houses and other special events throughout the year. Refuge brochures and maps provide the public with the locations of visitor facilities and associated restrictions. Figure 4 in the VSP Environmental Assessment shows the new non-motorized trails that will also facilitate Wildlife Observation and photography. These new trails will allow access along existing firebreaks, and trails currently used for management purposes. These new trails will be accessed at several locations off SR 29. The nature of the terrain trail surface and location of the trails naturally limits where these uses can occur on the refuge.

Environmental Education and Interpretation also take place on the refuge's current trails but also are proposed for use on new walking trails as well as McBride's cabin. Interpretive tours by swamp buggy on firebreaks and trails currently used by management are depicted in Figure 5 in the VSP.

**(c) When would the use be conducted?** Wildlife observation and photography, interpretation, and EE activities may be conducted year-round, during public operating hours from sunrise to sunset except by special permission from the Refuge Manager.

**(d) How would the use be conducted?** Wildlife observation and photography, interpretation, and EE activities are achieved through guided or self-guided tours and activities. Only modes of transportation permissible to the public on the Refuge may be used to conduct these uses by the public. Some supporting uses will include hiking and bicycling. Visitors can make contact with staff at the Headquarters/visitor contact station or visit the refuge webpage to see recreational trails. Other amenities available to the public and utilized in EE and interpretation include walking trails and boardwalks, observation/photo blind, covered shelters, and an observation platform. Each trail or platform also including interpretative panels and wayside exhibits, on various topics of the refuge's habitats and management.

Refuge staff will work with Regional Archaeologist and Historic Preservation Officer Rick Kanaski and associated USFWS cultural resource preservation staff to ensure all improvements and their associated construction meet Section 106 compliance requiring federal agencies to consider the effects on historic properties of projects they carry out, assist, fund, permit, license, or approve throughout the country.

**(e) Why is the use being proposed?** Wildlife observation and photography, interpretation, and EE are being re-evaluated for the Refuge. These activities have been occurring on the Refuge since it was created in 1989. The Improvement Act of 1997 defines the described uses as priority public uses, and if compatible, they are to receive enhanced consideration over other general public uses in Refuge planning. Non-consumptive uses such as bird watching, nature photography, butterfly watching, and plant identification are enjoyed by approximately 5,000 people a year at the Refuge.

Visitors are always on the lookout for a glimpse of the Florida Panther in the pine flatwoods and hardwood hammocks, but the cypress swamp within the Refuge and the ecotone surrounding it are potentially rewarding areas to see migratory neo-tropical passerines, woodstorks and many other species of birds. An increase in non-consumptive uses is expected to grow rapidly due to increases in resident population growth adjacent to the Refuge, a growing "winter" visitor population, and the awareness of the Refuge's diverse habitats. These activities can enhance the users' appreciation of the Refuge, the NWRs, wildlife, their habitats, and the human environment.

#### **AVAILABILITY OF RESOURCES:**

*Resources involved in the administration and management of the use* – Implementation of this use is estimated to cost \$48,000 annually including staff time and monitoring. Staff time is associated with administration and law enforcement. Existing staffing and funding are adequate to support these activities at existing and projected levels. Volunteers are utilized to assist in successful programs and opportunities. Administration of SUPs associated with this activity consists of approximately 5 staff days or less than 1 percent of staff time.

*Special equipment, facilities, or improvements necessary to support the use* –Construction of boardwalks, observation towers, or blinds will be contingent on future funding estimated at \$300,000.

*Maintenance costs* – Maintenance costs associated with this use are already performed by staff and/or volunteers throughout the year, during the normal course of their duties. Examples include mowing, trail maintenance, signage, parking areas. Additional new structures (observation blind, kiosks, boat ramps, boardwalks) will require maintenance. Annual Maintenance of these facilities will be \$15,000 per year including 10% of staff time.

*Monitoring costs* – Existing Refuge staff monitors the effects of current operations during the normal course of their duties. Voluntary evaluations are provided to teachers and visitors for feedback on educational programs and experiences. Annual refuge operation and maintenance funds support the Visitor Service program and activities. The development of facilities is contingent upon successfully locating a funding source. Costs for improvements identified in the CCP will typically come from the US Fish and Wildlife Service, Friends of the Florida Panther Refuge, and other grants or endowments. Refuge staff, such as interpretive rangers, intern students, volunteers, and the Friends of the Florida Panther Refuge, provides the staffing for these uses.

The financial and staff resources necessary to provide and administer this use at its current level and at the proposed level are sufficient, and we expect the use to continue in the future subject to availability of appropriated funds.

Item	Cost
Fish and Wildlife Officer – education and enforcement	\$10,000
Maintenance Workers – site upkeep, litter removal, sign installation	\$15,000
Refuge Managers – program oversight monitoring	\$5,000
Signs, parking lot maintenance	\$3,000
Environmental education programing	\$15,000
<b>Total Annual Costs</b>	<b>\$48,000</b>
Proposed infrastructure improvements	\$300,000
<b>10 year Total to implement</b>	<b>\$780,000</b>

#### **ANTICIPATED IMPACTS OF THE USE:**

A primary concern for allowing any public use to occur on the Refuge is to ensure that impacts to wildlife and habitats are maintained within acceptable limits and potential conflicts between user groups are minimized. Several studies have examined the effects of recreation on birds using shallow water habitats adjacent to trails and roads through wildlife refuges and coastal

habitats in the eastern United States (Burger 1981; Burger 1986; Klein 1993; Burger et al. 1995; Klein et al. 1995; Rodgers & Smith 1995, 1997; Burger & Gochfeld 1998).

The expansion of these uses, as proposed in the VSP, will increase disturbance in several new sites; however, impacts will be considered short-term and discrete due to the low anticipated frequency of use and ability to move sites to a new area if the habitat showed signs of impacts. Vegetation trampling, altering structure and species composition, and temporal wildlife impacts to species will be at a minimal level. This unavoidable impact associated with running the environmental educational program is acceptable.

Impacts associated with interpretive activities generally occur at developed facilities such as the visitor contact station, trails, boardwalks, or other improved facilities. Adding these new interpretive sites will have some wildlife or habitat impacts. The pine flatwoods trail will use an existing fire break and parking for this facility will use the existing Administrative headquarters parking lot. A new visitor contact station will be located in the Administrative building. If funding were to become available to replace the Administrative building, the new location will be immediately adjacent to the existing building where no clearing or ground alterations will be required. Semi-primitive group camping at the former site of the Fakahatchee Conservation Club will be considered in the form of outdoor skills workshop and scouting groups

*Short-term Impacts:* Impacts associated with wildlife observation and photography activities on the refuge are expected to be negligible due to public access to the refuge being limited to existing trails and seasonal trails will get minimal use due to trail conditions and water levels that may be over the trail.

In general, Wildlife photographers tend to have the larger disturbance impacts (Klein 1993; Morton 1995; Dobb 1998). While wildlife observers frequently stay on trails or their vehicles to view wildlife, wildlife photographers are much more likely to leave their vehicles and approach wildlife on foot (Klein 1993). Even a slow approach by wildlife photographers tends to have behavioral consequences to wildlife (Klein 1993). Other impacts include the potential for some photographers to remain close to wildlife for extended periods of time (Dobb 1998) and the tendency of casual photographers with low-power lenses to get much closer to their subject than other activities will require (Morton 1995). Overall, the existing research clearly demonstrates that disturbance from recreation activities always have at least temporary effects on the behavior and movement of birds within a habitat or localized area (Burger 1981, 1986; Klein 1993; Burger et al. 1995; Klein et al. 1995; Rodgers & Smith 1997; Burger & Gochfeld 1998). The findings that were reported in these studies are summarized as follows in terms of visitor activity and avian response to disturbance.

Presence: Birds avoided places where people were present and when visitor activity was high (Burger 1981; Klein et al. 1995; Burger & Gochfeld 1998).

Distance: Disturbance increased with decreased distance between visitors and birds (Burger 1986), though exact measurements were not reported.

Approach Angle: Visitors directly approaching birds on foot caused more disturbance than visitors driving by in vehicles, stopping vehicles near birds, and stopping vehicles and getting out without approaching birds (Klein 1993). Direct approaches may also cause greater disturbance than tangential approaches to birds (Burger & Gochfeld 1981; Burger et al. 1995; Knight & Cole 1995; Rodgers & Smith 1995, 1997).

**Noise:** Noise caused by visitors resulted in increased levels of disturbance (Burger 1986; Klein 1993; Burger & Gochfeld 1998), though noise was not correlated with visitor group size (Burger & Gochfeld 1998).

**Long-term Impacts:** Even though the current level of use occurring at the refuge is low, appropriate solutions to be developed to ensure a quality visitor experience while minimize any negative human/wildlife interactions. Most impacts to soil productivity are generally associated with areas with greater soil disturbance such as on existing firelines, trails, and roads. There are some situations that could be harmful to plant and animal life, which will warrant Refuge closures or the development of use restrictions. Examples of these situations include, but are not limited to, protection of trust and listed species (flora and fauna), impacted vegetation, nesting species, and the protection of and possible conflicts with other refuge management programs. Potential impacts to wildlife and habitats include disrupting foraging or resting activities, repetitive flushing of nesting birds, and stress or change in behavior due to group size and/or volume. Negative responses from wildlife due to human impacts can include, but are not limited, to:

- permanent disappearance of migratory bird species or individuals that are unable to adapt to the presence of people by habituation
- increased nest predation due to the continued flushing of birds from their nests
- change of patterns of behavior due to repetitive flushing
- increase of energy demands for wildlife fleeing from human disturbance
- variation in feeding behavior (Burger & Gochfeld 1998)

### **Cumulative Impacts**

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time.

Cumulative impacts may be seen from the combination of uses on the refuge including hunting, wildlife observation, photography, education, interpretation, habitat management and research. Conflicting programs that occur in the same space and time can cause decreased satisfaction from user groups and increase disturbance to wildlife from frequent human visitation, consumptive or non-consumptive. Management actions such as prescribed fire, water management and timber management are necessary aspects of refuge management but may not be compatible with hunting activities. Likewise, research which may require undisturbed areas to allow scientific rigor. The refuge considers all uses as activities are planned on a yearly basis and programs are structured to allow multiple uses with high quality while not overlapping. Times and locations of these activities allow participants to pursue these public uses while other uses may be located in other areas of the refuge or at other times to reduce conflicts.

Cumulatively, environmental consequences resulting from past, present and foreseeable actions will be minimized for through the use of best management practices, proper mitigation measures, careful planning, design, implementation, and monitoring. Overall, the cumulative effects of all proposed activities over time are anticipated to be negligible. Minor positive impacts will be expected from gaining additional recreational and educational opportunities.

By design, wildlife observation and photography should have minimal wildlife and habitat impacts. At current levels, the use is minimal and contained to just a few acres in the Southeast

corner of the refuge. However, as use increases, wildlife impacts are may become more likely to occur. Periodic evaluation of the sites and programs will be conducted to assess if objectives are being met, if habitat impacts are minimized, and if wildlife populations are not being adversely affected. If evidence of unacceptable impacts begins to appear, it will be necessary to change the activity or the program, move the activity or program, or eliminate the program.

While anticipated impacts are expected to be minimal, stipulations are required to ensure that wildlife resources are adequately protected. The environmental education program activities will avoid sensitive sites and sensitive wildlife populations. Built into all curriculums will be a section on wildlife etiquette. Environmental education programs and activities will be held at or near established facilities where impacts may be minimized. Evaluations of sites and program frequency should be conducted periodically to assess if objectives are being met and that the natural resources are not being adversely impacted.

Impacts associated with interpretive programs are also anticipated to be minimal. One overarching aspect of the interpretive program is to build understanding and appreciation for the refuge and its natural resources. As use increases, some wildlife disturbances are unavoidable, but through interpretive materials (e.g., brochures, signs, kiosk panels, and digital devices) proper wildlife etiquette will be stressed. Education is critical for making visitors aware that their actions can have negative impacts on wildlife. Interpretive activities and programs will be conducted at developed sites where impacts can be minimized.

#### **PUBLIC REVIEW AND COMMENT:**

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management

District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

**DETERMINATION (CHECK ONE BELOW):**

\_\_\_\_\_ Use is not compatible

  X   Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

To ensure compatibility with refuge purpose(s) and Refuge System mission, Wildlife Observation, Photography, Environmental Education and Interpretation can occur at Florida Panther NWR in accordance with State and Federal regulations, and special refuge-specific restrictions to ensure that wildlife and habitat management goals are achieved, and that the program is providing a safe, high-quality experiences for participants. This Wildlife Observation, Photography, Environmental Education and Interpretation program will be monitored and potentially modified or eliminated if any the program's components are found not compatible.

The following stipulations are necessary to ensure compatibility:

Management techniques to curtail adverse impacts to the wildlife or habitats due to high levels of visitation include the listed actions.

- Visitor Use will be sunrise to sunset.
- Visitors are restricted to access the refuge at designated entry locations identified in the Visitor Services plan.
- Providing information regarding ethical outdoor behavior for refuge visitors.
- Education is critical for making visitors aware that their actions can have negative impacts on migratory birds
- Impacts from wildlife viewing and photography can be reduced by providing observation blinds.
- Closing trails during high water events
- Rerouting, modifying, or eliminating activities which have demonstrated direct wildlife impacts should also be employed.
- The use of Unmanned Aerial Systems for recreational photography is prohibited.

**JUSTIFICATION:**

The Improvement Act of 1997 identified wildlife observation and photography, environmental education and interpretation, as four of the six priority wildlife-dependent recreational uses to be facilitated in the NWRS, and the Act encouraged the USFWS to provide opportunities for these uses. By providing wildlife observation and photography, the public will have an opportunity to observe/photograph wildlife on the Refuge and share those experiences with others. Through interpretive and EE programs, the public gains a better understanding and appreciation for America's flora and fauna, wildlife conservation, and the USFWS's role in managing and protecting natural resources. One of the stated goals of the NWRS is to "foster understanding

and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats". These uses can also provide excellent interpretive activities, exposing young people and urban dwellers to the unique sounds of the marsh, the beauty of nature, and the unique setting of the Refuge. Providing information regarding the mission of the USFWS and the purposes of the Refuge, along with specific resource information, to Refuge visitors may alleviate potential negative impacts of visitors on wildlife. Wildlife observation and photography, interpretation, and EE allows visitors to enjoy the outdoors and connect with nature in a natural setting, which is not only healthy for mind, body and spirit, but can build a life-long appreciation for wildlife and their habitats. Based on the stipulations noted above, allowing these uses to occur on the Refuge will not materially detract or interfere with the purposes for establishment of the Refuge and the mission of the NWRS.

The stipulations outlined above should minimize potential impacts relative to wildlife/human interactions. At the current and proposed levels, providing opportunities for wildlife observation and photography does not seem to conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the refuge. Based on available science and best professional judgement, the Service has determined that providing opportunities for wildlife observation and photography at Florida Panther NWR as outlined in the CCP, in accordance with the stipulations provided here, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge.

Environmental education and interpretation are used to encourage all citizens to act responsibly in protecting natural resources. They are tools the refuge can use to build understanding, appreciation, and support for the refuge and the NWRS. Resources required to run the programs are minimal and are built into the refuge's operation and maintenance budget. Identified improvements will not be developed until adequate staff and budget are available to develop and operate them. As long as stipulations to ensure compatibility are followed, the programs should remain compatible with the purposes of the refuge. At such time that the monitoring program identifies unacceptable wildlife impacts are occurring, the refuge will modify the activity to minimize or eliminate the impacts.

Both programs allow the education of the public on the missions of the Service and NWRS and on the refuge purposes helping to build a connected conservation community. They highlight the areas that are most in line with the refuge's management philosophy proposed under the CCP. Considering the minimal anticipated impacts through implementation of the environmental education and interpretation programs and the benefits that should arise through public education, participation, and involvement, the program is deemed compatible.

This CD is based on sound professional judgement.

**NEPA COMPLIANCE FOR REFUGE USE (Check one below):**

☐ Categorical Exclusion Without Environmental Action Statement

☐ Categorical Exclusion and Environmental Action Statement

☒ Environmental Assessment and Finding of No Significant Impact

☐ Environmental Impact Statement and Record of Decision

**LITERATURE CITED:**

References:

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**MANDATORY 15 YEAR RE-EVALUATION DATE: 2036**

## Approval of Compatibility Determinations

**Refuge Manager/Project Leader**

\_\_\_\_\_  
Signature Date

**Refuge Supervisor**

**Area 2, Southeast Region**

\_\_\_\_\_  
Signature Date

**Regional Compatibility**

**Coordinator, Southeast Region**

\_\_\_\_\_  
Signature Date

**Regional Refuge Chief**

**National Wildlife Refuge System**

**Southeast Region**

\_\_\_\_\_  
Signature Date

## **APPENDIX D: List of Other Visitor Services Related Documents**

Below is a list of related visitor services documents and their locations.

Comprehensive Conservation Plan – (Dated 2000) (In office)  
Hunting and Fishing Plan – Management Plan Binder (Appendix A)

## APPENDIX E: National Visitor Services' Standards

Table 6. National Visitor Services standards from USFWS Policy 605FW1 and 610FW2

National Visitor Services Standards	Policy Directives
<b>STANDARD 1. Develop a Visitor Services Plan</b>	Refuge Managers will develop a VSP that addresses all compatible wildlife-dependent recreational uses on their refuge. Managers should familiarize themselves the Visitor Services Requirements Handbook.
<b>STANDARD 2. Welcome and Orient Visitors</b>	We will assure that our refuges are welcoming, safe, and accessible. We will provide visitors with clear information so they can easily determine where they can go, what they can do, and how to safely and ethically engage in recreational and educational activities. Facilities will meet the quality criteria defined in 605 FW 1, Section 1.6 of the Service Manual. We will treat visitors with courtesy and in a professional manner.
<b>STANDARD 3. Provide Quality Hunting Opportunities</b>	Provide quality hunting opportunities. Hunting is a wildlife-dependent recreational use and, when compatible, an appropriate use of resources in the Refuge System. Hunting programs will meet the quality criteria defined in section 1.6 and, to the extent practicable, be carried out consistent with State laws, regulations, and management plans (see 605 FW 2).
<b>STANDARD 4. Provide Quality Fishing Opportunities</b>	Fishing is a wildlife-dependent recreational use and, when compatible, an appropriate use of resources in the Refuge System. Fishing programs will meet the quality criteria defined in section 1.6 and, to the extent practicable, be carried out consistent with State laws, regulations, and management plans (see 605 FW 3).
<b>STANDARD 5. Provide Quality Wildlife Observation and Photography Opportunities</b>	Visitors of all ages and abilities will have an opportunity to observe and photograph key wildlife and habitat on the refuge when it is compatible with refuge purpose(s). Viewing and photographing wildlife in natural or managed environments should foster a connection between visitors and natural resources (see 605 FW 4 and 605 FW 5, respectively). Wildlife observation and photography programs will meet the quality criteria defined in section 1.6.
<b>STANDARD 6. Develop and Implement a Quality Environmental Education Program</b>	Through curriculum-based environmental education packages based on national and State education standards, we will advance public awareness, understanding, appreciation, and knowledge of key fish, wildlife, plant, and resource issues. Each refuge will assess its potential to work with schools to provide an appropriate level of environmental education. We may support environmental education through the use of facilities, equipment, educational materials, teacher workshops, and study sites that are safe, accessible, and conducive to learning (see 605 FW 6). Environmental education programs will meet the quality criteria defined in section 1.6.

**STANDARD 7.  
Provide Quality  
Interpretation of Key  
Resources and Issues**

We will communicate fish, wildlife, habitat, and other resource issues to visitors of all ages and abilities through effective interpretation. We will tailor core messages and delivery methods to provide interpretation to refuge visitors and present them in appropriate locations. Interpretive programs will meet the quality criteria defined in section 1.6.

**STANDARD 8.  
Manage for Other  
Recreational Use  
Opportunities**

We may allow other recreational uses that support or enhance one of the wildlife-dependent recreational uses or minimally conflict with any of the wildlife-dependent recreational uses when we determine they are both appropriate and compatible. We will allow uses that are either legally mandated or occur due to special circumstances.

**STANDARD 9.  
Communicate Key  
Issues with Off-site  
Audiences**

Effective outreach depends on open and continuing communication and collaboration between the refuge and its many publics. Effective outreach involves determining and understanding the issues, identifying audiences, listening to stakeholders, crafting messages, selecting the most effective delivery techniques, and evaluating effectiveness. If conducted successfully, the results we achieve will further refuge purpose(s) and the Refuge System mission.

**STANDARD 10.  
Build volunteer  
programs and  
partnerships with  
Friends organizations.**

Volunteer and Friends organizations fortify refuge staffs with their gifts of time, skills, and energy. They are integral to the future of the Refuge System. Where appropriate, refuge staff will initiate and nurture relationships with volunteers and Friends organizations and will continually support, monitor, and evaluate these groups with the goal of fortifying important refuge activities. The National Wildlife Refuge System Volunteer and Community Partnership Enhancement Act of 1998 strengthens the Refuge System's role in developing effective partnerships with various community groups. Whether through volunteers, Friends organizations, or other important partnerships in the community, refuge personnel will seek to make the refuge an active community member, giving rise to a stronger Refuge System.

**11. Recreation Fee  
Program**

"The Federal Lands Recreation Enhancement Act of 2004 (FLREA) allows land management agencies, such as the National Wildlife Refuge System, to charge fees for entry and certain amenities (user fees). The charging of entrance and user fees at national wildlife refuges can be a helpful management tool if the program is well-managed and implemented."

**12. Concessions**

Concession Contracts, discusses the Service's current policy for concession management and provides guidance for permitting and administering concession operations on Service lands. We use concessions to assist us in providing wildlife-dependent recreation activities to the visiting public. The concessions are managed through contracts between the Service and a private entity, where the private entity is allowed to charge a fee for services provided at a field station to the visiting public.

### **13. Commercial Recreational Uses**

A commercial recreational use is a use that generates revenue or that results in a commodity which is or can be sold for income or revenue. Before considering compatibility, the use must be determined to contribute to the achievement of the refuge purpose or the mission of the Refuge System, as outlined in Title 50 Code of Federal Regulations, 29.1. To be allowed on a refuge, a commercial use must go beyond the “not materially interfere with...” requirement and must contribute to the achievement of the refuge purpose or mission of the Refuge System. The contribution must be clearly defined in the justification section of the compatibility determination for any commercial use. Title 50, Code of Federal Regulations, 27.97, Private Operations, prohibits an unauthorized commercial enterprise on any national wildlife refuge. Thus, commercial tours are required to apply for a special use permit (SUP) from the Refuge Manager. By establishing a SUP system, the refuge staff is able to set sustainable limits on the number of permits issued. In determining if a commercial recreational use is compatible, one way to connect it to the mission of the System is to determine if the commercial recreation use will facilitate one of the wildlife-dependent priority public use activities which are “directly related to the mission of the System.” (Refuge Improvement Act – 1997).

### **14. Wilderness**

We provide opportunities for appropriate and compatible use and enjoyment of wilderness areas in a manner that will preserve their wilderness character and that will “leave them unimpaired for future use and enjoyment as wilderness” (Wilderness Act, section 2 (a)). Refuges are generally closed to public access and use unless opened, following an appropriateness finding and a compatibility determination, through the applicable process (e.g., compatibility determination, NEPA and planning process, special use permit, regulation, etc.) (see 50 CFR 25.21). If we open a refuge, we may impose conditions or restrictions on any activity to ensure that it is appropriate and compatible and, for wilderness areas, preserves wilderness character and values. We emphasize providing “opportunities for solitude or a primitive and unconfined type of recreation” (Wilderness Act, section 2(c)).

## **APPENDIX F: LIST OF PREPARERS**

Kevin Godsea, Project Leader, Southwest Florida Refuge Complex  
Ben Nottingham, Deputy Project Leader (retired), Southwest Florida Refuge Complex  
Erin Meyers, Acting Deputy Project Leader, Southwest Florida Refuge Complex  
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Kathleen Burchett, Area Supervisor, Southeast Region

## APPENDIX G: INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION

**Originating Person:** Kevin Godsea

**Telephone Number:** 239 472-1100 ext. 223

**E-Mail:** [Kevin\\_Godsea@fws.gov](mailto:Kevin_Godsea@fws.gov)

**Date:** July 29, 2021

**PROJECT NAME (Grant Title/Number):** Florida Panther National Wildlife Refuge Visitor Services Plan and Associated Projects

**I. Service Program:**

☐ **Ecological Services**

☐ **Federal Aid**

☐ **Clean Vessel Act**

☐ **Coastal Wetlands**

☐ **Endangered Species Section 6**

☐ **Partners for Fish and Wildlife**

☐ **Sport Fish Restoration**

☐ **Wildlife Restoration**

☐ **Fisheries**

☒ **Refuges/Wildlife**

**II. State/Agency:** Florida – U.S. Fish and Wildlife Service

**III. Station Name:** Florida Panther National Wildlife Refuge

**IV. Description of Proposed Action (attach additional pages as needed):**

The U.S. Fish and Wildlife Service (Service) is developing a Visitor Services Plan (VSP) and Hunt and Fish Plan (HFP) for the Florida Panther National Wildlife Refuge (FPNWR). Full details and analysis of environmental effects associated with implementation of the VSP and HFP can be found in the attached draft VSP and Environmental Assessment (EA). Due to their size and complexity, two projects proposed in the VSP will require additional project-specific environmental consideration and public involvement in the future (i.e., 1. Replacing current headquarters and biological laboratory with a permanent building; and 2. Constructing a public access point, trail/boardwalk, informational kiosk, vault style bathroom, and wildlife viewing structure within Unit 44).

Under the proposed action Alternative (i.e., Alternative B), the Service is proposing to open public access to new and expanded public uses detailed in the draft VSP and HFP (Figures 1-5). The extent and magnitude of these public use opportunities are intended to be managed such that they result in no or insignificant negative effects to the natural and human communities occurring within and adjacent to the FPNWR. The proposed VSP is the result of collaboration with partner agencies, interested user groups and private citizens.

Activities that are dependent on wildlife, known as the Big 6 priority public uses—fishing, hunting, wildlife photography, wildlife observation, environmental education, and wildlife interpretation are considered appropriate activities on national wildlife refuges under the National Wildlife Refuge Improvement Act of 1997. All proposed public use options (Figures 2, 4

& 5) support Big 6 activities and include non-Big 6 activities such as expanding Refuge hours, updating signs, kiosks, and Refuge brochures, restructuring fees, establishing additional access points, and expanding areas of motorized (including airboats) and non-motorized access. Proposed changes to expand wildlife observation opportunities include construction of facilities such as a new photo blind and boardwalks, constructing new observation towers, Hunting and fishing opportunities are proposed, which include wild turkey hunting and fishing in a manmade pond (former quarry site). Additional proposed public use opportunities include the addition of new non-motorized hiking trails, camping, and limited use of ORV's for hunting and interpretive tours on designated roads and fire breaks. The VSP also permits small group activities within select areas on the FPNWR. Regulations and special conditions for all proposed actions are described in detail in the VSP and the associated EA. Maps of proposed uses can also be found in the VSP, HFP and EA.

The Alternative B proposed actions would require resources ranging from additional staff and education programming, to construction of facilities such as visitor contact centers, education centers, concessions, observation towers, boardwalks, vault toilets, and photo blinds. All public-use options being considered would be implemented consistent with the goals and objectives outlined in the FPNWR Comprehensive Conservation Plan (USFWS 2000). Once the Draft VSP has been approved, it will update and amend the visitor service program in the 2000 Comprehensive Conservation Plan for the FPNWR (CCP).

Alternatives A and B have been developed to comply with the requirements of the Endangered Species Act of 1973 (ESA), including: Section 2, which declares that "all federal departments and agencies shall seek to conserve endangered species and threatened species, and shall utilize their authorities on furtherance of the purposes of this Act"; and Section 7, which directs federal departments and agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats.

Additionally, the FPNWR threatened and endangered species program priorities include:

- Implementing Service actions as recommended in recovery plans for federally listed species and existing conservation strategies and agreements relevant to proposed and candidate species in the plan area;
- Collaborating with the Florida Fish and Wildlife Conservation Commission (FWC) and other conservation partners to be proactive in the conservation of state and federally listed endangered and threatened species, proposed and Candidate species, and to promote recovery and delisting as applicable;
- Working beyond the FPNWR boundary to collaborate and cooperate with Florida state agencies, Collier County, NOAA, academia, non-profit conservation organizations (NGO's), Tribes, and other partners to implement actions that contribute to an all-lands approach to species conservation and recovery;
- Where appropriate, supporting the reintroduction of species into historic habitat on Service lands, consistent with recovery plan objectives;
- Collaborating with NOAA-Fisheries, as appropriate, in evaluation of any effects to aquatic T&E species downstream of the plan area that could be affected by actions within the plan area.

Under the proposed action, Alternative B, visitor services and public recreational activities would be enhanced on the FPNWR, while also meeting the goals and objectives of the 2000 CCP. These enhancements would include the following projects:

1. Expanding opportunities for wildlife observation and photography
  - a. Constructing a public access point, trail/boardwalk, informational kiosk, vault style bathroom, and wildlife viewing structure within Unit 44.
  - b. Establishing new year-round and seasonal hiking trails. These new trails would include: 1) A year-round non-motorized trail that originates at refuge Headquarters, and traverses along 2 +/- miles of existing woods roads. This trail would also include interpretive messaging and an observation tower/photo blind to provide wildlife observation, photography, and interpretive opportunities; Establish a year-round non-motorized trail loop at Pistol Pond (+/-3.5 miles), which also traverses along existing woods roads; 3) Allow seasonal non-motorized public use of approximately 20 miles of existing fire breaks/woods roads on the east side of FPNWR from December to March; and 4) Develop an approximately .5 mile out-and-back hiking trail with observation overlook at northern boundary of Unit 44 to provide wildlife observation and photography opportunities.
  - c. Construct benches along edges of the Conservation Club site.
  - d. Allowing non-motorized bicycling
2. Expanding opportunities for environmental education and interpretation
  - a. Replacing current headquarters and biological laboratory with a permanent building that would include a visitor contact station, classrooms, auditorium, and educational exhibits.
  - b. Installation of electricity at McBride's Cabin through solar panels.
  - c. Update and install new kiosks.
  - d. Develop a traveling interpretive display
  - e. Allowing camping for small youth groups (e.g., Scouts and Outward Bound).
  - f. Open opportunities for interpretive biking, hiking, or swamp buggy tours on designated trails.
  - g. Allowing up to two instructor-led small group activities monthly, including but not limited to astronomy club night sky viewing, yoga and meditation, and field skills workshops.
3. Opening the refuge to turkey hunting.
  - a. Allowing limited entry turkey hunts on 25,975 acres of the Refuge.
  - b. Allowing ORV use during hunts only.
  - c. Allow camping for 1 weekend family hunt and small youth scouting groups.
  - d. Currently, three hunt weekends (i.e., two limited/quota turkey hunts and one limited family turkey hunt weekend) are being proposed. Up to twenty-five permits on each quota weekend hunt (i.e., fifty total permits) and up to ten family groups (i.e., twenty total permits) would be issued annually. However, Florida Panther NWR would monitor the turkey population and hunter access to allow for adaptive management in the number of permits issued annually.
  - e. The turkey bag limit would be one bearded turkey per hunt permit. Baiting is prohibited. Shooting turkeys in roost trees is prohibited.
4. Opening the Refuge to fishing.
  - a. Allowing fishing at Pistol Pond, a manmade pond
  - b. Constructing a parking lot with wildlife diversion fencing, and access gates, informational kiosks, and vault style bathroom.

- c. Constructing two ADA fishing piers Construction of up to four ~20 ft x 50 ft fishing/observation platforms.
  - d. Restoring Pistol Pond littoral zones to improve fish and wildlife habitat.
  - e. Host youth fishing and invasive species roundup events.
- 5. Expand partnerships and volunteer program
  - a. Constructing vehicle camper pads for volunteer work campers and researchers.
  - b. Collaborate with FWC and other partners to host Outdoor Skills workshops.
- 6. Establishing a recreation fee program on the Refuge.
- 7. Exploring commercial use activities
  - a. Allow unmanned aerial vehicle/drone use for research and commercial photography.
  - b. Explore partnerships for commercially guided specialty hunts or to facilitate ecotourism with interpretive tours.
  - c. Allowing only commercial video recording on the Refuge that features the refuge mission purpose and for environmental education purposes that tie back to the refuge mission and objectives.

## **V. Pertinent Species and Habitat:**

Potentially affected species were identified by evaluating the location and nature of the proposed actions, the USFWS county list of records for T&E species which are present or historically occurred in Collier County, FL (last updated 23 June 2020), scientific literature, and expert biological opinion. Potential habitat was evaluated using LIDAR technology, aerial photographs, the knowledge of USFWS personnel, species experts familiar with the project area, and habitat requirements for selected TES species. For the purposes of this analysis, a list of federally and state listed species was obtained from the following sources: 1) federally listed species that may occur in or near FPNWR was obtained from the USFWS IPAC website (<http://ecos.fws.gov/ipac/>) on 23 June 2020 (Consultation Code: 04EF2000-2020-SLI-0884 Event Code: 04EF2000-2020-E-02671); 2) FPNWR species lists; and 3) state listed species that may occur in or near FPNWR.

The FPNWR uses the Service's ECOS and IPAC to identify threatened and endangered species, including for purposes of this Biological Evaluation. This is done because the ECOS and IPAC database is the better of the Service's databases for south Florida and FPNWR, and may contain the best available information on species presence. Nevertheless, in order to ensure a thorough review, this Biological Evaluation considers all threatened and endangered species identified by both the IPAC and ECOS databases. Note, however, that these databases are updated regularly, approximately every 90 days, and, thus, it is possible that the specific threatened and endangered species identified as present on or near the refuge may change between the finalization of this Biological Evaluation and its publication and/or between finalization and your reading this document.

Staff present on the refuge and conducting this evaluation may have the best available information about the presence of fish and wildlife species. Thus, where species are identified by either database, but the refuge has information that the species is not actually present within the "action area," we have explained that as the basis for our determination that any hunting and fishing activities will have no effect on the species. Species that were eliminated from further analysis include: 1) species that were extirpated or are not believed to occur within the project area; and 2) species that occur in areas that would not be affected by the project. The following species were identified in the aforementioned ECOS/IPAC species list, and were eliminated

from further analysis: Loggerhead sea turtle (*Caretta caretta*), Florida scrub-jay (*Aphelocoma coerulescens*), ivory-billed woodpecker (*Campephilus principalis*), Atlantic sturgeon -gulf sub-species (*Acipenser oxyrinchus*), Bartram's hairstreak butterfly (*Strymon acis bartrami*), Florida leafwing butterfly (*Anaea troglodyta floralis*), Miami blue butterfly (*Cyclargus thomasi bethunbakeri*), Florida prairie-clover (*Dalea carthagenensis floridana*), Garber's spurge (*Chamaesyce garberi*). A no effect determination is made for all of these aforementioned species.

Federally listed species with documented occurrences on the Florida Panther National Wildlife Refuge include American alligator (*Alligator mississippiensis*), Eastern indigo snake (*Drymarchon corais couperi*), Florida bonneted bat (*Eumops floridanus*), Florida panther (*Puma concolor coryi*), wood stork (*Mycteria americana*), red-cockaded woodpecker (*Dryobates borealis*), Everglade snail kite (*Rostrhamus sociabilis plumbeus*), and Audubon's crested caracara (*Polyborus Plancus audubonii*). The Eastern diamondback rattlesnake (*Crotalus adamanteus*) occurs throughout the FPNWR, and has been documented within the project area. The Eastern diamondback rattlesnake has been petitioned for listing as a threatened species under the Endangered Species Act. As indicated in Federal Register Volume 77 Issue 91 (Thursday, May 10, 2012), the Service found that the petition presented substantial scientific or commercial information indicating that listing the eastern diamondback rattlesnake may be warranted. As such, the Service has initiated a review of the status of the species to determine if listing the Eastern diamondback rattlesnake is warranted. Everglade snail kite nesting has never been documented on the FPNWR. Three immature snail kites were documented on private lands adjacent to the FPNWR (approximately 1 aerial mile from the northwest corner of the refuge) during a recent Christmas Bird Count on 14 December 2019. Personal communications with Big Cypress National Preserve indicate that the Everglades snail kite has been historically documented within the Okaloacoochee Slough found in Bear Island. Only one documented occurrence of the Everglade snail kite is known from FPNWR, and this bird was observed flying over the East Hinson Marsh area of the Refuge by a retired USFWS manager during the 2011 Fakahatchee Christmas Bird Count.

The federally threatened black rail (*Laterallus jamaicensis*) has never been documented on the refuge. Of the 26,609 acres on the FPNWR, less than 1% of the refuge could be considered freshwater marsh habitat as defined by Florida Natural Areas Inventory. Due to hydrologic alterations adjacent to the refuge (e.g., State Road 29, Barron River Canal, adjacent lands, and I-75 Canal), combined with the environmental degradations that have occurred from the aforementioned hydrologic alterations, there is no suitable marsh habitat for the black rail on the refuge.

Because additional state permits may be required for some of the proposed activities, state listed species are included in this Section 7 only for future reference by state officials. State listed threatened, endangered and animal species of concern known to occur on the Refuge include: Gopher tortoise (*Gopherus polyphemus*), roseate spoonbill (*Ajaia ajaia*), little blue heron (*Egretta caerulea*), Southeastern American kestrel (*Falco sparverius Paulus*), Tricolored heron (*Egretta tricolor*), and Big Cypress fox squirrel (*Sciurus niger avicennia*).

No federally listed plant species are known or expected to occur within the disturbed portions of the project area, as these areas all occur within existing disturbed habitats (i.e., SR-29, quarry site, oil exploration site/pad, former clearcut, woods roads, former hunt club camp, and firebreaks), some of which have been in place for over 70 years. All proposed areas have been repeatedly visited and surveyed by botanical researchers and FPNWR biological staff since the refuge was established, and Service employees and researchers drive/walk/visit many of these

areas upwards of five days per week. Long-term wildlife monitoring on the refuge includes 89 breeding bird monitoring points, forty-two infrared camera traps, annual Christmas Bird Count, annual FWC monitoring of collared pumas, as well as insightful data produced from various research projects (e.g., South Florida Deer Study, which was the largest and most comprehensive white-tailed deer/panther-prey study ever completed in the state of Florida).

The Florida bonneted bat has been captured and detected acoustically within multiple habitats on the FPNWR, including at Roth Work Center Pond, Pistol Pond, and numerous habitats throughout the Refuge. Critical habitat for Florida bonneted bat has been designated on the refuge, and the final rule should be published in the Federal Register during 2021-2022. The first Florida bonneted bat roost documented that was documented on the refuge during 2015 was abandoned and destroyed by winds during 2016/2017. During July 2021, a male bonneted bat was discovered roosting in a south Florida slash pine (*Pinus elliottii* var *densa*) snag on the refuge during a comprehensive Florida bonneted bat assessment being conducted by the Florida Fish and Wildlife Conservation Commission (FWC). The single male bonneted bat appeared to be roosting under loose bark on this snag, and also appeared to be roosting with other bats that were suspected to be evening bats (*Nycticeius humeralis*). The Florida bonneted bat appears to be a habitat generalist, and natural roosts have been discovered in mixed hardwood strand forest, frequently burned pine flatwoods and manmade structures. The species also readily roosts in manmade bat houses (e.g., bat houses at Babcock Ranch).

As part of an independent project during 2013, Sutton C. Maeher deployed up to nine Anabat SD2 acoustical detectors to monitor for presence or absence of the Florida bonneted bat at selected sites, including dry upland habitats and around open water areas. Anabat recorders were deployed on a Monday, and then collected and moved the following Thursday. Thursday deployments consisted of four survey nights. After sunset, Anabats were operated for 7 for 3-4 consecutive nights at each location, and recording at all frequencies. Maeher's surveys took place within thirteen survey areas on the FPNWR (Table 1), and his results indicated that the Roth Work Center pond and West Hinson Lake (approximately 3.1 aerial miles from the project area) had the highest abundance of FBB calls.

The Florida panther has been documented in almost every habitat on the FPNWR (Figure 6). Although the refuge does have Florida panthers that utilize the refuge extensively throughout the year, the FPNWR is not large enough to support the entire home range of an adult panther. As such, Florida panthers consistently move back and forth between the FPNWR and adjacent conservation lands and private lands each year (e.g., Fakahatchee Strand State Preserve State Park, Big Cypress National Preserve, Picayune Strand State Forest, and private lands to the north of FPNWR).

Audubon's crested caracara has been consistently observed scavenging and perching along the SR-29 right-of-way during the past four years (Figures 7-8). Prior to 2016, crested caracaras were rarely observed south of the FPNWR's northern boundary along SR-29 (Mark Danaher and other USFWS employees' personal observations). Mark Danaher has observed at least one family group of caracaras annually along the SR-29 between 2018 and 2020. These family groups have had one to two fledglings each year.

The American alligator can be found in almost every wetland on the FPNWR, including the Barron River Canal, which is adjacent to SR-29. This species is ubiquitous in wetlands and manmade water features throughout the state of Florida, and is only listed due to similarity of appearance to the American crocodile.

Eastern indigo snakes are possibly non-existent on the refuge, as there is very little good quality habitat for the species due to the amount and duration of flooding on the Refuge during the wet season. Eastern indigo snakes that were released on the refuge almost two decades ago have not been re-sighted.

The red-cockaded woodpecker was not a resident on the refuge until two pairs of sub-adults (two males and two females) were translocated to the refuge from Picayune Strand State Forest on 13 March 2019. The sub-adults were translocated as part of a salvage operation due to the significant pine tree mortality that Picayune Strand State Forest incurred from Hurricane Irma, intense wildfires and wood boring beetles. The refuge currently has two recruitment clusters in Unit 24 known as cluster 24A and 24B (Figure 9). Of the two pairs that were translocated, two males and one female successfully stayed on the refuge, and a pair bond was established between one of the males and the female. This male and female red-cockaded woodpecker (RCW) established their breeding territory in Cluster 24A, and the single male established his territory in cluster 24B (Figure 9). The breeding pair in 24A produced two female nestlings during the 2019 breeding season, and one of these nestlings was confirmed to have successfully fledged. However, this fledgling was never seen again. During 2020 the cluster 24A breeding pair produced two male nestlings, and both nestlings were confirmed to have successfully fledged. Unfortunately, these fledglings have not been re-sighted on the refuge again. During December 2020, two new recruitment clusters (4 artificial inserts in each) were installed in Units 25 (Cluster 25A) and 26 (Cluster 26A). A pair of seven month old red-cockaded woodpeckers (one male and one female) was translocated to Cluster 25A from Croom Wildlife Management area. Unfortunately, based on 2021 monitoring activities, it does not appear as though these birds stayed on the refuge.

The Service was petitioned to list the monarch butterfly (*Danaus plexippus*) as endangered in 2014. On December 15, 2020, the U.S. Fish and Wildlife Service announced that listing the monarch as endangered or threatened under the Endangered Species Act is warranted, but precluded by higher priority listing actions. The monarch butterfly is a year-round resident in south Florida, but is only occasionally found on the FPNWR. *Ophryocystis elektroscirrha* (OE) is a parasite that infects monarch, queen (*Danaus gilippus*), and Soldier (*Danaus eresimus*) in the U.S. First detection of OE in monarch and queen butterflies was detected in Florida during the late 1960s. In the southern tip of Florida, where Monarchs fly and lay eggs all year, more than 70% have HEAVY OE. Some research indicates that nearly 100% of wild Monarchs in the Miami/Dade area of Florida could be infected with mild to heavy infection. Some of the biggest threats to monarchs in south Florida are from aerial application of mosquito adulticides, exotic invasive species (e.g., Cuban treefrog), cars, lack of adequate host plants, and OE. The refuge requires non-toxic ammunition during the limited turkey hunt. As a result, no effects from lead in the environment would occur from hunting, and all effects from the proposed activities on the monarch butterfly are anticipated to be negligible.

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**A. Include species/habitat occurrence map:**

Table 1. Bonneted Bat Call Abundance from Maehr 2013

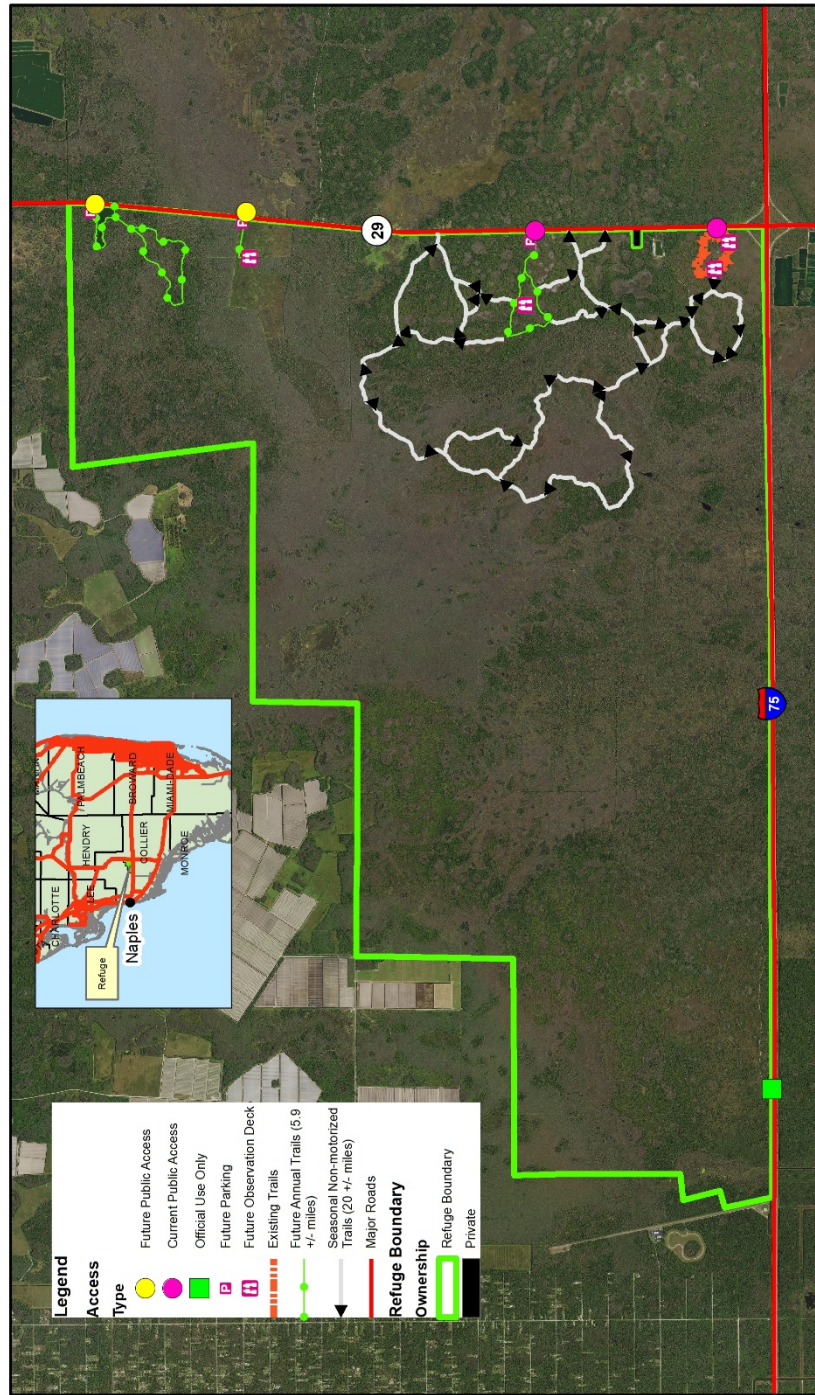
Location	FBB Call Abundance	Abundance per Day	Devices Deployed
Cochran Lake	5.2	1.3	9
West Hinson Lake	46.6	11.6	7
Roth Work Center Pond	35.7	11.9	9
Pistol Pond	6.9	1.7	9
Unit 6 Flatwoods	0	0	9
Unit 13 Flatwoods	0	0	9
McBride's Pond	0	0	9
Hunt Club	0.55	0.13	9
Clear Cut	6.25	2.08	4
Unit 24 Pond	3.4	1.1	9
Unit 25 Snags	3.9	1.3	9

Wilson Camp Lakes	0.5	0.16	6
Lucky Lake	0	0	9



U.S. Fish & Wildlife Service

### Current and Proposed Future Non-motorized Trails & Access Points



Produced by Mark Danaher/USFWS/Florida Panther NWR  
Immolalee, FL  
Produced: September 16, 2020  
Base map: 2020 Collier County Aerial Imagery  
File: VSP Alternative E.mxd

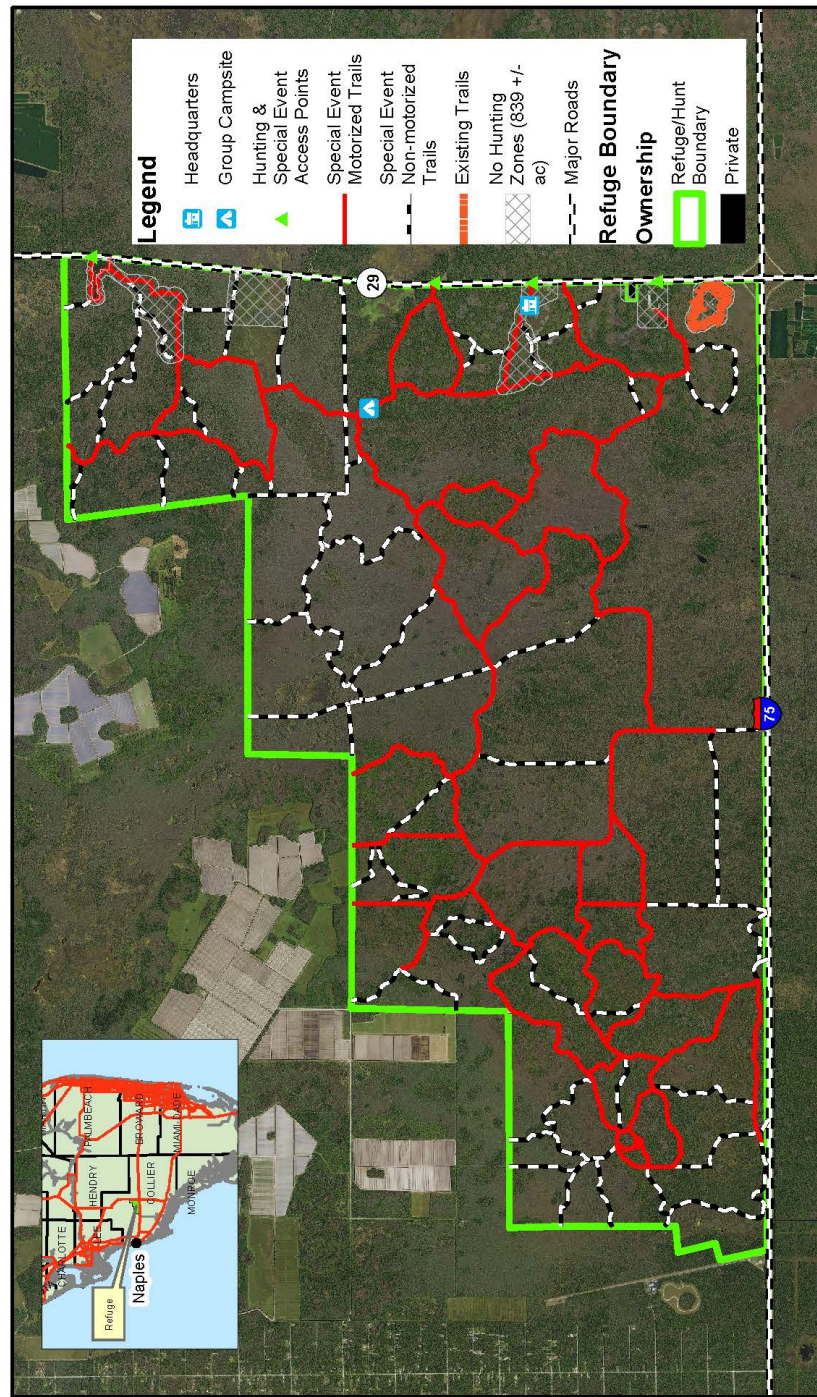
The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.  
This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

Figure 1. Current and proposed future non-motorized trails and access points.



U.S. Fish & Wildlife Service

## Proposed Hunt and Special Event Trails & Access Points



Produced by Mark Danghen/USFWS/Florida Panther NWR  
Immolokalee, FL  
Produced September 16, 2020  
Base map: 2020 Collier County Aerial Imagery  
File: V3F Alternatives E.mxd

0 0.75 1.5 3 Miles



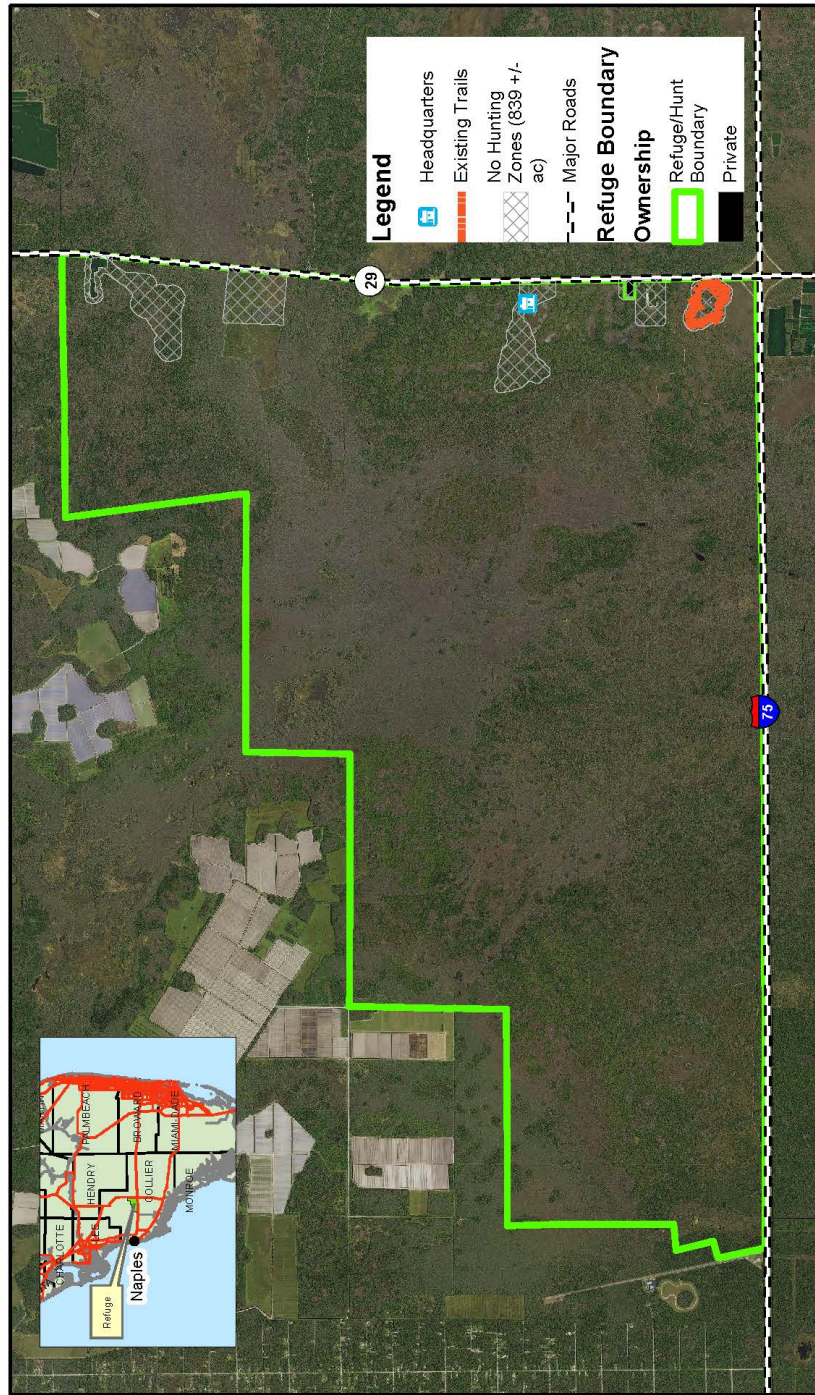
Datum: NAD 83

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This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

Figure 2. Proposed hunt and special event access points and trails.



U.S. Fish & Wildlife Service  
Proposed Hunting and No Hunting Zones



Produced by Mark Danghen/USFWS/Florida Panther NWR  
Immolalee, FL  
Produced September 16, 2020  
Base map: 2020 Collier County Aerial Imagery  
File: V3SF Alternatives E.mxd



The USFWS makes no warranty for use of this map and cannot be held liable for actions or decisions based on map content.  
This map is intended to provide a general overview of current and future proposed uses proposed described in the Florida Panther NWR Visitor Services Plan.

Figure 3. Proposed hunting and no hunting areas.

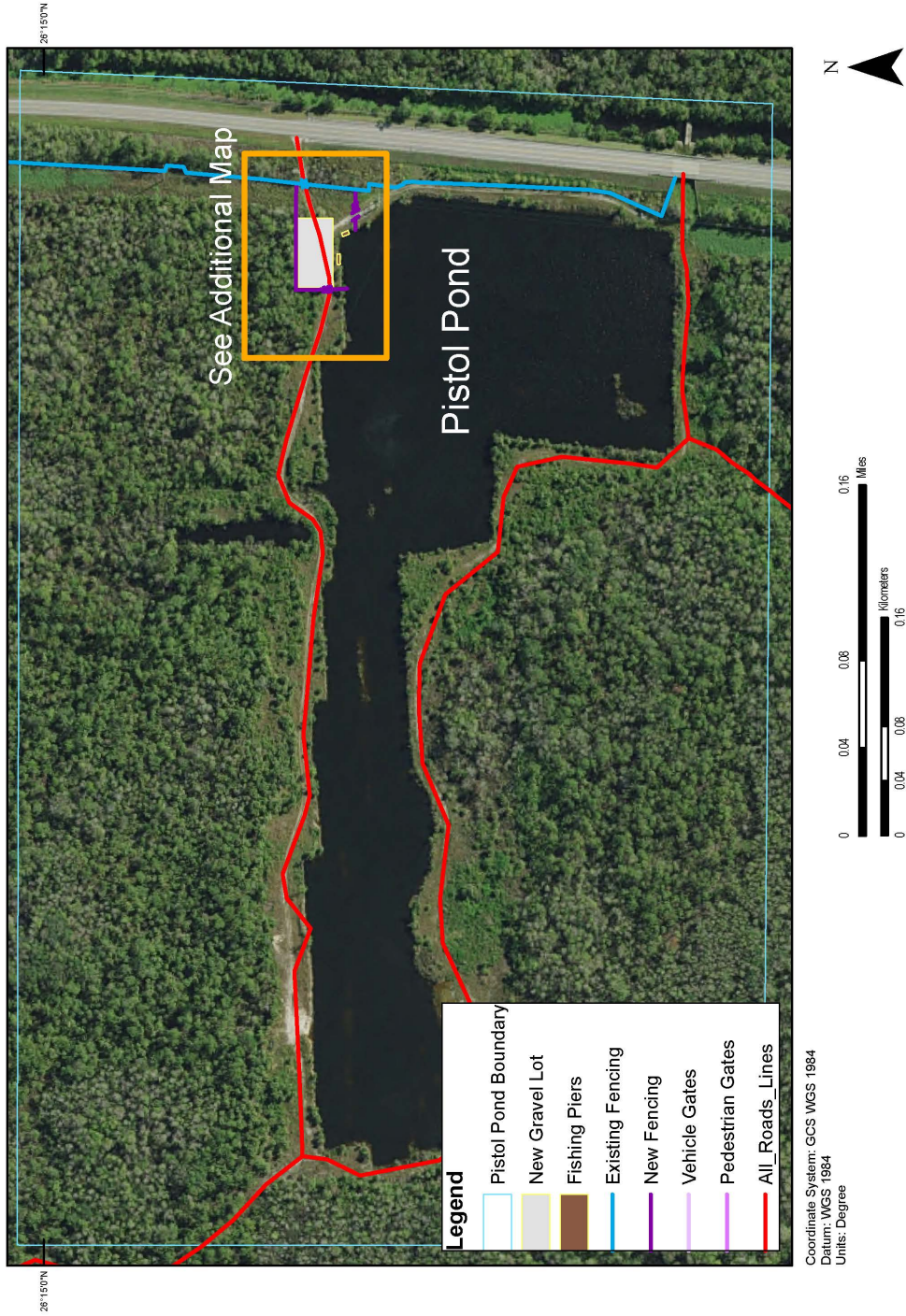


Figure 4. General map of proposed Pistol Pond improvements.

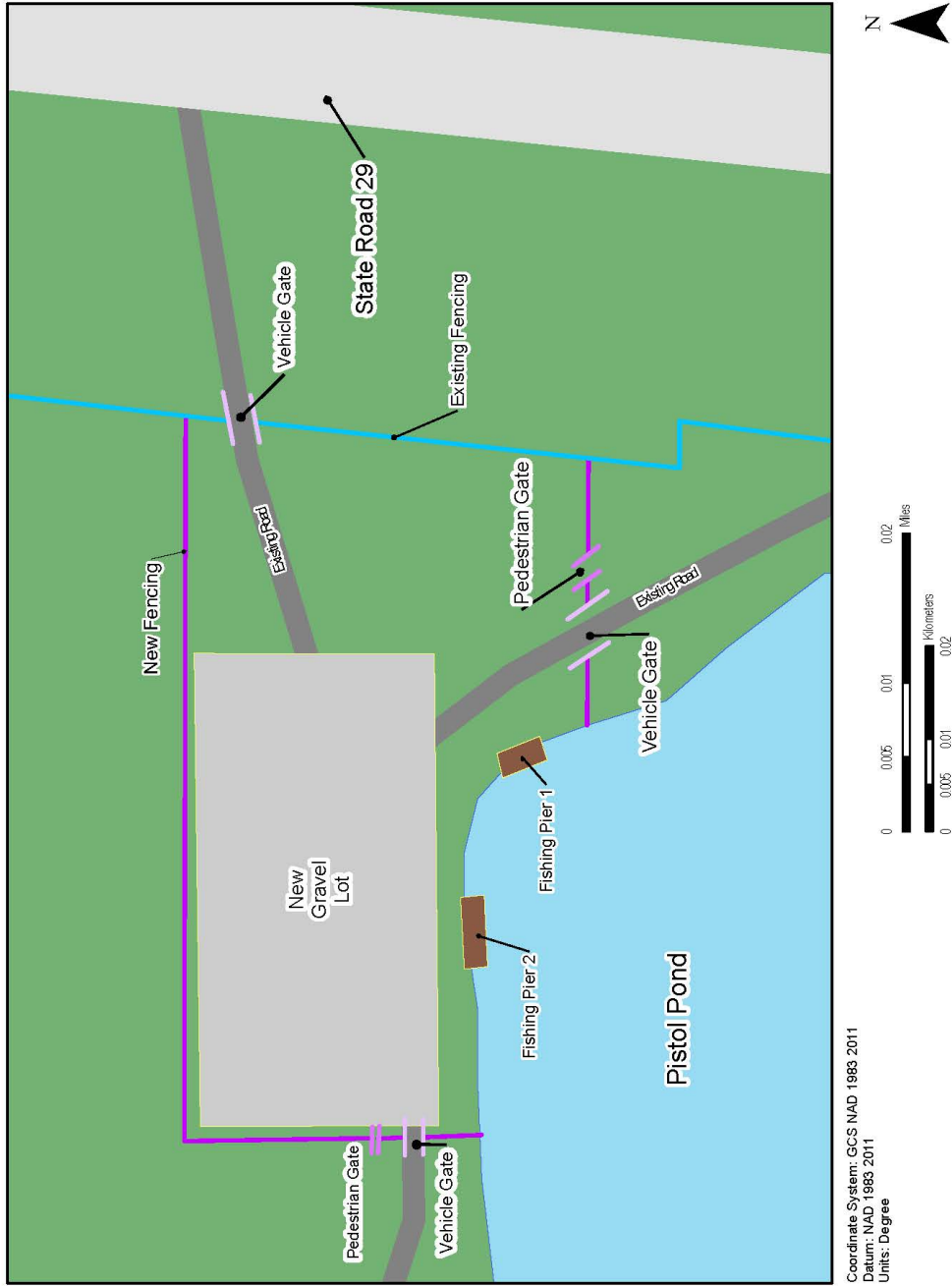


Figure 5. Detailed map of proposed Pistol Pond improvements.

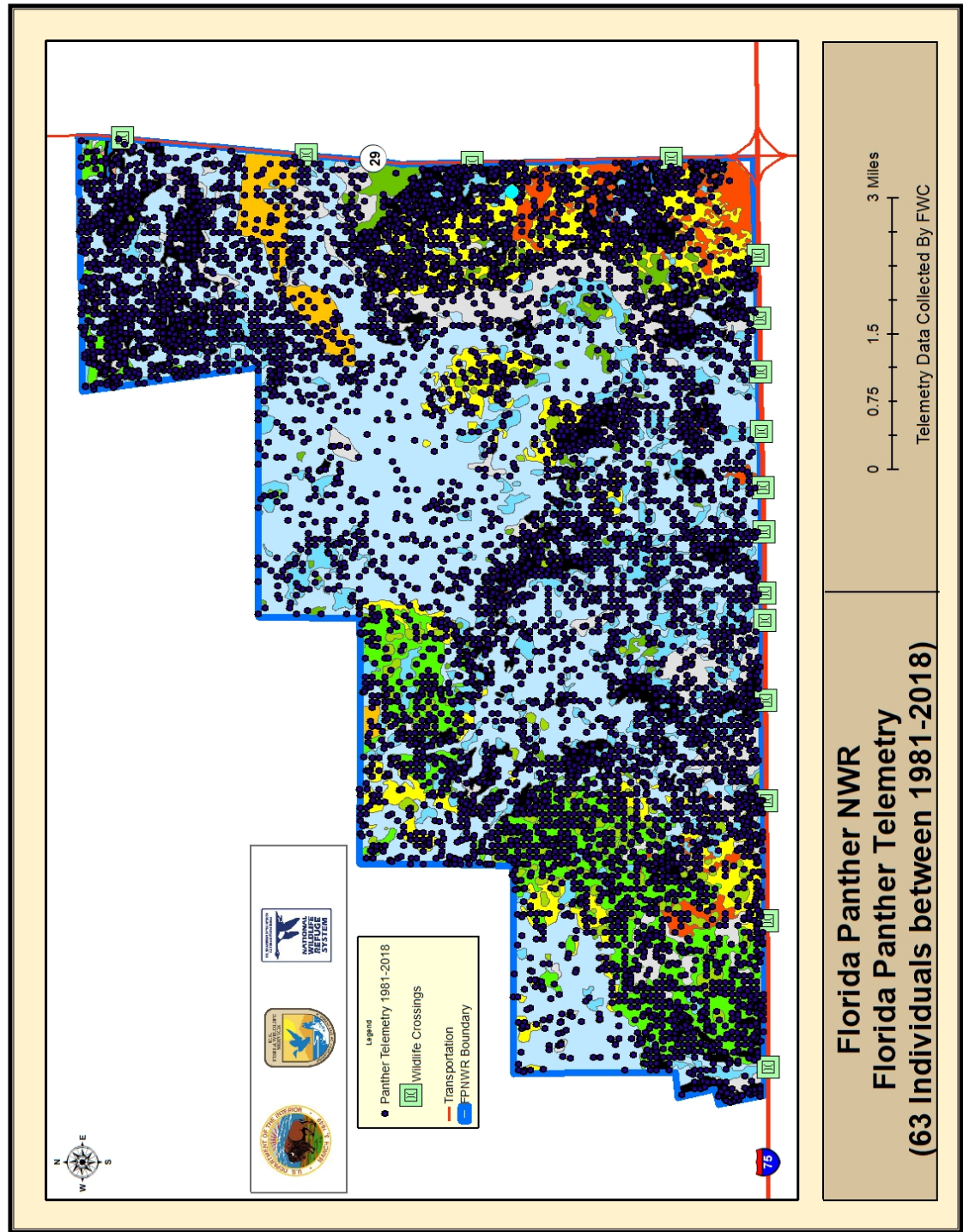


Figure 6. Florida panther spatial telemetry points on FPNWR 1981-2018.



Figure 7. Crested caracaras perched on SR-29 guardrail 1.25 +/- miles north of FPNWR Headquarters Office entrance.



Figure 8. Crested caracaras scavenging .75 +/- miles south of FPNWR Headquarters Office entrance.

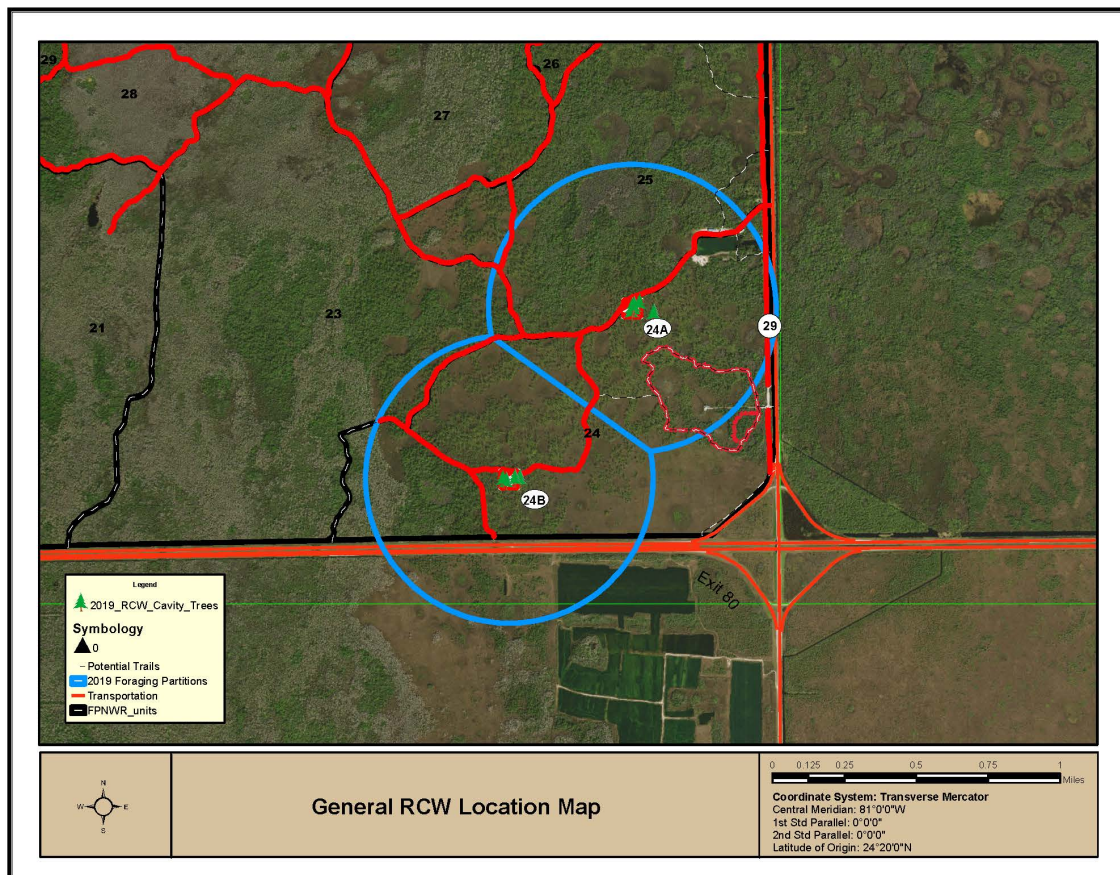


Figure 9. Active RCW cluster location map and .5 mile foraging partitions as of 2021.

**B. Complete the following table:**

SPECIES/CRITICAL HABITAT	STATUS <sup>1</sup>
American alligator ( <i>Alligator mississippiensis</i> )	T (SOA)
Florida bonneted bat ( <i>Eumops floridanus</i> )/Critical Habitat	E
Everglade snail kite ( <i>Rostrhamus sociabilis plumbeus</i> )	E
Florida Panther ( <i>Puma concolor coryi</i> )	E
Wood stork ( <i>Mycteria americana</i> )	T
Eastern Indigo Snake ( <i>Drymarchon corais couperi</i> )	T
Audubon's crested caracara ( <i>Polyborus plancus audubonii</i> )	T
Red-cockaded woodpecker ( <i>Dryobates borealis</i> )	PT
Monarch Butterfly ( <i>Danaus plexippus</i> )	C

<sup>1</sup>STATUS: E=endangered, T=threatened, PE=proposed endangered, PT=proposed threatened, CH=critical habitat, PCH=proposed critical habitat, C=candidate species, SOA=Similarity of Appearance

**VI. Location (attach map):**

**A. Ecoregion Number and Name:** 53-South Florida

**B. County and State:** Collier County, Florida

**C. Section, township, and range (or latitude and longitude):** S1 T53 R27, S18 T53 R28, S20 T53 R28, S34 T49 R28, S31 T49 R29

**D. Distance (miles) and direction to nearest town:**

Florida Panther National Wildlife Refuge is located in the Northwest corner of the intersection of Interstate 75 and State Road 29, 20 miles east of Naples, FL.

**E. Species/habitat occurrence:**

Based upon historic information and general distribution information for these species, the refuge staff is aware that listed species may occur within the vicinity of the project area. Pertinent information is described in Section VII A for each of the listed species.

**VII. Determination of Effects:**

**A. Explanation of effects of the action on species and critical habitats in section V. subsection B (attach additional pages as needed):**

It is important to note that the proposed activities in the VSP will almost exclusively occur along existing roads and disturbed sites (e.g., SR-29, woods roads, fire breaks, former rock quarry, former hunt club and cabin area, and former oil exploration site), which have been in place and negatively impacted by humans for decades. Due to ongoing management and research activities throughout the year, most of these disturbed areas on the refuge currently incur more human visitation than even the adjacent Big Cypress National Preserve Bear Island, which is open to public access year-round. Activities proposed in the VSP, including construction activities of facilities, may temporarily disrupt scavenging/foraging activities of *Polyborus plancus audubonii*, *Puma concolor coryi*, *M. Americana*, and state listed species of birds. However, effects are anticipated to be completely negligible and/or discountable due to the fact that all activities will occur within previously disturbed areas which currently incur high rates of human usage.

As long as the FPNWR continues to utilize ecologically based management and/or expands this form of management, impacts resulting from the new projects proposed under VSP Alternative B are anticipated to produce only negligible to minor direct and indirect effects. Ecologically based management, coupled with improved sustainable levels of public use, provides both preferred habitat and increased public wildlife observation/educational opportunities. While construction activities of proposed facilities may produce short-term impacts, proper mitigation measures should minimize impacts to wildlife and aquatic species. Construction activities related to new facilities, fencing, power line trenching and limited turkey hunter ORV use will generate noise and dust. However, no significant adverse impacts to wildlife and aquatic species activities are anticipated. Increased human use of the project areas during and after construction of

facilities is anticipated to result in minor increases in noise levels. However, the sound will diminish with distance and vegetative buffering offered by the surrounding forested stands. Additional public use and visitation resulting from the proposed projects are anticipated to produce inconsequential environmental impacts when combined with the existing uses and impacts that these project areas currently incur, some of which occurs on a daily basis (e.g., use of the refuge by visiting researchers, Service employees and partners).

The proposed actions will directly and indirectly affect various native flora and fauna in the immediate project area. Negative plant and wildlife effects are expected to be minimal from a landscape scale perspective due to the fact that all proposed projects will occur on and/or within existing disturbed sites, many of which have been negatively impacted by humans for decades. Displaced wildlife will be able to utilize the surrounding forested landscape, and depending on the species, could potentially utilize the project areas after the proposed actions are completed. Individual plants and plant habitat could be permanently altered due to construction of the facilities, and maintenance/enhancement of the trails. However, the aforementioned activities are not likely to affect plant species persistence. Construction activities related to parking lots, building construction, fencing, and power line trenching would generate noise and dust. However, construction activities are not expected to significantly affect the occurrence of migratory birds and other wildlife species. This statement is especially true when considering the fact that the project areas are all located within previously disturbed sites, and most are directly adjacent to the heavily traveled and impacted SR-29.

The take-off and landing of unauthorized aircraft from the FPNWR, including unmanned aerial vehicles (UAV's), is prohibited. Authorization for the use of a UAV on FPNWR will only be permitted to facilitate scientific research or commercial filming projects that have a direct tie to the environment, refuge management and educating the public. A Special Use Permit from the refuge is necessary to obtain prior to the operation of aircraft on the refuge, and all special use permits requesting the ability to use UAV's will be closely scrutinized by Service staff in order to ensure that the activity is minimized to the greatest extent possible, and the use of an unmanned aerial vehicle truly contributes to Science, refuge management and/or public education. As a result of every UAV permit request being closely scrutinized and controlled, and UAV use being of limited duration, all effects to listed species resulting from the permitted use of UAV's are anticipated to be insignificant and/or discountable.

Most of the southern half of peninsular Florida is occupied by the Osceola wild turkey (*Meleagris gallopavo osceola*). Wild turkey numbers have increased in Florida since the 1970s due to habitat protection and management efforts (FWC 2016), but some declines have been documented recently. This game species has limited home ranges, and local hunting efforts are unlikely to affect regional populations, although spring turkey hunting can disrupt nesting (Vangilder and Kurzejeski 1995). Through the use of quota hunts, a sustainable harvest is expected. A limited wild turkey hunt would be held during three weekends of the Florida Spring Turkey Season, and only one bearded turkey could be harvested seasonally by permitted hunters. The refuge hunt would adopt FWC regulations at nearby State Wildlife Management Areas, and also add federal regulations specific to the refuge. During the 2018-2019 season, 216 turkey were taken from WMAs in the South and South-west regions (FWC 2019). Based on FWC reported hunter success rates for the 2019 Special-Opportunity Turkey Hunts, average hunter days per

harvested turkey was 8.1 days (FWC 2019). The wild turkey is likely one of the most difficult game animals to hunt in the Southeast, and has low harvest success rates. Overall, impacts from permitted turkey hunting are expected to be negligible to minor due to the limited amount of proposed turkey hunting permits to be issued, the type, amount and location of approved public access, and general locations of all proposed project activities (e.g., highly disturbed areas, many of which have been negatively impacted by humans for decades). Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable.

Hunters and anglers have and continue to be the largest individual funders of conservation in the United States. According to the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation report, state residents and nonresidents spent \$9.0 billion on wildlife-associated recreation in Florida during 2011 (U.S. Department of the Interior et al. 2014). Hunting expenditures in Florida are estimated to be approximately \$716 million per year (U.S. Department of the Interior et al. 2014). According to the 2011 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, Florida led the nation in total angler expenditures with approximately \$4.6 billion being spent on fishing (U.S. Department of the Interior et al. 2014). Fishing related expenditures are estimated to support more than 80,200 jobs in Florida, and of these jobs, more than 14,000 are attributed to freshwater fishing (Southwick Associates 2013). Even though no hunting has ever occurred on the refuge since it was established in 1989, turkey hunters in Florida have directly contributed to important land management/restoration activities on the refuge for several years. Since 2015, a state program known as the FWC Turkey Cost-share Program has provided approximately \$75,000 in funding for prescribed burning and invasive plant control activities on the refuge, which greatly improved wildlife habitat on the refuge. Funding for the FWC Turkey Cost-share program comes directly from the sale of turkey hunting licenses sold in Florida. Not only did the aforementioned activities improve habitat for the Osceola wild turkey, but these activities also improved habitat conditions for listed species such as the red-cockaded woodpecker, Florida panther, Florida bonneted bat and Audubon's crested caracara. Allowing controlled public access to the refuge could actually prove beneficial for the ecosystems and wildlife species found on the FPNWR via increased citizen science and increased public support to help the refuge obtain critical funding and resources needed to properly manage and maintain the refuge and its wildlife.

Well-managed hunt programs and other outdoor recreational activities do not conflict with the Service's ability to recover the Florida panther or other federal trust species on the FPNWR. A perfect example of this lack of conflict is evidenced by the fact that the puma population has increased throughout southwest Florida even though hunting and other forms of outdoor recreation have continued to occur as traditional uses across millions of acres, including both private and public lands. Pumas are one of the most adaptable mammals in the Northern Hemisphere, and have home ranges within close proximity of human occupied areas in southwest Florida (e.g., Golden Gate Estates). The proposed quota turkey hunts and increased public visitation on the refuge are anticipated to only have negligible and discountable effects (if any) on the Florida panther and other federal trust species. Panther activity may be temporarily altered as a result of human activity. However, any alteration of panther activity is expected to be insignificant and discountable. Pumas can tolerate human presence and activities in

natural areas, and in the case of Golden Gate Estates, the species has lived, hunted and reproduced among significant human habitation for decades. Additionally, one of the largest wetland restoration projects in the world (i.e., Picayune Strand Restoration Project) is occurring directly to the southwest of the FPNWR. Despite having some of the largest earth moving operations and most human disturbance of any natural area in Florida (including hunting for multiple game species), Florida panthers and numerous other wildlife species have continued to persist on, successfully reproduce throughout and utilize Picayune Strand State Forest.

Recent results from the largest white-tailed deer study in the history of Florida (i.e. South Florida Deer Study) estimated that hunting only accounted for approximately 1% of deer mortalities, as opposed to approximately 72% resulting from panther predation (Cherry et al. 2019). Only one of 263 white-tailed deer with active GPS collars was legally harvested by a hunter during the South Florida Deer Study (January 2015-December 2017), and two deer appeared to have been harvested illegally. If scientific studies such as the South Florida Deer Study indicate that hunter harvest of white-tailed deer has a negligible effect on the deer population (Cherry et al. 2020), then hunter harvest of Osceola wild turkeys are anticipated to have even less impacts on the Florida panther. The Osceola wild turkey is not a primary prey item of the Florida panther.

It was determined in the compatibility determination for the proposed turkey hunts that only non-toxic/non-lead shot would be allowed on FPNWR. This determination was made due to the minimal amount of separation between the upland hunt and wetland habitats, and the fact that most of the refuge consists of wetlands and hydric soils. As such, no lead effects on listed species are anticipated from the proposed turkey hunts because only non-toxic shot will be used.

The VSP proposes to allow the use of lead fishing tackle at Pistol Pond. Lost fishing tackle can pose a toxicological threat to some bird species and scavengers. However, the amount of lead introduced to the environment from sport fishing is negligible given expected participation levels and use rates of non-toxic tackle. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for sport fishing on FPNWR. Lead from spent ammunition and lost fishing tackle is not readily released into aquatic and terrestrial systems (Rattner et al. 2009). Because Pistol Pond is a closed system with high pH, there are minimal opportunities for lead to weather, mobilize and bioaccumulate within food chains there. However, the hazard of ingested lead sinkers and fishing tackle is well-documented in bird species (e.g., swans and loons), and there is a possibility that bird species such as doves, northern bobwhite, black vulture, turkey vulture, bald eagle, double-crested cormorant, anhinga, and Audubon's crested caracara could be exposed to lead from lead tackle being used at Pistol Pond. Because of the documented impacts of lead on bird species, restrictions on the sale and use of lead weights have been instituted in numerous countries, as well as several states in the United States in order to minimize wildlife effects (Rattner et al. 2009). The Service will encourage the use of non-toxic tackle and educate anglers about minimizing impacts of fishing on wildlife. Lead introduced into the environment from fishing at Pistol Pond is not likely to adversely affect listed species known to occur on FPNWR, and is expected to have a no effect on Eastern indigo and Florida bonneted bat due to their natural history requirements, and the fact that the Eastern indigo is not believed to be present on FPNWR.

Fishing and other proposed public use activities may result in trash being left in the environment if users do not obey laws, follow posted rules and respect the natural environment. Such trash could negatively impact wildlife (e.g., wildlife entanglement in fishing line) and result in unnecessary human-wildlife conflicts (e.g., black bears, alligators and raccoons). Occasionally, anglers may hook turtles, alligators or other species as accidental by-catch. The greatest potential risk to wildlife and aquatic species posed by fishing is discarded fishing line and other fishing litter (e.g., hooks), which can entangle wildlife and cause injury or death (Thompson 1969, Gregory 1991). The seven principles of "Leave No Trace" would be promoted at all public access locations. Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently. The FPNWR does not have the staffing or funding to police and clean up excessive trash or spent fishing tackle/fishing line, and if the past 20+ years are any indication, the FPNWR is not likely to receive more funding and staffing in the foreseeable future.

Many proposed uses are not expected to impact Refuge resources except for some potentially small, temporary disturbances during implementation/construction, or minor additional impacts from increased visitation. With more opportunities for the public to access the FPNWR, the chances of a human encountering a Florida panther also increases. This could be especially true for turkey hunters and hikers, as several public videos can be found online that show panther-human encounters. However, encountering wildlife in their natural habitats is something that all public visitors should expect when visiting conservation lands such as the FPNWR, as these lands offer some of the last great examples of true wild Florida. Turkeys are hunted in open areas where the hunters need to have excellent line of sight, especially when decoys are used to better assist with luring gobblers within gun range. As such, the likelihood of a panther or other non-target animal getting accidentally shot is practically non-existent. For the 2020 spring turkey season, there were 139 Wildlife Management Areas, National Wildlife Refuges, and other public lands (total of 5,125,137+/- acres) that were open to spring turkey hunting opportunities in Florida (2021 FWC personal communication). Although there have been human-panther encounters during turkey hunts (including the adjacent Big Cypress National Preserve), there has never been a documented case of a panther being shot by a turkey hunter in Florida.

Proposed changes/additions/expansion of public use opportunities with no, or minor and temporary, expected impacts include updating education/interpretive materials, and expanding Refuge hours. Although still anticipated to result in negligible to minor impacts, other uses such as camping, construction of facilities, expanded motorized/non-motorized access, and hunting have the potential to result increased levels of negative impacts. All uses were carefully considered for benefit to the public and impacts to the resource.

Improperly used ORVs have the potential to result in negative environmental impacts due to destruction of habitat and disturbance to wildlife (Backcountry Hunters and Anglers 2011, Webb and Wilshire 1983, Defenders of Wildlife 2002, Texas Parks and Wildlife 2011). When operated off designated trails, ORVs can destroy herbaceous plants and seedlings, create ruts, compact soil, exacerbate the spread of invasive exotic plants, and create swaths of bare ground that have minimal wildlife value. Additionally, off-trail ORVs can destroy ground nests. However, ORV use on existing roads and trails

to support the proposed VSP activities is likely to have only minimal/negligible negative effects on vegetation and wildlife. Similar to what has been previously discussed under other uses, some wildlife disturbance resulting from limited ORV use on the FPNWR is anticipated. However, negative effects to listed species resulting from the proposed ORV use are expected to be insignificant and/or discountable due to the limited amount of ORV use that will be permitted, the ability of the Service to tightly control permitted ORV use, and the timing when ORV use would occur (i.e., dry season). Because of the limited scope and duration of permitted ORV use on FPNWR, this activity is capable of being tightly controlled by Service and partners. Should the limited permitted ORV use being proposed in the VSP lead to off-trail negative environmental impacts, ORV use may be shut down temporarily or permanently.

A 2013 study in the Big Cypress National Preserve, Florida Panther NWR, and Everglades National Park concluded: "In Bear Island, an area with designated ORV trails, we found that variations in panther distances to trails appear to be driven by hydrology rather than hunter ORV use" (McCarthy et al 2015). The best available science related to the effects of deer hunting on the Florida panther suggest there were effects on panther habitat selection in areas of high hunter activity, but no effect on the distribution near ORV trails (McCarthy et. al 2015). These impacts are temporary, and can be minimized with effective hunt management planning and dispersing hunter density.

With appropriate habitat management and cavity provisioning, the red-cockaded woodpecker has made astounding population increases throughout the Southeast since being federally listed as an endangered species in 1979. The species is currently proposed for downlisting from endangered to threatened. None of the proposed activities are expected to negatively impact the current red-cockaded woodpeckers on FPNWR, as all of the proposed activities are confined to existing disturbed areas and/or habitats where the species is not expected to occur (e.g., hardwood hammocks and hardwood wetlands). No nesting-size pine trees should need to be removed as a result of the proposed activities, and any potential disturbance to active RCW clusters will be negligible and discountable. With sufficient habitat and appropriate management, this species has shown that it is highly resilient to disturbance, including mass disturbances caused by hurricanes. On 21 September 1989, Hurricane Hugo slammed into the South Carolina coast and destroyed over 87% of the known RCW cavity trees on the Francis Marion National Forest in one night. Due to appropriate habitat management and cavity provisioning, the RCW population exceeded the Recovery Plan goal of 350 potential breeding groups in 2008 (378 PBG's as of 2008). The Francis Marion National Forest is now one of the largest RCW populations in the United States.

As discussed in Section V, the following species were identified in the aforementioned ECOS/IPAC species list, and were eliminated from further analysis: Loggerhead Sea Turtle (*Caretta caretta*), Florida Scrub-jay (*Aphelocoma coerulescens*), Ivory-billed Woodpecker (*Campephilus principalis*), Atlantic Sturgeon -gulf Subspecies (*Acipenser oxyrinchus*), Bartram's Hairstreak Butterfly (*Strymon acis bartrami*), Florida Leafwing Butterfly (*Anaea troglodyta floridalis*), Miami Blue Butterfly (*Cyclargus thomasi bethunbakeri*), Florida Prairie-clover (*Dalea carthagenensis floridana*), Garber's Spurge (*Chamaesyce garberi*). A no effect determination is made for all of these aforementioned species, as well as for *Rostrhamus sociabilis plumbeus* and *Laterallus jamaicensis*.

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
American alligator	Alligators can be found throughout the refuge in almost every wetland type and manmade water feature (e.g., canals and borrow pits). This species has recovered and only remains listed due to similarity of appearance to the American crocodile. Minor disturbance from more humans in their habitat may cause alligators to temporarily relocate. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. Lost fishing tackle can pose a toxicological threat to some scavengers. However, the amount of lead introduced to the environment from sport fishing is negligible given expected participation levels and use rates of non-toxic tackle. Lead introduced into the environment from fishing at Pistol Pond is expected to have negligible and discountable effects on American alligator.
Florida bonneted bat	Florida bonneted bats have been documented throughout the refuge, as well as within the proposed action areas. One male <i>E. floridanus</i> was recently found roosting under the loose bark of a south Florida slash pine snag on the refuge during 2021. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gunshots are also expected to be unmeasurable and discountable. Hunting would not occur during the dusk and evening hours when bats feed. Human presence and related noise during fishing would be minimal due to low anticipated participation levels. The refuge requires non-toxic ammunition during the limited turkey hunt. The amount of lead introduced to the environment from sport fishing is negligible given expected participation levels and use rates of non-toxic tackle. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for sport fishing on FPNWR. The refuge will encourage the use of non-toxic tackle and educate anglers about minimizing impacts of fishing on wildlife. This species is insectivorous and does not feed on species where lead bioaccumulated from fishing at Pistol Pond could directly impact bonneted bats. Therefore, there are no anticipated biologically significant adverse impacts to this species

	through direct consumption or bioaccumulation uptake of lead because of this proposal.
Florida Panther	<p>Activities proposed in the VSP, including construction activities of facilities, may temporarily disrupt roaming/foraging activities of Florida panther. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. However, effects are anticipated to be negligible and/or discountable because all activities will occur within previously disturbed areas which currently incur high rates of human usage. The proposed quota turkey hunts and increased public visitation on the refuge are anticipated to only have negligible and discountable effects (if any) on the Florida panther. Panther activity may be temporarily altered as a result of human activity. However, any alteration of panther activity is expected to be insignificant and discountable. Pumas can tolerate human presence and activities in natural areas, and in the case of Golden Gate Estates, the species has lived, hunted and reproduced among significant human habitation for decades. Additionally, one of the largest wetland restoration projects in the world (i.e., Picayune Strand Restoration Project) is occurring directly to the southwest of the FPNWR. Despite having some of the largest earth moving operations and most human disturbance of any natural area in Florida (including hunting for multiple game species), Florida panthers and numerous other wildlife species have continued to persist on, successfully reproduce throughout and utilize Picayune Strand State Forest. Nontoxic ammunition is required for the turkey hunt. Lost fishing tackle can pose a toxicological threat to scavengers. However, the amount of lead introduced to the environment from sport fishing is negligible given expected participation levels and use rates of non-toxic tackle. Impacts to the Florida panther from the use of lead fishing tackle at Pistol Pond are anticipated to be negligible and discountable, as this species is an ambush predator, and no negative effects to pumas have ever been documented in Florida from lead fishing tackle.</p>
Wood stork	<p>Activities proposed in the VSP, including construction of facilities, may temporarily disrupt scavenging/foraging activities of wood stork but effects are anticipated to be negligible and of short duration due to the fact that all activities will occur within previously disturbed areas which currently incur high rates of human usage. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so</p>

	<p>minimal that noise impacts to listed species from gunshots are also expected to be unmeasurable and discountable. Minor disturbance from more humans in their habitat may cause birds to temporarily relocate and consistently move to other areas to forage. Nontoxic ammunition is required for the turkey hunt. Lost fishing tackle can pose a toxicological threat to certain bird species. However, the amount of lead introduced to the environment from sport fishing is negligible given expected participation levels and use rates of non-toxic tackle. The potential for a wood stork or any other listed species to be shot during the permitted turkey hunts is not expected. Turkey hunting requires the hunter to lure the turkey within close range of the hunter by calling, and once the bird is within close range of the hunter, a precise shot to the vitals of the turkey is required. As such, permitted turkey hunters are not expected to randomly shoot at targets that are not in clear view of the turkey hunter.</p>
Eastern indigo snake	<p>There will be no effect because Eastern indigo snakes are not believed to occur on the refuge. There is little good quality habitat for the species due to the amount and duration of flooding on the Refuge during the wet season. Eastern indigo snakes that were released on the refuge almost two decades ago have never been re-sighted. The refuge requires non-toxic ammunition during the limited turkey hunt. The refuge will encourage the use of non-toxic tackle and educate anglers about minimizing impacts of fishing on wildlife. Lead introduced into the environment from fishing at Pistol Pond is expected to have no effect on Eastern indigo due to the fact that the Eastern indigo is not believed to be present on FPNWR. Because of the heedless and unrelenting persecution of snakes by so many humans, education and notification about the legality of killing snakes on FPNWR will be communicated to the public.</p>
Audubon's crested caracara	<p>Audubon's crested caracara has been observed on the refuge. Activities proposed in the VSP, including construction of facilities, may temporarily disrupt foraging activities of the species. However, effects are anticipated to be negligible and/or discountable due to the fact that all activities will occur within previously disturbed areas which currently incur high rates of human usage. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gunshots are also expected to be unmeasurable and discountable. Minor disturbance from more humans in their habitat may cause birds to temporarily relocate and consistently move to other areas to forage. The refuge</p>

	<p>requires non-toxic ammunition during the limited turkey hunt. As a result, no effects from lead ammunition in the environment would occur. The amount of lead introduced to the environment from sport fishing is negligible given expected participation levels and use rates of non-toxic tackle. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for the caracara from sport fishing on FPNWR. The refuge will encourage the use of non-toxic tackle and educate anglers about minimizing impacts of fishing on wildlife. Lost fishing tackle can pose a toxicological threat to certain bird species. However, the amount of lead introduced to the environment from sport fishing is negligible given expected participation levels and use rates of non-toxic tackle.</p>
Red-cockaded woodpecker	<p>Activities proposed in the VSP, including construction of facilities, may temporarily disrupt foraging activities of the red-cockaded woodpecker if clusters occur in close proximity to the action area, but effects are anticipated to be negligible and of short duration due to the fact that all activities will occur within previously disturbed areas which currently incur high rates of human usage. Minor disturbance from more humans in their habitat may cause birds to temporarily relocate and consistently move to other areas to forage. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gunshots are also expected to be unmeasurable and discountable. The refuge requires non-toxic ammunition during the limited turkey hunt. Lost fishing tackle can pose a toxicological threat to certain bird species. However, this species is not a scavenger, and exclusively forages on invertebrates/arthropods. Therefore, the amount of lead introduced to the environment from sport fishing is negligible given expected participation levels, use rates of non-toxic tackle, and the unlikely bioaccumulation of lead in the food chain from use of lead fishing tackle at Pistol Pond. As a result, no appreciable effects from lead in the environment are anticipated.</p>
Monarch Butterfly	<p>Monarch butterflies are migratory species that typically leave the area for Central America on their annual migration in late summer. The proposed actions are not likely to have adverse effects on this species. Though transitory in nature, migrating monarchs could experience foot or vehicle strikes or could be disturbed and move temporarily in response to hunter or angler foot traffic. They also could have the plants they rely on for habitat damaged by foot and vehicular traffic. All of these potential effects are unlikely to result in any appreciable</p>

	adverse effects to the species. The bioaccumulation of lead is a potential concern with some species, but it does not present a significant issue for this species on the refuge because the monarch butterfly would not ingest lead associated lead fishing tackle. Adult monarchs exclusively consume plant flower nectar, and the larva only feed on <i>Asclepias</i> spp.
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**B. Explanation of actions to be implemented to reduce adverse effects:**

<b>SPECIES/ CRITICAL HABITAT</b>	<b>ACTIONS TO MITIGATE/MINIMIZE IMPACTS</b>
American alligator	<ul style="list-style-type: none"> <li>- Educate the public and post regulations at all kiosks to minimize human-alligator conflicts.</li> <li>- Utilize law enforcement to patrol and enforce no harassment of wildlife, especially alligators at Pistol Pond.</li> <li>- The seven principles of "Leave No Trace" would be promoted at all public access locations. Signage, education materials and law enforcement will used at all major public use areas in order to minimize the incidence of littering. Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently.</li> </ul> <p>Encourage the use of non-toxic/non-lead fishing tackle. Should individual public use activities be linked with the illegal take and/or harassment of any wildlife, the activity may be shut down temporarily or permanently. Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently.</p>
Florida bonneted bat	<p>No snags or trees with cavities will be removed unless they are surveyed and approved by Refuge Biologist, and no wildlife species are discovered utilizing the snags. Should Florida bonneted bat roosts be discovered adjacent to proposed public access points, public access may be temporarily or permanently altered in order to minimize potential disturbance to the bats. Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently.</p>

SPECIES/ CRITICAL HABITAT	ACTIONS TO MITIGATE/MINIMIZE IMPACTS
Florida Panther	<ul style="list-style-type: none"> <li>- Entrance gates will be kept shut at all times. Temporary barriers will be put in place to minimize wildlife getting onto SR-29 should old gates and fencing need to be removed or modified.</li> <li>- Public trails will only be open to public access from sunrise to sunset.</li> <li>- Public access points will be designed to prevent wildlife from entering the SR-29 roadway.</li> <li>- Motorized public access will only occur during special events and permitted hunts.</li> <li>- Should any wildlife fencing need to be relocated or replaced on the refuge, similar temporary fencing will be installed contiguous with permanent fencing when personnel aren't present to monitor and staff open fence or gate sections. Such temporary fencing should prevent panthers and other medium to large-bodied wildlife from entering the SR-29 roadway.</li> <li>- Continue to promote the expansion of fencing and wildlife crossings north and south of the refuge along SR-29.</li> <li>- Should the limited permitted ORV use being proposed in the VSP lead to off-trail negative environmental impacts, ORV use may be shut down temporarily or permanently.</li> <li>- Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently.</li> </ul>

SPECIES/ CRITICAL HABITAT	ACTIONS TO MITIGATE/MINIMIZE IMPACTS
Eastern indigo snake	All contractors and the general public will be instructed to be on the lookout for all snakes, and to avoid any that are seen. The public and all authorized contractors will be prohibited from killing any native snakes on the refuge unless duly authorized through a special use permit. Because humans tend to fear that which they don't understand, it will be critically important to educate the public about the role that native snakes (venomous and non-venomous) play in the environment, and the fact that killing any native snake on the refuge is illegal. Should individual public use activities be linked with the illegal killing of snakes or any other wildlife, the activity may be shut down temporarily or permanently. Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently.
Audubon's crested caracara	Reduce highway speeds during construction activities along SR-29, minimize removal of mature trees within and adjacent to project areas, and work with partners to educate the public about the need to reduce vehicle speeds on SR-29 when birds are observed foraging along the SR-29 road shoulders. Signage, education materials and law enforcement will be used at all major public use areas in order to minimize the incidence of littering. Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently.
Red-cockaded woodpecker	Minimize the removal of foraging-sized trees within foraging partitions of active clusters whenever possible. Other than periodic trail/road maintenance, prevent mechanical activities within active clusters from 1 April to 1 July. Confine public use activities to existing trails and woods roads. Close off public access around active red-cockaded woodpecker clusters and other sensitive environmental features should harassment and other negative impacts occur as a result of increased human presence. Should trash, vandalism and negative environmental impacts become an issue to enforce, manage and/or mitigate at any of the public access locations, these locations and associated public use activities may be shut down temporarily or permanently.

SPECIES/ CRITICAL HABITAT	ACTIONS TO MITIGATE/MINIMIZE IMPACTS
Monarch Butterfly	No actions needed because the species only has a transitory presence on the refuge.

**VIII. Effect Determination and Response Requested:**

Species/Critical Habitat	Determination <sup>1</sup>			Response Requested <sup>1</sup>
	NE	NA	AA	
American alligator		X		Concurrence
Audubon's crested caracara		X		Concurrence
Black rail	X			Concurrence
Eastern indigo snake	X			Concurrence
Everglades Snail Kite		X		Concurrence
Florida bonneted bat		X		Concurrence
Florida Panther		X		Concurrence
Wood stork		X		Concurrence
Red-cockaded woodpecker		X		Concurrence
Monarch Butterfly		X		Concurrence

<sup>1</sup>DETERMINATION/RESPONSE REQUESTED:

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested is optional but a "Concurrence" is recommended for a complete Administrative Record.

NA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response Requested is a "Concurrence".

AA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested for listed species is "Formal Consultation". Response Requested for proposed or candidate species is "Conference".

**Kevin Godsea**

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**Signature** (originating station)

**date**

**Project Leader**

**Title**

**IX. Reviewing Ecological Services Office Evaluation:**

**A. Concurrence**   X   **Nonconcurrence**           

**B. Formal consultation required**           

**C. Conference required**           

**D. Informal conference required**           

**E. Remarks (attach additional pages as needed):**

**ROBERT  
CAREY**

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**date**

**Title**

**office**

## APPENDIX H: SUMMARY OF PUBLIC COMMENTS AND RESPONSE FROM THE U.S. FISH AND WILDLIFE SERVICE

The U.S. Fish and Wildlife Service (USFWS, Service) appreciates interest in future management and hunting opportunities on national wildlife refuges (NWRs, refuges). The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published here.

Under the National Environmental Policy Act (NEPA), the Service must respond to substantive comments. For purposes of this planning process, a substantive comment is one that was submitted during the public review and comment period, which was within the scope of the proposed action, was specific to the proposed action, had a direct relationship to the proposed action, and included reasons for the Service to consider it. (For example, a substantive comment could be that the document referenced 500 individuals of a particular species, but that current research found 600. In such a case, the Service would likely update the document to reflect the 600, citing the current research. While a comment that would not be considered substantive would be: "We love the proposal.") Comments outside the scope of the proposal were not addressed.

The substantive comments received were summarized and grouped under the listed categories; to provide context, some exact quotes were included from individual comments.

#### Plans, Process, and Compliance

- Consultation under Section 106, National Historic Preservation Act
- Inconsistent with Secretary Order 3398
- CCP Determined that Hunting Would Not Be Allowed at Florida Panther NWR
- Lack of Sufficient National Environmental Policy Act Analysis and Review
- Biological Integrity, Diversity, and Environmental Health
- Section 7 Consultation
- Inconsistent with Mission as a Refuge
- Public Meetings
- Public Review Announcement Notification Time
- Reasonable Accommodation
- Compliance under Endangered Species Act

#### Wildlife and Habitat Management

- Management and Recovery of the Florida Panther at Florida Panther NWR
- Wildlife Fencing
- Reporting of Observations of Florida Panthers
- Increased Encounters between humans and Panthers
- Vegetation Disturbance

#### Visitor Services

- Welcome and Orient Visitor
- Hunting, in General
- Nontoxic and Lead Shot and Tackle
- Scouting
- 1:00 pm Hunt End Time
- Offer Family Hunt During Youth Hunt Season
- Turkey Call Concerns
- Archery
- Future Hunt Program Changes
- Not Allowing ATV/ORV Use
- Fishing
- Wildlife Observation and Photography
- Environmental Education
- Other Recreational Use Opportunities
- Volunteers
- Recreational Fees
- Filming Activities
- Limiting Visitation

#### Refuge Management and Administration

- Funding and Staffing Concerns
- Future Permitting
- Other Refuge Management Goals and Uses
- Registration of All Users of Florida Panther NWR
- Law Enforcement Concerns

- Future Refuge Management
- General Edits

#### Landscape Factors

- Impacts from Adjacent Development and Oil and Gas Exploration and Drilling
- Impacts from Pythons
- Climate Change and Sea Level Rise

Any page numbers referenced in the comments or responses relate to the original page numbers in the draft Visitor Services Plan, draft Hunting and Sport Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther NWR released for public review and comment.

### **PLANS, PROCESS, AND COMPLIANCE**

#### **Consultation under Section 106, National Historic Preservation Act**

**Comment:** One comment was received from the Seminole Tribe of Florida (STOF) regarding consultation under Section 106 of the National Historic Preservation Act.

“The proposed VSP would affect an area that falls within the STOF Area of Interest. We have reviewed the documents that you provided and would like to provide the following comment:

- While it appears that the proposed Visitor Service Plan (VSP) may not require consultation under Section 106 of the National Historic Preservation Act, many of the proposed changes, if implemented, would constitute federal undertakings. In all such instances, we would expect the Fish and Wildlife Service, or other federal lead agency, to initiate Section 106 consultation with the STOF.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Any proposed VSP undertakings possessing the potential to impact historic properties will trigger Section 106. The Service will subsequently consult with the STOF pursuant to the National Historic Preservation Act, its implementing regulation 36 CFR 800, and the Service’s 614 FW 3 (Cultural Resources Management Chapter: Compliance with Section 106). We did not make any changes to the proposed action as a result of these comments.

**Comment:** One commenter felt there was a lack of Section 106, National Historic Preservation Act consultation and that the plan does not address follow up with the Tribes.

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. This plan identifies potential measures to improve the visiting public’s use and experience. As such, it does not trigger Section 106 of the National Historic Preservation Act. As part of the NEPA process, the Service provided the Tribes interested in this portion of Florida opportunities to review and provide input on the draft Plan. The Service’s conversations with the Tribes on such matters are separate from the public NEPA process and consistent with the Service’s 2016 Native American Policy ([The Native American Policy \(fws.gov\)](https://www.fws.gov/native-american-policy)). If a specific action is funded, then the Service will initiate consultation with the Tribes, the Florida Division of Historical Resources, and other interested stakeholders pursuant to the National Historic Preservation Act, NEPA, other pertinent federal laws, Executive Orders,

and Service policy. We did not make any changes to the proposed action as a result of these comments.

### **Inconsistent with Secretary Order 3398**

**Comment:** “Secretary Haaland recently issued Secretary’s Order 3398, entitled “Revocation of Secretary’s Orders Inconsistent with Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.” This Order revokes a series of Secretary’s Orders issued in recent years that are inconsistent with our commitment to protect public health; conserve land, water, and wildlife; and elevate science. I believe that the proposed changes are inconsistent with Secretary Haaland’s orders.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Secretary Order 3398 Revocation of Secretary’s Orders Inconsistent with Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis revoked several Secretary Orders, as listed.

- SO 3348 – “Concerning the Federal Coal Moratorium” (March 29, 2017)
- SO 3349 – “American Energy Independence” (March 29, 2017)
- SO 3350 – “America-First Offshore Energy Strategy” (May 1, 2017)
- SO 3351 – “Strengthening the Department of the Interior’s Energy Portfolio” (May 1, 2017)
- SO 3352 – “National Petroleum Reserve – Alaska” (May 31, 2017)
- SO 3354 – “Supporting and Improving the Federal Onshore Oil and Gas Leasing Program and Federal Solid Mineral Leasing Program” (July 6, 2017)
- SO 3355 – “Streamlining National Environmental Policy Reviews and Implementation of Executive Order 13807, ‘Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects’” (August 31, 2017)
- SO 3358 – “Executive Committee for Expedited Permitting” (October 25, 2017)
- SO 3360 – “Rescinding Authorities Inconsistent with Secretary’s Order 3349, “American Energy Independence”” (December 22, 2017)
- SO 3380 – “Public Notice of the Costs Associated with Developing Department of the Interior Publications and Similar Documents” (March 10, 2020)
- SO 3385 – “Enforcement Priorities” (September 14, 2020)
- SO 3389 – “Coordinating and Clarifying National Historic Preservation Act Section 106 Reviews” (December 22, 2020)

The action for Florida Panther NWR meets all applicable laws, regulations, and policies, including Secretary Order 3398. Nothing in Secretary Order 3398 conflicts with the Service’s decision to implement the Visitor Services Plan for Florida Panther NWR. We did not make any changes to the proposed action as a result of this comment.

### **CCP Determined that Hunting Would Not Be Allowed at Florida Panther NWR**

**Comments:** Multiple comments were received regarding the determination that hunting would not be allowed on Florida Panther NWR in the 2000 Comprehensive Conservation Plan (CCP) for Florida Panther NWR, as listed. One comment outlined that the proposed hunting is not compatible; it further stated that the public already has hunting and ORV access within the 720,000 acres of Big Cypress National Preserve, making the refuge proposal unneeded. Multiple comments were received regarding concern that the uses in the proposal were not compatible. Excerpts from some of the comments are listed below.

“During the drafting and review for the CCP completed in 2000, the compatibility of hunting was specifically analyzed and was found to be ‘not compatible’ with the FPNWR (US Fish and Wildlife Service, 2000. Florida Panther National Wildlife Refuge Comprehensive Conservation Plan). We find this assessment continues to be an accurate one. The strong rationale in the 2000 Environmental Assessment provided that the refuge was established for the benefit of panther survival and recovery, the location of the refuge is strategic, and that ‘every deer taken by a hunter on the refuge would reduce the amount available for a panther’ (US Fish and Wildlife Service, 2000. Florida Panther National Wildlife Refuge Comprehensive Conservation Plan). While we understand that hunting of deer is not proposed currently, we do worry that opening up this use may result in future widening of this activity in future years.”

“The strong rationale in the 2000 Environmental Assessment provided that the refuge was established for the benefit of panther survival and recovery, the location of the refuge is strategic, and that “every deer taken by a hunter on the refuge would reduce the amount available for a panther.” While we understand that hunting of deer is not proposed currently, we do worry that opening up this use may result in future widening of this activity in future years. Hunting for other species such as turkey is not compatible either. The 2000 CCP establishes support for the real potential that with hunting introduced onto the refuge landscape, “there will always be a chance of a cat being shot by a hunter. ... Further, the 2000 CCP established that an increased level of access and activity could also infringe upon or interfere with important research and management activities. This incompatibility could be further aggravated by budgetary resource constraints and lack of consistent law enforcement presence, and may not be manageable with the currently available or foreseeable future budget and staff. These changes should not be contemplated unless the FPNWR staff, biologists, administrators, and law enforcement vacancies are filled.”

“The Proposal emphasizes the importance of supporting conservation efforts and describes the National Wildlife Refuge System (NWRS) mission as “fundamental” for determining compatibility. Accordingly, proposed objectives must “not materially interfere or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge” [16 U.S.C. § 668dd (a)(2)]. The proposed objectives directly contradict the purpose of the Refuge by hindering its purpose and conflicting with the legislation that authorizes its very existence.”

“Hunting for other species such as turkey is not compatible either. The 2000 CCP establishes support for the real potential that with hunting introduced onto the refuge landscape, ‘there will always be a chance of a cat being shot by a hunter’ (US Fish and Wildlife Service, 2000. Florida Panther National Wildlife Refuge Comprehensive Conservation Plan). Indeed, there have been multiple cases of illegal take of panther, including an incident where a panther was shot on public lands about 50 yards off public use/ORV trails in the Big Cypress National Preserve (Pittman, 2013. Young Florida Panther Shot Dead on Big Cypress Preserve, Tampa Bay Times. December 10, 2013. Accessed at <<https://www.tampabay.com/news/environment/wildlife/panther-shot-dead-on-big-cypress-preserve/2156228/>>). 4 2009, a panther was found shot just outside of the BCNP boundary (Pittman, 2013. Young Florida Panther Shot Dead on Big Cypress Preserve, Tampa Bay Times. December 10, 2013. Accessed at <<https://www.tampabay.com/news/environment/wildlife/panther-shot-dead-on-big-cypress-preserve/2156228/>>). Later that year, a panther was killed by a bow hunter (Pittman, 2013. Young Florida Panther Shot Dead on Big Cypress Preserve, Tampa Bay

Times. December 10, 2013. Accessed at <<https://www.tampabay.com/news/environment/wildlife/panther-shot-dead-on-big-cypress-preserve/2156228/>>). And in 2011, a hunter also killed a Florida panther in Georgia (Pittman, 2013. Young Florida Panther Shot Dead on Big Cypress Preserve, Tampa Bay Times. December 10, 2013. Accessed at <<https://www.tampabay.com/news/environment/wildlife/panther-shot-dead-on-big-cypress-preserve/2156228/>>). The FPNWR is simply too important and too sensitive to allow for a high level of increased access and activity.”

“Further, the 2000 CCP established that an increased level of access and activity could also infringe upon or interfere with important research and management activities (US Fish and Wildlife Service, 2000. Florida Panther National Wildlife Refuge Comprehensive Conservation Plan. P.17). This incompatibility could be further aggravated by budgetary resource constraints and lack of consistent law enforcement presence, and may not be manageable with the currently available or foreseeable future budget and staff. These changes should not be contemplated unless the FPNWR staff, biologists, administrators, and law enforcement vacancies are filled.”

“We are specifically concerned that the VSP proposes to open 25,560 acres of the Florida Panther National Wildlife Refuge (FPNWR) to turkey hunting. There is no management or conservation need for this action and we see a high potential for unintended, non-target human-wildlife conflict with the state- and federally-endangered Florida panther (*Puma concolor coryi*), a sub-species of mountain lion.”

“The VSP also admits that “panther activity may be temporarily altered as a result of human activity.” See Section B. Environmental Assessment Florida Panther National Wildlife Refuge Environmental Assessment for 2021 Draft Visitor Services Plan and Turkey Hunting and Sport Fishing Plan, page 117. Seeing as the FPNWR was established to protect the Florida panther and is located in the core of occupied Florida panther territory, and seeing as the FPNWR does not allow for hunting within FPNWR, human activities that knowingly may alter panther activity, such as hunting, should not be permitted within FPNWR.”

“We appreciate the intention of Refuge staff to share the magic and beauty of the FPNWR with more of the public. However, the Conservancy recommends that the limited refuge funds and resources, in addition to the critical FPNWR Expansion initiative, be directed to support biological functions, management, restoration, and scientific research of the refuge. There are several actions, many already reflected in the current CCP, which could instead be prioritized to enhance and augment protected species use of the FPNWR and to continue and initiate scientific research regarding refuge biota.”

“Rather than authorize hunting, in 2000, the Service found hunting to be incompatible with the purposes of the refuge. ...the Service has failed to acknowledge its previous incompatibility determination and explain or distinguish its about-face with respect to hunting. The Service also improperly tiers the VSP to a revised CCP that had been initiated but not finished. In other words, neither the 2000 CCP nor the revised draft CCP authorizes hunting on the refuge.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The National Wildlife Refuge System Improvement Act

of 1997 (Public Law 105-57) determined that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation are legitimate and appropriate public uses of the Refuge System. This Act also recognized that these compatible wildlife-dependent recreational uses are the priority general public uses of the Refuge System. The Service is committed to supporting refuge management activities and key research and demonstration area projects that serve the purposes of Florida Panther NWR. In the 2000 CCP for Florida Panther NWR, the Service provided for re-evaluation of hunting at Florida Panther NWR potentially as early as 2005 (USFWS 2000). It is also important to note the 2000 CCP predates the Refuge Systems Compatibility Policy (603 FW 2) and as such no formal Compatibility Determination was conducted at the time. However, the 2000 CCP for Florida Panther NWR outlined 5 reasons why hunting was not to be determined compatible in 2000, as listed (USFWS 2000); the EA (Section B in the Florida Panther Visitor Services Plan and the Hunting Compatibility Determination (Appendix C in the Florida Panther NWR Visitor Services Plan) provided clear justification why the current action does meet compatibility requirements.

- The refuge was established for the endangered Florida panther. The refuge lies strategically within the center of a core area heavily used by panthers between the northern portions of Big Cypress National Preserve and the Fakahatchee Strand State Preserve. For this reason, it is prudent to strictly monitor and control the amount of human use on refuge lands.
- The need for an additional deer hunting area in southwest Florida is not great. More than 540,000 acres are available to the public on Big Cypress National Preserve. In addition, deer hunting on public lands is planned for the following areas in southwest Florida: Picayune Strand State Forest - 50,000 acres; Okaloacoochee Slough State Forest - 30,000 acres; and possibly Corkscrew Regional Ecosystem Watershed - 30,000 acres. We support managed deer hunts in these areas, however, the refuge has a different mandate than the aforementioned properties.
- The refuge does not have an overabundance of deer. There is a rough estimate of approximately 3 deer per-square-mile. Every deer taken by a hunter on the refuge would reduce the amount available for a panther.
- If we permit a hunt, there will always be a chance of a cat being shot by a hunter. A Texas cougar, that was part of the Florida panther genetic restoration program, was shot in 1998 on private lands.
- The refuge serves as an important research and demonstration area for applied panther habitat management. Management activities and studies, aimed primarily toward panther habitat enhancement, are ongoing projects. This will require human activity, habitat management, the establishment of vegetative plots, and animal monitoring. Hunting has the potential of interfering with these projects and adds additional human activity. The cumulative human activity may have a negative impact on refuge panther use. Moreover, hunting is not an activity that will enhance panther habitat or use of the refuge.

For clarity, bullets two and three above focus on deer hunting, which is not included in this action. The remaining three bullets outline the importance of Florida Panther NWR to Florida panthers (which is addressed in the response above), the potential for accidental shooting of a Florida panther, and the importance of Florida Panther NWR as a research and demonstration area. It is also important to note that conditions have changed in the 21 years since completion of the CCP. For instance, the Florida Panther population have expanded from 35-40 individuals to 120-230 today and while the panther population density has increased, the range continues

to expand well beyond the refuge. The hunting and fishing programs for Florida Panther NWR were designed to provide for appropriate and compatible outdoor recreation opportunities, while continuing to meet refuge purposes and management goals and objectives, including management for the Florida panther and support of ongoing research activities. As outlined in the Hunt Plan (Appendix A of the Florida Panther NWR Visitor Services Plan) and Hunting Compatibility Determination (Appendix C of the Florida Panther NWR 2021-22 Hunting and Sport Fishing Package) and as outlined in the Intra-Service Section 7 Biological Evaluation (Appendix G in the Florida Panther NWR Visitor Service Plan), the Service has determined that the turkey hunt program at Florida Panther NWR is not likely to adversely affect the Florida panther population. The action is to allow for the hunting of turkey at Florida Panther NWR; turkey are not a primary prey species for the Florida panther. The likelihood of a Florida panther being shot during a turkey hunt is low. As designed, the hunting and fishing programs would not unduly impact management, research, and demonstration activities at Florida Panther NWR. The compatibility determinations in Appendix C of the Florida Panther NWR Visitor Services Plan provide the stipulations and justification to ensure that all uses of Florida Panther NWR meet National Wildlife Refuge System standards of appropriateness and compatibility. If the Service determines that unacceptable impacts result from any use, the Service will alter or eliminate that use accordingly.

The Florida 2019 Statewide Comprehensive Outdoor Recreation Plan (SCORP) written by FDEP, In an effort to meet the state's current and future demands for outdoor recreational needs. FDEP recommends "Agencies and recreation departments should determine through internal review and through public opinion where deficiencies in access exist, and work towards improving existing access points or establishing new ones where appropriate." "By region of residence, the highest participation rates stem from the Northwest and North Central regions, although the Central and Southeast regions were the ones most frequented by both resident and tourist hunters. The supply of available hunting lands is greatest in the Northwest region and lowest in the Northeast region. Large tracts in the Southeast and Southwest regions are open to hunting, but are primarily wetlands and are less accessible." As outlined in the EA, the proposed turkey hunts at the Refuge will provide unique hunting/outdoor opportunities for youths and their families, which are similar to other Youth hunting opportunity in south Florida.

As outlined in Appendix A (III) (f), the Service has determined that the hunting and fishing programs can be supported by existing staffing and funding, while also meeting other management goals, objectives, and priorities at Florida Panther NWR. While staffing levels at the Florida Panther NWR have declined, the Service also relies on state and local agency partners as well as other federal agencies to assist in law enforcement efforts as necessary.

For clarity, the Service did not tier the Visitor Services Plan (VSP) from the Comprehensive Conservation Plan (CCP) revision that was started in 2014. The Service recognizes that confusion exists regarding the different, but related planning processes for Florida Panther NWR, specifically the planning process for the CCP revision (which started with scoping in 2014 with a Federal Register notice and which is still underway) and the planning process for the current action for the VSP (which started with a Federal Register notice in 2021). While these two planning documents are separate planning processes with separate environmental analyses, they do overlap, which enabled misunderstanding. To date, the Service has not developed an EA and draft CCP for public review and comment. After thorough review of the comments received during the CCP revision scoping process in 2014, the Service decided to address the concerns raised about public access and recreation separate from the CCP through the development of a VSP and Hunting and Sport Fishing Plan for the refuge before revising the CCP. In 2021, the Service requested public review and comment on the draft VSP for Florida

Panther NWR, including the Hunting and Sport Fishing Plan through local public notice on April 15, 2021 and through a notice in the Federal Register (86 Federal Register 23794) published on May 4, 2021 as part of the Service's annual Hunting and Sport Fishing rulemaking action for 2021-22, which included notice for the Florida Panther NWR EA and draft VSP.

We did not make any changes to the proposed action as a result of these comments.

### **Lack of Sufficient National Environmental Policy Act Analysis and Review**

**Comment:** Multiple comments expressed concern that the proposal lacked sufficient National Environmental Policy Act (NEPA) analysis and review. Excerpts from some of the comments are listed below.

"The VSP has not undergone proper review under the National Environmental Policy Act (42 U.S.C. §§ 4321 et seq.) (NEPA), subverts wildlife conservation mandates in the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. §§ 668dd-668ee) (NWRSA), and fails to accord with the Florida Panther Recovery Plan (FPRP), which states that FPNWR be closed to hunting. Following are important flaws and omissions in the draft plan that, if adequately addressed, would support MLF's (Mountain Lion Foundation's) position on the final management plan. Failure to address these concerns per NEPA and the NWRSA would leave the plan vulnerable to legal challenge."

"Rather than authorize hunting, in 2000, the Service found hunting to be incompatible with the purposes of the refuge. Even if such tiering were appropriate under the law, the Service has failed to acknowledge its previous incompatibility determination and explain or distinguish its about-face with respect to hunting. The Service also improperly tiers the VSP to a revised CCP that had been initiated but not finished. In other words, neither the 2000 CCP nor the revised draft CCP authorizes hunting on the refuge. For these reasons, the Service's authorization of a turkey hunt on the Florida Panther NWR does not comply with either the NWRSA or NEPA. The Service must correct these errors before finalizing and implementing the VSP for the Florida Panther NWR."

"The EA considers just two alternatives: the no action alternative and expansion of 14 recreational opportunities available to the public. This does not appear to qualify as a reasonable range of alternatives, especially considering inconsistencies with the prevailing CCP. This planning short-cut may reflect plummeting staffing and funding levels that have plagued the Refuge System for at least the last decade. Congress funded conservation planning for the entire System at just \$2.5 million for the last two years. And although the President has requested \$2.1 million more for FY 2022, that level falls far short of the \$25 million estimated to allow the Service to begin tackling the planning backlog."

"The EA fails to evaluate a reasonable range of alternatives to the proposed action that would avoid or minimize all of the aforementioned adverse effects on this imperiled species. For example, FWS should evaluate a proposed action that considers a reduced amount of acreage made available for proposed activities within known panther habitat."

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. An EA need not analyze an infinite or even large number of alternatives. For a project of the scope and context of the proposed action, a reasonable range of alternatives for an EA should capture the spectrum of alternatives; any action

alternatives considered must meet the Purpose and Need outlined in the EA. In the case of the proposed action, the No Action Alternative (Alternative A in the EA in Section B) would continue current management activities at levels and activities similar to current conditions and in alignment with the Florida Panther NWR 2000 Comprehensive Conservation Plan (CCP, USFWS 2000). Alternative A in the EA in Section B would not include additional visitor activities and amenities beyond what was outlined in the 2000 CCP. Since public use activities on NWRs are required to meet appropriateness (603 FW 1) and compatibility (603 FW 2) requirements and based on the purposes of Florida Panther NWR, alternatives were not considered that could not meet these (and thus could also not meet the Purpose and Need outlined in the EA in Section B). The other side of the spectrum of alternatives considered in the EA was Alternative B (Proposed Action), which would implement the proposed Visitor Services Plan with uses that were determined to be appropriate and compatible (see Appendix C for the Compatibility Determinations for the uses outlined in the Visitor Services Plan). The Environmental Assessment prepared underwent regional and national review to address and consider these actions from a local, regional, multi-State, and/or flyway perspective, and to consider the cumulative impacts from this larger geographical context. The rule would not have significant impacts at the local, regional, or national level. The commenters who have raised these environmental analysis concerns have provided no additional information that would change this analysis or our conclusion. The refuge annually conducts management activities that will minimize or offset impacts of hunting and fishing on physical and cultural resources, including establishing designated areas for hunting; restricting levels of use; confining access and travel to designated locations; providing education programs and materials for hunters, anglers, and other users; and conducting law enforcement activities.

Page 32 of The Florida Panther Recovery Plan states: “Prey management has been accomplished by regulating harvest using a variety of strategies. ENP, FSPSP, and FPNWR are closed to hunting” (USFWS 2008). This is written in the background section of the recovery plan describing the 2008 conditions of prey management across the Panther’s range. The action proposed is hunting of wild turkey, which is not a primary prey source for the panther. Furthermore, the Recovery plan does not include any goal or objectives for keeping the refuge closed to hunting. In response to public comments regarding hunting access of public lands in the Recovery Plan, the Service also wrote: “The majority of outdoor recreational activities are compatible with panther recovery if they are conducted in a manner consistent with existing local, state, and Federal laws and regulations. The Recovery Plan is not aimed at any culture or traditional cultural practices” (USFWS 2008).

Expanding opportunities does not necessarily result in increased impacts to refuge resources. Opening of new uses may attract people to the refuge, but these hunters and/or anglers were likely already participating elsewhere on State or other Federal lands. Overall, considering the decreasing trends in hunting and fishing generally, and decreasing trends of these activities on refuges specifically, we do not expect this final rule to have a significant impact on the environment.

For clarity, the Service did not tier the Visitor Services Plan (VSP) from the Comprehensive Conservation Plan (CCP) revision that was started in 2014. The Service recognizes that confusion exists regarding the different, but related planning processes for Florida Panther NWR, specifically the planning process for the CCP revision (which started with scoping in 2014 with a Federal Register notice and which is still underway) and the planning process for the current action for the VSP (which started with a Federal Register notice in 2021). While these two planning documents are separate planning processes with separate environmental analyses, they do overlap, which enabled misunderstanding. To date, the Service has not

developed an EA and draft CCP for public review and comment. After thorough review of the comments received during the CCP revision scoping process in 2014, the Service decided to address the concerns raised about public access and recreation separate from the CCP through the development of a VSP and Hunting and Sport Fishing Plan for the refuge before revising the CCP. In 2021, the Service requested public review and comment on the draft VSP for Florida Panther NWR, including the Hunting and Sport Fishing Plan through local public notice on April 15, 2021 and through a notice in the Federal Register (86 Federal Register 23794) published on May 4, 2021 as part of the Service's annual Hunting and Sport Fishing rulemaking action for 2021-22, which included notice for the Florida Panther NWR EA and draft VSP.

We did not make any changes to the proposed action as a result of these comments.

**Comment:** Multiple commenters suggested that the Service should have completed an Environmental Impact Statement instead of an Environmental Assessment. Excerpts from some of the comments are listed below.

"If the agency is intent on moving forward with this plan, and open the refuge for the first time to some or all of these new uses, it must conduct an EIS. The EIS will provide the agency the opportunity to take a hard look at direct and indirect impacts of the new uses, as well as cumulative impacts and allow it to examine changes in the environment caused by the combined impact of past, present, and future human activities. I believe that anything short of a full EIS will be a violation of the National Environmental Policy Act."

"The EA contains an inadequate cumulative impacts analysis and fails to analyze the cumulative impacts of all past, present, and reasonably foreseeable related activities on the Florida panther. Agencies are required to consider cumulative actions and similar actions in defining the scope of an EIS."

"The cumulative impacts can significantly impact this habitat of one of the rarest mammals in North America as well as many other federally endangered and threatened wildlife species."

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. On July 16, 2020, the Council on Environmental Quality (CEQ) published a final rule to update its regulations for Federal agencies to implement the National Environmental Policy Act (NEPA) (85 FR 43304, <https://www.govinfo.gov/content/pkg/FR-2020-07-16/pdf/2020-15179.pdf>). In order to focus agency time and resources on considering whether the proposed action causes an effect rather than on categorizing the type of effect, the term "cumulative effects" was removed to simplify the definition to focus agencies on consideration of effects that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action. While the term "cumulative effects" was removed, the concept of effects analysis still stands. The EA in Section B was developed to analyze the proposed action as outlined in the refuge's Visitor Services Plan, including the Hunting and Sport Fishing Plan, in compliance with CEQ guidance and regulations (including 40 CFR §§1500-1509) and with regulations and policies of the U.S. Department of the Interior (including 43 CFR Part 46) and U.S. Fish and Wildlife Service (including 550 FW 3).

The EA in Section B analyzes the proposed action in relation to its context in the landscape and its role in natural resource protection. This analysis included potential impacts from planned actions to 126 species of birds (including the wild turkey), 46 species of reptiles and amphibians, 22 species of mammals, 13 families of fish, 42 state listed plants, eight different ecological communities, soils, geology, air quality, water quality, cultural resources and

operations that occur on the Refuge. The analysis also considered potential impacts from non-native species, including 56 invasive exotic plants and 23 non-native animals after planned actions occur on the Refuge. Additionally, we analyzed impacts from planned actions on other parameters such as visitor use and experience, socioeconomics-local and regional economies and environmental justice in Minority Populations and Low-Income Populations.

The Section 7 in Appendix G provides analysis and the determinations that planned actions will have no effect on the black rail or Eastern indigo snake; and are not likely to adversely affect the American alligator, Audubon's crested caracara, Everglade snail kite, Florida bonneted bat, Florida panther, wood stork, red-cockaded woodpecker or Monarch butterfly.

Beyond the EA and FONSI determining no significant impacts of the action for Florida Panther NWR, the Cumulative Impacts Report prepared for the 2021-22 Hunting and Sport Fishing rule concluded for all of the proposed actions in the rule, whether analyzed in an EA or through a Categorical Exclusion and including the action for Florida Panther NWR, that the rule will not have significant impacts at the local, regional, or national level. It is important to note that a Federal court found that the Service's approach, using a bottom-up analysis to assess the cumulative impact of increased hunting and fishing across the entire National Wildlife Refuge System, was an appropriate way for the Service to analyze the impacts of the rule in compliance with NEPA (see *Fund for Animals v. Hall*, 777 F. Supp. 2d 92, 105 (D.D.C. 2011)).

43 CFR §46.300 outlines that the purpose of an Environmental Assessment is to allow the Responsible Official to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). 40 CFR §1508.1(l) defines a FONSI as a document by a Federal agency briefly presenting the reasons why an action, not otherwise categorically excluded, will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. 43 CFR §46.310(e) provides that the level of detail and depth of impact analysis should normally be limited to the minimum needed to determine whether there would be significant environmental effects.

In this case, based on the analysis in the EA in Section B, the analysis and determinations in the Section 7 in Appendix G, and the findings outlined in the FONSI in Appendix I and summarized here, the Service has determined that implementation of the action does not represent significant impacts to the human environment, including the Florida panther and its habitat, and, thus, development of an EIS is not required.

We did not make any changes to the proposed action as a result of these comments.

### **Compliance with Endangered Species Act**

**Comment:** Some comments addressed concerns with impacts to endangered species on the refuge and compliance with the Endangered Species Act. Excerpts from some of the comments are listed below.

"Federal agencies are required to 'utilize their authorities in furtherance of the purposes of [the ESA] by carrying out programs for the conservation of endangered and threatened species' [16 U.S.C. § 1536(a)(1)]. 'Conservation' means 'to use all necessary methods and procedures which are necessary to bring any endangered species or threatened species to the point at which [conservation efforts] are no longer necessary' [16 U.S.C. §1532(3)]. 'Accordingly, the ESA creates an affirmative duty: it requires federal agencies take proper steps to conserve endangered species' [Center for

Biological Diversity v. Vilsack, 276 F. Supp. 3d 1015, 1031 (D. Nev. 2017)]. While the ESA does not mandate specific duties under the conservation mandate, ‘taking insignificant measures cannot satisfy the requirements under Section 7(a)(1)’ [Center for Biological Diversity v. Vilsack, 276 F. Supp. 3d 1015, 1031 (D. Nev. 2017)].”

“Inviting unknown numbers of visitors into the refuge to operate off-road vehicles, hunt, fish, camp, and engage in commercial endeavors, among other uses, will unavoidably impact the federally endangered Florida panther, as well as the additional federally listed species that call the FPNWR home – wood stork, Audubon’s crested caracara, Everglades snail kite, Florida bonneted bat, and eastern indigo snake.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service consulted under Section 7 of the ESA and received concurrence on its findings. The Section 7 in Appendix G provides analysis and the determinations that planned actions will have no effect on the black rail or Eastern indigo snake; and are not likely to adversely affect the American alligator, Audubon’s crested caracara, Everglade snail kite, Florida bonneted bat, Florida panther, wood stork, red-cockaded woodpecker or Monarch butterfly.

### **BIDEH and Refuge Purposes**

**Comment:** One commenter expressed concern that the proposed uses on the refuge will not maintain the Biological Integrity, Diversity and Environmental Health Service policy and will detract from the purposes of the refuge

““A significant directive” of National Wildlife Refuges is to “ensure that... the biological integrity, diversity, and environmental health” of the refuges are maintained. Any uses where conflict may be anticipated may be considered contrary to this mandate. Unfortunately, heavy public use, active recreation, and hunting may interfere and detract from the purposes of the FPNWR, which is in “protecting and enhancing panther habitat while maintaining natural diversity.””

**Service Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service’s biological integrity, diversity, and environmental health (BIDEH) policy (601 FW 3) guides decision-making with respect to management of activities on refuges, including hunting. Service biologists and wildlife professionals, in consultation with the State, determine the optimal number of each game animal that should reside in an ecosystem and then establish hunt parameters (e.g., bag limits, sex ratios) based on those analyses. We carefully consider how a proposed hunt fits with individual refuge goals, objectives, and strategies before allowing the hunt. None of the known, estimated, or projected harvests of species in this rulemaking is expected to have significant adverse direct, indirect, or cumulative impacts to hunted populations, non-hunted wildlife, endangered or threatened species, plant or habitat resources, wildlife-dependent recreation, prescribed fire, air, soil, water, cultural resources, refuge facilities, solitude, or socio-economics. We analyze these impacts not only in the refuge’s Environmental Assessment document, but also in the 2021–2022 cumulative impacts report <https://www.regulations.gov/document/FWS-HQ-NWRS-2021-0027-0002>.

In response to the comments expressing concern specifically about Florida Panther NWR, the Service is opening three limited quota spring turkey hunts and fishing on a 19-acre pond on that refuge. Therefore, impacts on the endangered Florida panther (*Puma (=Felis) concolor coryi*)

are expected to be negligible to minor due to the limited number of turkey hunting permits we will issue; the type, amount, and location of approved public access; and the general locations of all proposed project activities (e.g., highly disturbed areas impacted by human use before the refuge was established). As outlined in the environmental assessment (section B of the VSP), through the use of quota hunts, a sustainable harvest is expected. A limited wild turkey hunt may be held during three weekends of the Florida spring turkey season, and only one bearded turkey may be harvested seasonally by permitted hunters. The refuge hunt will adopt Florida State regulations at nearby State wildlife management areas, and also add refuge-specific regulations to ensure compatibility. Up to 25 permits on two quota weekend hunts (i.e., 50 total permits) and up to 10 family groups (i.e., 20 total permits) on the third weekend hunt may be issued annually. However, Florida Panther NWR will monitor the turkey population and hunter access to allow for adaptive management in the number of permits issued annually. Also, no new roads or trails will be needed to accommodate hunting on the refuge. The use of existing roads and trails will accommodate turkey hunting.

It is estimated that fewer than 70 hunters will access the refuge, and they will take fewer than 8 turkeys each season on the refuge. The local turkey population is expected to rebound seasonally, with no significant effects anticipated. Rangewide, this slight increase in take is not expected to have a cumulative effect on the species. Also, turkey are not a primary prey species for the Florida panther, so any temporary, minor change in the refuge's turkey population should not affect panthers. Well-managed hunt programs and other outdoor recreational activities do not conflict with the Service's ability to recover the Florida panther or other Federal trust species on Florida Panther NWR. A perfect example of this lack of conflict is evidenced by the fact that the panther population has continued to increase throughout southwest Florida even though hunting and other forms of outdoor recreation have continued to occur as traditional uses across millions of acres, including on both private and public lands. Panthers are one of the most adaptable mammals in the Northern Hemisphere and have home ranges in close proximity to human occupied areas in southwest Florida (e.g., Golden Gate Estates). The proposed quota turkey hunts are anticipated to only have minimal to moderate short-term effects on the Florida panther and other Federal trust species. Panther activity may be temporarily altered as a result of human activity. However, any alteration of panther activity is expected to be insignificant.

We did not make any changes to the proposed action as a result of these comments.

### **Section 7 Consultation**

**Comments:** "I could not find in the draft EA document when an ESA Section 7 consultation was conducted for the specific proposed alternative B nor the data shared and issues raised during that consultation."

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. A Section 7 Intra-Service Biological Evaluation is a consultation internal to the Service and is not provided for public review and comment. The Section 7 consultation for this action is provided with the final Florida Panther NWR Visitor Services Plan, Environmental Assessment, and Compatibility Determination upon publication of the Final Rule for National Wildlife Refuge System Hunting and Sport Fish Regulations at the conclusion of the Rule process in late summer 2021. The Service will also post all final documents on the Internet (at ServCat at: <https://ecos.fws.gov/ServCat/>) when the Rule is final. We did not make any changes to the proposed action as a result of these comments.

### **Inconsistent with Mission as a Refuge**

**Comment:** One comment lamented that not only did the proposal not meet the dictionary definition of “refuge”, it also did not meet the Service’s definition of refuge and was thus inconsistent with the mission as a refuge. This commenter suggested that Florida Panther NWR should be a sanctuary from human incursion.

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. As outlined in the National Wildlife Refuge System Improvement Act (PL 105-57, 1997), national wildlife refuges are part of a national system with the mission to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. The Act states first and foremost that we focus our National Wildlife Refuge System mission on conservation of fish, wildlife, and plant resources and their habitats. The Act requires the Secretary, before allowing a new use of a refuge, or before expanding, renewing, or extending an existing use of a refuge, determine that the use is compatible with the purpose for which the refuge was established or the mission of the National Wildlife Refuge System. The Act established as the policy of the United States that wildlife-dependent recreation, when compatible, is a legitimate and appropriate public use of the National Wildlife Refuge System, through which the American public can develop an appreciation for fish and wildlife. The Act established six wildlife-dependent recreational uses as the priority general public uses of the National Wildlife Refuge System: hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

The action, as outlined in the Visitor Services Plan in Section A and as analyzed in the Environmental Assessment (EA) in Section B, meets all applicable laws, regulations, and policies, including the National Wildlife Refuge System Administration Act as amended by the National Wildlife Refuge System Improvement Act and including the mission of the National Wildlife Refuge System. Further, the action does not materially interfere with or detract from the purposes of the refuge or the mission of the National Wildlife Refuge System.

We did not make any changes to the proposed action as a result of this comment.

### **Public Meetings**

**Comment:** Multiple comments were submitted regarding public meetings for the action. Excerpts from some of those comments are listed.

“I am very concerned that public outreach was mainly via a handful of groups that FWS decided to notify versus notifying the general public to ensure underrepresented stakeholders with interest on this issue had a voice and an opportunity to shape the alternatives to be evaluated. Instead, it appears that groups advocating primarily for the interests of two types of “wildlife-dependent recreational use” (mainly hunting and fishing) had the most (and pick of the) seats at the table. As a result, this has come across as a “biased” public participatory process, which is not fair or inclusive of others that constantly feel left out on how our public lands (and species they support) are managed.

“FWS stated in the document that it “sent scoping letters making notification and seeking input on drafting the Hunt and Fish Plan October 1, 2020”. The document fails to make transparent who was notified (and hence who was left out from that input phase).”

“I remember one call for public comments during scoping for this project. And no other meetings. Yet previous meetings were discussed during the Zoom meeting. How were those noticed? Is there a list of previous meetings?”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service’s public engagement efforts to develop the current action are documented in the public engagement sections of the VSP, Hunting and Sport Fishing Plan, and Hunting and Sport Fishing CDs. The Service recognizes that confusion exists regarding public involvement for different, but related planning processes for Florida Panther NWR, specifically the planning process for the revision of the Comprehensive Conservation Plan (CCP, which started with scoping in 2014 with a Federal Register notice) and the planning process for the current action for the Visitor Services Plan (VSP, which started with a Federal Register notice in 2021). While these two documents are separate planning processes with separate environmental analyses, they do overlap, which enabled misunderstanding. The comments received during the scoping for the CCP were used to inform the development of the VSP. The Services recognizes that this was not a scoping process for the VPS and has clarified the language in the document to reflect as such in the public engagement sections.

A notice of intent to revise the existing CCP for Florida Panther NWR and prepare an EA was published in the Federal Register on April 23, 2014 (79 Federal Register 22697). At that time, the Service launched an online community engagement website on Mindmixer.com under the domain [www.floridapantherplan.com](http://www.floridapantherplan.com) to engage the public on ideas for future refuge management to update the existing CCP from 2000. The online engagement tool generated 71 individual ideas with 111 comments on those ideas for consideration, and generated 8,707 page views over 6 months of CCP public scoping. In addition to this online engagement tool, we held a stakeholder informational meeting attended by local non-profit organizations with representatives from the Florida Wildlife Federation, Conservancy of Southwest Florida, Friends of the Florida Panther NWR, Collier Audubon, Big Cypress Sportsmen’s Alliance, Sierra Club, Everglades Coordinating Council, South Florida Wildlands Association, and Florida Sportsmen’s Conservation Association on July 11, 2014; this meeting was informational, public comments were not submitted through this meeting, and attendees were informed how to submit comments on the CCP separate from this meeting. A separate CCP intergovernmental scoping meeting was conducted with representatives from local, state, and Federal agencies on July 15, 2014. This was followed by a general CCP public scoping meeting on July 16, 2014 with 51 attendees. Comments on the CCP were encouraged to be written and submitted by mail or email or through the online engagement website. A subsequent notice of intent was published in the Federal Register on July 21, 2014 (79 Federal Register 42349) extending the CCP scoping period an additional 60 days. A total of 4,778 scoping comments were submitted at the public workshop, by email, by mail, and through the website for the refuge’s CCP. The CCP planning process is still underway. To date, no EA and draft CCP for Florida Panther NWR have been prepared and made available for public review and comment. A Federal Register notice and companion local notice will be made at such time as the EA and draft CCP are available for public review and comment.

After thorough review of the comments received during the CCP Revision scoping process in 2014, the Service decided to address the concerns raised about public access and recreation separate from the CCP through the development of a VSP and Hunting and Sport Fishing Plan for the refuge before revising the CCP. The Service sent VSP scoping letters to the state of Florida and five potentially interested Native American Tribes on October 1, 2020 to engage early with our state and Tribal partners. In 2021, the Service requested public review and

comment on the draft VSP for Florida Panther NWR, including the Turkey Hunting and Sport Fishing Plan and addressing 14 public uses of the refuge (i.e., Bicycling (non-motorized); Camping; Commercial Videography, Photography and Audio Recording; Commercial Tours (Wildlife Observation, Education and Interpretation Guiding and Outfitting); Sport Fishing; Big Game Hunting; Instructor Led Small Group Activities/ Interpretation not led by NWRS Staff or Authorized Agent; Off-Road Vehicle Use; Scientific Research; Unmanned Aircraft (drones); **WILDLIFE OBSERVATION, PHOTOGRAPHY, ENVIRONMENTAL EDUCATION AND INTERPRETATION**). On April 15, 2021, local public notice for the VSP included the posting of (1) Draft VSP, Draft Hunting and Sport Fishing Plan, Draft Compatibility Determinations, and the Environmental Assessment, on the refuge's website ([https://www.fws.gov/refuge/florida\\_panther/](https://www.fws.gov/refuge/florida_panther/)) and (2) a Public Information Bulletin, which included an announcement of a Virtual Public Meeting that was held May 11, 2021. The Public Information Bulletin for the VSP was sent out to various media outlets on April 15, 2021. The associated Federal Register notice (86 Federal Register 23794) was published on May 4, 2021 as part of the Service's annual Hunting and Sport Fishing rulemaking action for 2021-22; this included notice for the Florida Panther NWR EA and draft VSP. However, the local comment period began 17 days prior to the Federal Register notice (on April 15, 2021) providing the public additional time to comment on the proposed action. Due to circumstances from COVID and Hurricane Elsa, the Service did incorporate comments received locally on the Florida Panther NWR VSP up through July 9, 2021. Public comments on the VSP were taken at the virtual public meeting, as well as through email and US Mail. Through this public engagement process, we received 600 comments on the action that represented a wide range of topics and opinions for the Service to consider in the development of the final decision on the action.

### **Public Review Announcement Notification Time**

**Comments:** One commenter didn't not feel like there was proper public announcement for the project.

"The Federal Register notice came out May 4, 2021 for rule changes for 90 national wildlife refuges, but it had no information about public meetings for any of the "stations". In fact, I only learned about the Panther NWR May 11 public meeting via a friend that heard it via a local radio station 2 days before the meeting, otherwise, I would have even missed that opportunity.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Local public notice included a Public Information Bulletin and draft planning document posted on the refuge's website on April 15, 2021 which also included an announcement of a Virtual Public Meeting that was held May 11, 2021. Public Information Bulletins were sent out to various media outlets on April 15. Federal Register Notice 2021-08013 was published on May 4, 2020; however, the local comment period began 18 days prior to the Federal Register Notice giving the public additional time to comment. Due to circumstances from COVID and Hurricane Elsa, the Service did incorporate comments received locally up to July 9, 2021. We did not make any changes to the proposed action as a result of these comments.

### **Reasonable Accommodation**

**Comments:** "I am also disheartened on how the public meeting was scheduled so close to the FR public notice. The refuge website at the time said that "persons with disabilities requiring reasonable accommodations to participate in the meeting should contact [FWS] at least 5

business days prior to the date of the meeting to help ensure availability.” The public meeting was held EXACTLY five business days after the Federal Register notice went out, which means that FWS failed to publicly share on time for persons with disabilities to ask for accommodations. And, in the midst of the COVID-19 pandemic, even some people without disabilities are struggling with virtual public meetings.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Local public notice included a Public Information Bulletin and draft planning document posted on the refuge’s website on April 15, 2021 which also included an announcement of a Virtual Public Meeting that was held May 11, 2021. Reasonable accommodation language was included in this announcement. We did not make any changes to the proposed action as a result of these comments.

## **WILDLIFE AND HABITAT MANAGEMENT**

### **Management and Recovery of the Florida Panther at Florida Panther NWR**

**Comments:** Multiple commenters submitted comments regarding management and recovery of the Florida panther at Florida Panther NWR. Multiple comments expressed concern that the proposal would be detrimental to recovery of the Florida panther, including concerns regarding construction and noise impacts, public use and noise impacts, vehicle collisions, loss of usable habitat by the Florida panther due to encroachment of human activity, increased trash and associated impacts, decrease in prey densities, loss of functionality of the refuge for Florida panthers, and increased interactions (including deadly) between humans and Florida panthers. Excerpts from some of the comments are listed.

“There is a strong foundation in the FPNWR’s supporting and founding documentation that the refuge lands are ‘critically important for the survival and recovery of the Florida panther....’ (US Fish and Wildlife Service, 1985. Fakahatchee Strand A Florida Panther Habitat Preservation Proposal, Environmental Assessment).”

“Survival and recovery of the panther is the paramount charge of the FPNWR, and management should focus on maintaining and enhancing habitat conditions for its key species and its prey.”

“The FPNWR should continue to prioritize the current habitat management goals to ‘provide optimum habitat conditions on the refuge for the Florida panther,’ and to ‘achieve and maintain optimum prey densities for the Florida panther’ (US Fish and Wildlife Service, 2000. Florida Panther National Wildlife Refuge Comprehensive Conservation Plan, P.17).”

“We believe that allowing and encouraging our members to experience natural places fosters stewardship of the environment. Exploring and Enjoying shall never compromise Protection. Natural places are being squeezed, encroached upon, and islanded. Expanded hunting and fishing is potentially appropriate in other national wildlife refuges included in this proposal, but not in the Florida Panther National Wildlife Refuge. True stewards of panther habitat would agree that this, heretofore undisturbed, refuge, must remain undisturbed to be sustainable for the Florida Panther population.”

“It seems clear that this area adjacent to a ‘critical linkage’ for the recently enacted Florida Wildlife Corridor Act must be preserved in its current state. If not, a thorough

assessment under NEPA must be performed. No matter the process, Florida panthers WILL BE disturbed by increased human presence. They may flee to surrounding areas, areas which are becoming increasingly populated, leading to unwelcome human/panther interaction including road kills.”

“When the Panther Refuge was established in 89, it was specifically set up to protect the panther in its habitat, and it's been very successful in that mission. ... I mean there's, there's telemetry in a lot of these places, but nothing is as concentrated as the Florida Panther National Wildlife Refuge. ... One of the big differences in the refuge is the 100% complete lack or near 100% complete lack of human disturbance, human activities. So we've got this very successful refuge ... I haven't heard the rationale for why we need to bring in all these activities right now, these activities are available in other places. This is a very, very special place that serves a critical function for our state animal. And that role is only going to increase... I think this is probably a mistake, I think you should be rolling this back, leave the Panther Refuge as is...”

“Bringing people in this refuge will be acclimating panthers to people. There are many, many other places to turkey hunt.”

“But there are serious negative consequences for this very endangered species in bringing people, especially with noise like motorized vehicles and gunshots, into their habitat. They are shy, secretive, solitary animals which need a lot of space. ... In Eastern Collier County then there's oil and gas exploration and extraction and a vastly expanded RV network in the Big Cypress National Preserve. You add this to the changing climate, which will cause deepening cycles of flood and drought, hotter temperatures, stronger storms, all of which will possibly compromise the survival of the Florida panther. This refuge is one of the only completely safe areas for these reclusive cats. If we must satisfy the sportsman's desire to hunt and fish, at the very least, and I understand that, because I have friends and family that hunt and fish and you can't stop them, I understand it, I really do, but not here. And not in March, not when the kittens are just starting to be born.”

“Newly available trails and fishing areas would have the heaviest use during the mating season and the 70 hunting permits proposed in this alternative occurs when panthers are having their kittens.”

“I would prefer the Florida Panther National Wildlife Refuge be a protected place First & Foremost for Panthers, & other flora & fauna that are found on the Refuge. There are other nearby areas where we the public, can conduct all these proposed activities, so none are in fact a necessity.”

“Development through construction, increased visitation, fishing, and hunting would hinder efforts to further the purpose of the Refuge by increasing the risk of harm to panthers by constricting and contaminating their habitat, consequently increasing the likelihood of injury and intra-specific aggression.”

“Proposed construction to make changes like adding electricity to the cabin,<sup>47</sup> constructing new buildings like restrooms and a visitor center,<sup>48</sup> and building interpretive kiosks,<sup>49</sup> would be disruptive and detrimental to panther conservation.”

"The intensity of the noise emitted from tools and machines used for construction would allow it to travel longer distances than quieter disruptions and consequently diminish the viable panther habitat more severely."

"Introducing a significant amount of noise to the animals by developing the land would "detract from the fulfillment of the National Wildlife Refuge System"<sup>53</sup> and "the purposes of the National Wildlife Refuge;"<sup>54</sup> inciting so much noise for recreational purposes would be a direct contradiction to the legislation that authorizes its existence and, more importantly, detrimental to a species that is already fragile."

"Implementing programming that increases visitation would intensify the risk of panther related vehicular collisions by directing people to the Refuge. Such risks would threaten the likelihood of panther well-being and survival. Thus, such activities are not compatible with the mission of the Refuge. Indirect effects on panthers from vehicular traffic are classified as a form of "harassment and harm,"<sup>55</sup> qualifying them as "take" under the ESA."

"Encroaching on the panthers' already constricted habitat by opening 2,436.5% more of the Refuge would increase the likelihood of human-panther interactions. Because most panthers want to avoid humans, encroaching on their space so drastically would result in the population having less of the existing habitat to share and a higher likelihood of intra-specific aggression. Furthermore, because people have historically feared panthers and continue to, more frequent human-panther interactions pose the risk of damaging the public perception of the panthers. Increasing the availability of the Refuge to the public, especially so substantially, would hinder conservation efforts and would therefore not be compatible with the NWRS mission."

"Allowing people to have access to this much of the Refuge would inevitably lead to increased littering, which would impact the health of the panthers and their cubs despite the initiative to prevent littering by having trash receptacles."

"Notably, the proposed action area is located in the FWS' Panther Focus Area, specifically the Primary Zone. FWS must fully evaluate and provide assurances that the proposed action will not harm the panther or jeopardize its existence, as this activity will impact habitat essential to the panther's recovery and survival."

"As the panther is territorial in nature, FWS should evaluate how the proposed action would impact the panther's behavior, movements, and the potential for increased intraspecific aggression."

"The Proposal would impair the critical habitat of the Florida panther by initiating construction projects, encouraging human encroachment on previously inaccessible land, and introducing programs that would modify the ecosystem for recreational purposes. ... Currently, only 1,049 acres of the Refuge are open to the public. ... "

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The third revision of the Florida Panther Recovery Plan was completed in 2008 (USFWS 2008), while a 5-year status review was conducted in 2017. The Service is committed to continued implementation of the Recovery Plan for the Florida panther, including actions outlined for Florida Panther NWR (including 1.1.1.4.1. future expansion of Florida Panther NWR and 1.1.1.3.1.3.2. connectivity to Corkscrew Regional

Ecosystem Watershed) (USFWS 2008). As outlined in the Hunt Plan (Appendix A of the Florida Panther NWR Visitor Services Plan) and Hunting Compatibility Determination (Appendix C of the Florida Panther NWR Visitor Services Plan) and as outlined in the Intra-Service Section 7 Biological Evaluation (Appendix G in the Florida Panther NWR Visitor Services Plan), the Service has determined that the hunt program at Florida Panther NWR is not likely to adversely affect the Florida panther population. For clarity, the action is to allow for the hunting of turkey at Florida Panther NWR; turkey are not a primary prey species for the Florida panther. The action does not include deer hunting. The Service will continue to prioritize management of habitat and prey for the Florida panther. For context, as outlined in the 2021-22 Hunting and Sport Fishing Package for Florida Panther NWR, the action would open Florida Panther NWR to annual estimated visitation of 70 hunters and 1,500 anglers, which would represent an 26% increase in the annual visitation to Florida Panther NWR. The compatibility determinations in Appendix C of the Florida Panther NWR Visitor Services Plan provide the stipulations and justification to ensure that all uses of Florida Panther NWR meet National Wildlife Refuge System standards of appropriateness and compatibility. If the Service determines that unacceptable impacts result from any use, the Service will alter or eliminate that use accordingly.

It is illegal to abandon property or dispose of waste on a refuge (see 50 CFR §27.93 and §27.94). It is also illegal to disturb or injure any non-target plants or wildlife (see 50 CFR §27.51) on a refuge. Further, many refuges have specific regulations to guard against littering associated with hunting and fishing.

The Environmental Assessment (Section B in the Florida Panther Visitor Services Plan) outlines a well-managed hunt program and other outdoor recreational activities do not conflict with the Service's ability to recover the Florida panther or other federal trust species on the FPNWR. A perfect example of this lack of conflict is evidenced by the fact that the Puma population has continued to increase throughout southwest Florida even though hunting and other forms of outdoor recreation have continued to occur as traditional uses across millions of acres, including both private and public lands. Pumas are one of the most adaptable mammals in the Northern Hemisphere, and have home ranges within close proximity of human occupied areas in southwest Florida (e.g., Golden Gate Estates).

Some activities proposed in the VSP are conceptual in nature, and will require additional environmental analysis as required by the National Environmental Policy Act (NEPA) and similar laws/Service policies (e.g., constructing a public access point, trail/boardwalk, informational kiosk, vault style bathroom, and wildlife viewing structure within Unit 44). Construction of new facilities such as office/visitor contact station would replace the existing Office and biological lab located on the refuge at 12085 SR 29 Immokalee FL 34142. Electricity in the Cabin by solar panels and not thru electrical transmission lines and any vaulted restrooms would be included in the parking lots for the existing trails, and fishing pond. Construction activities including noise from tools is temporary and insignificant to the Recovery of the Florida Panther.

Noise from recreational uses proposed would be minimal. Turkey hunting requires hunters to be quite for long periods of time. ORV use is limited to 70 permitted hunters and a few interpretive tours each year. During these activities hunters and tour groups travel a low speeds (15 mph speed limit) and generally avoid making too much noise as it defeats the purpose for their visit.

The roads immediately surrounding the refuge have fences to exclude wildlife from entering the highway. The fence on I-75 has recently been extended to the Naples toll booth and has dramatically decrease the number of panther killed on I-75. The Service is working with Florida

Dept. Of Transportation to include more wildlife crossings and fencing at places that have historically be a problem for wildlife collisions along Hwy 29, Oil Well Road and State Road 82. All are roads that visitors would use to reach the refuge.

It is the Service's assessment in the Florida Panther Recovery plan, that a "majority of outdoor recreational activities are compatible with the recovery of the Florida panther if they are conducted in a manner consistent with existing local, state, and Federal laws and regulations." (USFWS 2008)

A 2014 study in the Big Cypress National Preserve, Florida Panther NWR, and Everglades National Park concluded: "In Bear Island, an area with designated ORV trails, we found that variations in panther distances to trails appear to be driven by hydrology rather than hunter ORV use" (McCarthy et al. 2014). The best available science related to the effects of deer hunting on the Florida panther suggest there were effects on panther habitat selection in areas of high hunter activity, but no effect on the distribution near ORV trails (McCarthy et al. 2014). Effects of hunting activity and ORV use on panther habitat selection in Big Cypress NP found no relationship between hunter ORV use and selection for hardwood, forested wetlands, or conifer land-covers by denning female panthers (McCarthy et al. 2014). There is no evidence that these activities increase the likelihood of intra-specific aggression.

We did not make any changes to the proposed action as a result of these comments.

### **Wildlife Fencing**

**Comment:** Multiple comments were submitted regarding wildlife fencing. Some commenters were concerned that the fencing around Pistol Pond would restrict access. Excerpts from one of the comments is listed below.

"Public access to currently-restricted areas of the refuge should also be cognizant of issues related to the gates and fencing which provides protection from panthers and other wildlife entering State Road 29. There have been a number of issues in recent years where wildlife, including Florida panthers, have gotten caught in the roadway after passing through gaps in the protective fencing."

"FWC staff are concerned that proposed fencing around the new parking lot at Pistol Pond will restrict the movement of panthers that utilize the wildlife crossing at the southeast corner of Pistol Pond. Panthers traveling adjacent to the current wildlife fencing from the north will no longer be able to approach the crossing. Similarly, panthers that used the crossing to enter the refuge from Big Cypress will reach a cul-de-sac if they turn to the north. FWC staff suggests that the parking lot should not be fenced to allow current panther movement patterns to continue. The plan's design proposes redundant gates so that if the main gate to the highway remained open, the other gates would hopefully be closed thereby preventing wildlife from entering the highway. If a dual gate system is desired, FWC staff recommends fencing only the entry road, which may require shifting the parking lot further west to accommodate the length of a truck-trailer combination. This would allow wildlife to continue to move from north to south between Pistol Pond and the current wildlife fencing"

**Service's Response to Comment:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The refuge works with the Florida Department of Transportation (FDOT) whose responsibilities include maintaining the wildlife crossings and associated roadway barrier fencing. These fences are necessary to deter wildlife from entering

the roadway while the wildlife underpass provide safe passage to lands adjacent to the refuge. Fencing can often be compromised by vehicle crashes, hurricane winds, and trespassers and the refuge notifies FDOT when maintenance is needed. The fencing proposed at Pistol Pond would provide an interior barrier so that wildlife would be blocked from entering the proposed parking area, providing further protection for wildlife from becoming caught on the Highway 29 roadway. A similar setup exists at the parking area for the existing public trails, which has been successful in keeping wildlife off the roadway while providing a welcoming entrance to the refuge's hiking trails. The refuge's other access gates within the fencing system operate with an automatic gate operators to allow cars to enter and exit while or a manual swing gate. Maintaining the integrity of the fencing barrier for the protection of wildlife and keeping gates closed is a priority to the Service and is incorporated into the type and amount of public access analyzed in the plan. We did not make any changes to the proposed action as a result of these comments.

### **Reporting of Observations of Florida Panthers**

**Comment:** One comment suggested including a checklist or observation reporting as part of the hunt permit to provide additional information on panther sightings, exotic plant locations, and other key information of management use to the refuge.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service always welcomes observation from refuge visitors especially reports of exotic plant and animals on the refuge. This is an important aspect of Early Detection and Rapid Response (EDRR) to management of invasive species. The FWC also has an online Panther Sighting database <https://public.myfwc.com/hsc/panthersightings/> where the General public can report panther sightings. The Service works closely with FWC on panther and other human/wildlife conflicts. We did not make any changes to the proposed action as a result of these comments.

### **Increased Encounters between Humans and Panthers**

**Comments:** One comment expressed concern that the proposed action would result in increased encounters, including deadly encounters, between humans and panthers and the resultant outcry to control, move, and/or kill panthers to protect the public.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Should panther human interactions occur beyond just a sighting, the Service, Florida Fish and Wildlife Conservation Commission, and National Park Service developed an interagency Response Plan in 2008 that is used to guide the agencies' responses to such encounters. We did not make any changes to the proposed action in response to these comments.

### **Vegetation Disturbance**

**Comment:** "In regard to Proposed Program Changes of Standard 3-Hunting as written in the VSP: Only temporary blinds would be allowed. We would prohibit the taking, removing, manipulation, or destroying of Refuge vegetation. Taking of any plants or other wildlife would be prohibited. It is hard to believe that no Refuge vegetation would be destroyed when you will have people traversing the Refuge and its vegetation in search of their turkey. It is equally hard to believe that no vegetation would be "taken" and used to camouflage a blind."

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service analyzed the impacts to vegetation in Section B Environmental Assessment and determined that any associated vegetation disturbance will likely be negligible. Permitted off-road vehicle use during permitted hunts may cause localized and temporary vegetation disturbance. Overall, the intensity of uses is expected to be low, relative to the size of the refuge, and adverse effects to habitats are expected to be negligible under both alternatives. Any negative effects could be further reduced by limited use to existing trails, and by making potentially sensitive areas off-limits. We did not make any changes to the proposed action as a result of these comments.

## **VISITOR SERVICES**

### **Welcome and Orient Visitors**

**Comment:** "Standard 2: Welcome and Orient Visitors In regard to Standard 2-it is not understood how the Refuge HQ, with only 2 full-time staff people, will have someone available to greet visitors and orient them to the Refuge when there is rarely anyone in the HQ office now."

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Welcoming and orienting visitors is done in a variety of ways including thru appropriate signage, trail maps, brochures, electronic maps and media as well as by personal contact with refuge staff. While refuge staff has been reduced, a visitor contact station within the administration building would only be available for visitors when staffing and volunteer resources are available to answer questions in person. We did not make any changes to the proposed action as a result of these comments.

### **Hunting, in General**

**Comments:** Multiple comments were received regarding hunting in general, ranging from opposition to any hunting on Florida Panther NWR to support for the action to support for additional hunting and access on the refuge beyond the current action. Concerns include continued habitat loss throughout the Florida panther's range and the associated disturbance from hunting on the refuge, accidental shooting and associated injury or mortality to Florida panthers, impacts to denning panthers, increased disturbance to the resources of the refuge, need to limit access to the refuge to protect wildlife and habitat in a developed landscape, need to respond to increasing demand for opportunities for outdoor recreational access and use, and safety concerns related to hunting activities.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Given the Service proposes to open three limited quota spring turkey hunts, and fishing on a 19-acre pond, impacts on the endangered Florida Panther are expected to be negligible to minor due to the limited amount of turkey hunting permits to be issued, the type, amount and location of approved public access, and general locations of all proposed project activities (e.g., highly disturbed areas impacted by human use before the refuge was established).

The Service prioritizes facilitating wildlife-dependent recreational opportunities, including hunting and fishing, on Service land in compliance with applicable Service law and policy. For refuges, the Administration Act, as amended, stipulates that hunting (along with fishing, wildlife observation and photography, and environmental education and interpretation), if found to be

compatible, is a legitimate and priority general public use of a refuge and should be facilitated (16 U.S.C. §668dd(a)(3)(D)). Thus, we only allow hunting of resident wildlife on NWRs if such activity has been determined compatible with the established purpose(s) of the refuge and the mission of the Refuge System as required by the Administration Act. Each station manager makes a decision regarding hunting and fishing opportunities only after rigorous examination of the available information, consultation and coordination with States and tribes, and compliance with the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*) and Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), as well as other applicable laws and regulation 16 U.S.C §668dd(a)(3)(D)). Furthermore, we manage refuges to support healthy wildlife populations that in many cases produce harvestable surpluses that are a renewable resource. As practiced on refuges, hunting and fishing do not pose a threat to wildlife populations. It is important to note that taking certain individuals through hunting does not necessarily reduce a population overall, as hunting can simply replace other types of mortality. Therefore, facilitating hunting and fishing opportunities is an important aspect of the Service's roles and responsibilities as outlined in the legislation establishing the Refuge System. The Service will facilitate these opportunities on Florida Panther NWR since the limited use was deemed compatible with the purpose of the refuge and the mission of the Refuge System.

As outlined in the Environmental Assessment (Section B of the Visitor Services Plan), through the use of quota hunts, a sustainable harvest is expected. A limited wild turkey hunt would be held during three weekends of the Florida Spring Turkey Season, and only one bearded turkey could be harvested seasonally by permitted hunters. The refuge hunt would adopt FWC regulations at nearby State Wildlife Management Areas, and also add federal regulations specific to the refuge. Up to twenty-five permits on each quota weekend hunt (i.e., fifty total permits) and up to ten family groups (i.e., twenty total permits) would be issued annually. However, Florida Panther NWR would monitor the turkey population and hunter access to allow for adaptive management in the number of permits issued annually. It is estimated that less than 70 hunters would access the Refuge and they would take less than eight turkeys each season on the Refuge. The local turkey population is expected to rebound seasonally, with no significant effects anticipated. Range-wide, this slight increase in take is not expected to have a cumulative effect on the species. Well-managed hunt programs and other outdoor recreational activities do not conflict with the Service's ability to recover the Florida panther or other federal trust species on the Florida Panther NWR. A perfect example of this lack of conflict is evidenced by the fact that the Puma population has continued to increase throughout southwest Florida even though hunting and other forms of outdoor recreation have continued to occur as traditional uses across millions of acres, including both private and public lands. Pumas are one of the most adaptable mammals in the Northern Hemisphere, and have home ranges within close proximity of human occupied areas in southwest Florida (e.g., Golden Gate Estates). The proposed quota turkey hunts are anticipated to only have minimal to moderate short-term effects on the Florida panther and other federal trust species. Panther activity may be temporarily altered as a result of human activity. However, any alteration of panther activity is expected to be insignificant.

We did not make any changes to the proposed action as a result of these comments.

### **Nontoxic and Lead Shot and Tackle**

**Comments:** Multiple comments were received regarding nontoxic shot. Multiple comments suggested that only federally approved nontoxic shot be allowed on the refuge. One comment noted that nontoxic shot is difficult to find and is expensive, potentially limiting hunting

participating, especially from youth and families. Other comments noted the dangers of lead for wildlife.

“The use of lead ammunition puts the wildlife of the Refuge at risk of lead poisoning. The

Proposal acknowledges that fragments of lead bullets are commonly left in abandoned gut piles after hunting, raising the risk of lead poisoning.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. As outlined in the VSP, Hunt and Fishing Plan, and Environmental Assessment, only non-toxic shot is permitted during the turkey hunt. Anglers are permitted to use lead tackle. The plan provides information on the environmental trends and planned actions of hunting and fishing including the overall threats related to lead (EA Pages 18 and 21). The refuge hunt program only allows the use of non-toxic shot in the hunt program to eliminate the impact of residual lead ammunition on refuge resources. Although there is not currently a Service-wide ban on lead ammunition for non-migratory bird hunting activities or on lead sport fishing tackle, the Service has taken specific steps to limit the use of lead in hunting and fishing activities on refuges.

The Service continues to educate hunters and anglers on the impacts of lead on the environment, and particularly on human health and safety concerns of ingesting animals harvested with lead ammunition. We always encourage hunters and fishers to voluntarily use nontoxic ammunition and tackle for all harvest activities. Lead alternatives to both ammunition and tackle are becoming more widely available and used by hunters and anglers.

The Service believes it is important to encourage refuge-State partnerships to reach decisions on lead usage. We continue to research this issue and engage with States and other partners to promote the use of non-lead ammunition and tackle. We share a strong partnership with the States in managing wildlife, and, therefore, we are proceeding with the phase-out of toxic ammunition in a coordinated manner with each respective State wildlife agency.

The refuge carefully evaluated possible impacts on endangered and threatened species as part of the National Environmental Policy Act process. We found that the low number of anglers using lead tackle would result in no more than a negligible increase of lead in the environment when compared to the lead tackle being used in the surrounding areas. In addition, the refuge looked at the impacts of these new hunting and fishing opportunities, including the allowance or prohibition of lead, on endangered and threatened species in compliance with requirements under Section 7 of the Endangered Species Act (ESA). The ESA requires Federal agencies to ensure that the actions they carry out, fund, or authorize do not jeopardize the continued existence of endangered or threatened species (listed species). As outlined in the Environmental Assessment (Section B in the Florida Panther Visitor Services Plan), while concerns do exist regarding the bioavailability of spent lead ammunition, lead associated with the proposed increased hunting would not be anticipated to have significant impacts for non-target wildlife and aquatic species. Overall, impacts are expected to be negligible to minor due to the limited amount of proposed turkey hunting permits to be issued, the type, amount and location of approved public access, and general locations of all proposed project activities (e.g., highly disturbed areas, many of which have been impacted by humans for decades). The Service determined that the proposed action was not likely to adversely affect any listed species.

We did not make any changes to the proposed action as a result of these comments.

## **Scouting**

**Comment:** Several comments suggested allowing up to 30 days for scouting activities prior to a permitted hunt. Excerpts from some of the comments are listed below.

“Allow pre-hunt scouting on foot or bicycle for permitted hunter for two hours before sunrise to two hours after sunset up to 30 days prior to the spring turkey hunting season. The plan as proposed only specifies pre-hunt access will be allowed during “daylight hours” and during spring turkey season for a period of 1 week prior. Early morning and evening gobbling activity are an important component of turkey scouting.”

“Allowing only one week of access may be a short window of time for those ambitious enough to explore 26,609 acres on foot or bicycle, but we agree with the limitation of one week for ORV use.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Scouting a new hunting area is necessary to familiarize users with the roads, trails and reduce pressure by spreading out the users across the refuge. We have limited scouting to 1 week before an individual scheduled permitted hunt in order to reduce overall number of visits to the remote areas of the refuge, while still providing access to hunters to get familiar with the refuge’s network of roads and trails, making for a better hunt experience. Permitted hunters as well as the general public will be able to access all other roads and trails that are open to the general public by foot or bicycle to conduct their scouting activities. We did not make any changes to the proposed action as a result of these comments.

## **1:00 pm Hunt End Time**

**Comment:** Several comments suggested extending the 1:00 pm hunt end time to match the state’s all day hunt day during the season.

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service strives to align specific hunting regulations to the state season or a nearby State WMA. This proposal is sensitive to the Service’s desire to reduce conflict with other management actions such as prescribed burning. For example, the 1:00 pm end time allows hunters to complete their hunt for the day and fire managers time to complete a prescribed burn with minimum interruptions to either activity. We did not make any changes to the proposed action as a result of these comments.

## **Offer Family Hunt During Youth Hunt Season**

**Comment:** A few commenters suggested offering the family hunt day during the youth season, which is typically the last weekend in February for the south zone.

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The proposed special opportunity family hunt is designed to allow both the youth and an adult supervisor to be eligible to take wild turkey. FWC’s youth weekend only allows youth 15 years old and younger to be eligible to hunt while being supervised by an adult. The Service designed and proposed this special opportunity hunt to allow visitors to participate in a traditional use of the land that existed prior to the Refuge’s establishment and to support state-led efforts by increasing access and aligning where

possible on Service lands and waters. We did not make any changes to the proposed action as a result of these comments.

### **Turkey Call Concerns**

**Comments:** Multiple comments noted that turkey calls attract Florida panthers and that turkey hunters do regularly encounter panthers. Excerpts from one of the comments is listed below.

“The VSP states, ‘due to the short season proposed for spring turkey hunting, and the extended home range of the Florida Panther, no impacts to the panther population are anticipated.’ See Section B. Environmental Assessment Florida Panther National Wildlife Refuge Environmental Assessment for 2021 Draft Visitor Services Plan and Turkey Hunting and Sport Fishing Plan, page 105. However, we see high potential for conflict with turkey hunters and panthers, especially with family hunts where small children may be present. Turkey hunters commonly use turkey calls to attract male turkeys. However, these calls may also attract predators, like Florida panthers. Just earlier this year, a turkey hunter in Montana attracted three mountain lions while trying to attract turkeys with a turkey call (McKee, Spencer. “[VIDEO] Hunters accidentally call multiple hidden mountain lions to their location.” Out There Colorado. 20 April 2021. [https://www.outtherecolorado.com/news/video-hunters-accidentally-call-multiple-hidden-mountain-lions-to-their-location/article\\_c831fb98-a200-11eb-a075-c352c389d5a5.html](https://www.outtherecolorado.com/news/video-hunters-accidentally-call-multiple-hidden-mountain-lions-to-their-location/article_c831fb98-a200-11eb-a075-c352c389d5a5.html)), and this is not the first time this has occurred. In 2015, a Florida man attracted a full-grown panther to within 25 yards of his blind (Walters, Steve. “Close call with panther for turkey hunter.” Sun Sentinel. 12 March 2015.). The VSP does not address or acknowledge the use of turkey calls and the possible impact to Florida panthers, or possibility of human/panther encounter.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. As discussed above, turkey are not a primary prey species for Florida panthers. Further, as outlined in the Hunt Plan (Appendix A of the Florida Panther NWR Visitor Services Plan) and Hunting Compatibility Determination (Appendix C of the Florida Panther NWR Visitor Services Plan), the hunt program was designed to be a safe, family oriented outdoor recreational activity. As we add new or expand uses, the Refuge would add the monitoring of visitor use impacts to this list of objectives. Specifically, monitoring changes in vegetation by the transfer of invasive plant seed sources, disturbance to wildlife, human/wildlife conflicts, and soil compaction. A positive effect of allowing limited turkey hunting would be the provision of additional wildlife-dependent recreational opportunities, a better appreciation and more complete understanding of the wildlife and habitats associated with the Refuge, and an opportunity to utilize a sustainable, renewable resource. Additionally, the proposed turkey hunts provide unique hunting/outdoor opportunities for youths and their families, which are unlike any other public hunting opportunity in south Florida.

While we acknowledge that using turkey calls could attract curious panthers, according to the Florida Fish and Wildlife Conservation Commission and the Service, there has never been a verified panther attack on a human in Florida. Further, under state law, while hunters can mimic turkey calls (e.g., with a box, friction, or mouth call), hunters cannot use recorded turkey calls or sounds for spring turkey hunts. Should panther human interactions occur beyond just a sighting, the Service, Florida Fish and Wildlife Conservation Commission, and National Park Service developed an interagency Response Plan in 2008 that is used to guide the agencies’ responses to such encounters.

We did not make any changes to the proposed action as a result of these comments.

### **Archery**

**Comments:** “FHF also strongly supports providing archery skills programming on an annual basis to increase awareness and build experience with archery hunting. We believe that experience will help promote ethical outdoor behavior and foster the next generation of good hunters.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service acknowledges the support expressed for archery skills training. The Service includes within the Florida Panther NWR Turkey Hunting and Sport Fishing Plan the refuge intent regarding archery and other hunt skills training; *“The refuge would continue to work with FWC to ensure safe and enjoyable recreational hunting opportunities. Established hunter training, hunter ethics, and hunter responsibilities help ensure hunters continue to use good judgment related to humaneness and animal welfare”* (Appendix A. Florida Panther NWR Hunting and Sport Fishing Plan). We did not make any changes to the proposed action as a result of these comments.

### **Future Hunt Program Changes**

**Comment:** Multiple comments were submitted regarding future hunt program changes. Some commenters suggested the refuge open hunting for additional species such as deer, feral hogs, small game, and conditional reptiles. One comment questioned the process by which future hunt program changes, including to regulations, would be proposed (e.g., longer hunting seasons, addition of small game opportunities, and addition of a youth deer hunt).

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Following implementation of the current action, the Service could evaluate the hunt program and could consider adding the opportunity to hunt additional species. Any future changes to the hunt program at Florida Panther NWR would follow essentially the same process as the 2021-22 hunt package. Any hunt regulation changes proposed would follow the Service’s Hunting and Sport Fishing rulemaking process with notices published in the Federal Register at the public review and comment stage and at the final decision stage. The public would be provided the opportunity to comment on proposed changes through the Service’s rulemaking process. Having the hunt area managed as a state Wildlife Management Area does not change the Federal process; the Federal government does not abrogate its responsibilities to the state. Some minor adjustments will occur without public review and comment, such as season dates, while other adjustments may be needed to accommodate conditions or management activities, such as temporarily closing an area due to safety concerns or moving an entry point to a hunt area due to flooding issues. We did not make any changes to the proposed action as a result of these comments.

### **Not Allowing ATV/ORV Use**

**Comments:** Multiple comments were received regarding not allowing ATV/ORV use on Florida Panther NWR to minimize impacts to natural resources, including the Florida panther; vegetation; soils; plant community composition; wetland hydrology; volume, timing, and distribution of surface water flows; natural water flow patterns and timing; and invasive species spread. Concerns were also expressed regarding users actually staying on designated trails and the associated adverse impacts from these activities; despite it being illegal to take ORVs

off of designated trails, the Service should acknowledge that the activity would occur. Excerpts from some of the comments are included below.

"We would be particularly concerned if hunting would be proposed for the FPNWR. We would also be very concerned if recreational access uses were proposed that would introduce the public's ORVs and ATVs to the area. There already appears to be a problem with human intrusion into the underpasses that exist near the FPNWR and this proposed use may increase these intrusions."

"Officials using ORVs, ATVs, etc. to patrol and monitor the trails in the refuge is not the same thing as allowing the public to use said trails. It is a well-known fact how much damage is/can be done to our public lands by irresponsible citizens destroying the habitat with their motorized vehicles. Therefore, ORVs, ATVs, etc. should not be allowed in the refuge except by government officials or other persons authorized to use the trails."

"One clarification regarding our position on the access roads and trails: we recognize the existing paths are vital for fire management, management studies and panther movement, but oppose opening them to the general public, especially during the mating and denning season for panthers which begins in March."

"If there is a real need for someone to use an ATV or UTV on the Refuge, specific to hunting, then they should only be allowed to use it during the hunting season, and not for the scoping five day period."

"The 2000 ORV Management Plan for the nearby Big Cypress National Preserve recognizes the severe environmental impacts of ORVs and the safeguards that are needed to protect the values and resources of Big Cypress from their impacts. ORV use in Big Cypress is referred to as a "high impact recreational activity"<sup>69</sup> and is responsible for rutting, compaction and oxidation of soils, destruction of plants and roots, alteration of wetland hydrology, facilitating the spread of invasive plant species throughout Big Cypress, and causing behavioral disturbances to endangered animal species.<sup>70</sup> The role that ORV use has in spreading invasive plant species throughout Big Cypress is well-documented.<sup>71</sup> Big Cypress expends a great deal of resources and effort in countering the threat and spread of invasive plant species inside its borders."

"We are concerned about the negative effects of off-road vehicles on refuge resources, namely that not all vehicle operators will stay on designated trails. Leaving trails and driving on refuge lands has the potential to cause detrimental impacts by damaging and destroying habitat, trampling or disturbing wildlife and affecting vegetation, soils, hydrology, water quality and helping to spread invasive species."

"We do not believe that the refuge has the capacity to patrol these areas and enforce the requirement that off-road vehicles stay on designated trails. We also question refuge staff's capacity to monitor habitat degradation in areas near designated trails as well as the Service's ability to fund costs associated with monitoring and enforcement (not to mention restoration of damaged habitat)."

The Center for Biological Diversity's comments cited several papers referencing negative impacts of ORV use, including those listed below.

- Andrews, K. M., J. W. Gibbons, and D. M. Jochimsen. Literature Synthesis of the Effects of Roads and Vehicles on Amphibians and Reptiles. Federal Highway Administration (FHWA), U.S. Department of Transportation, Report No. FHWA-HEP-08-005. Washington, D.C. 151 pp. (2006).
- E.g., Ingle, C., Leung, Y. F., Monz, C., & Bauman, H. (2003, April). Monitoring visitor impacts in coastal national parks: A review of techniques. In Proceedings of the George Wright Society and National Park Service Joint Conference (pp. 228-233); Schlacher, T. A., Richardson, D., & McLean, I. (2008). Impacts of off-road vehicles (ORVs) on macrobenthic assemblages on sandy beaches. *Environmental Management*, 41(6), 878-

892; Arp, C. D., & Simmons, T. (2012). Analyzing the impacts of off-road vehicle (ORV) trails on watershed processes in Wrangell-St. Elias National Park and Preserve, Alaska. *Environmental management*, 49(3), 751-766.

- Duever, M. J., Carlson, J. E., & Riopelle, L. A., Off-road vehicles and their impacts in the Big Cypress National Preserve. National Park Service, South Florida Research Center, Everglades National Park (1981).
- Pernas, A. J., D. Weeks, and C. Bates. 1995. Dye trace field study — Ochopee Prairie. Unpublished data from the Ochopee Prairie Monitoring Program. On file at Big Cypress National Preserve, Ochopee, FL.
- Rehage, J. S., & Trexler, J. C. (2006). Assessing the net effect of anthropogenic disturbance on aquatic communities in wetlands: community structure relative to distance from canals. *Hydrobiologia*, 569(1), 359-373.
- U.S. Department of Interior, National Park Service, Big Cypress National Preserve Final Recreational Off-Road Vehicle Management Plan: Supplemental Environmental Impact Statement (2012).
- Welch, R., Madden, M., & Doren, R. F. (1999). Mapping the everglades. *Photogrammetric Engineering and Remote Sensing*, 65(2), 163-170.
- Julian, P. (2010). Habitat Selection by the Florida Panther in Response to Melaleuca Removal Within Big Cypress National Preserve (Doctoral dissertation, Florida Gulf Coast University).
- Gunderson, L. H. (1983). Status of exotic woody species in Big Cypress National Preserve. National Park Service, South Florida Research Center, Everglades National Park.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. For context, as outlined in the Florida Panther Visitor Services Plan and Appendix A. 2021-22 Hunting and Sport Fishing Package for Florida Panther NWR, the action would open Florida Panther NWR to annual estimated visitation of 70 hunters, which would represent a 1.4% increase in the annual visitation to Florida Panther NWR. Off road vehicles would be restricted to existing trails and firebreaks. Given the small numbers of ORV users expected during the spring turkey season, no soil compaction or vegetation disturbance is expected. The Refuge would monitor changes in vegetation by the transfer of invasive plant seed sources, disturbance to wildlife, human/wildlife conflicts, and soil compaction. Specific to the use of ORV's, the Service would monitor the width of trails, depth of trails at sensitive locations along the existing trail network both before and after the hunting season. Trail width is often an indicator of the degree of suitable substrate within a trail. As trails become rutted, ORV operators travel parallel to the rutted area in order for the vehicle to have traction to cross the area. Mitigating the use of ORV, is done by avoiding regular use, minimizing impacts by only allowing them on existing trails, and monitoring the trail width and depth to identify potential closures and maintenance and rehabilitation needs. We also may temporally close trails due to high water events or other management needs.

The Refuge has carefully analyzed the impact of ORVs and has restricted them to existing roads within the refuge. The refuge will only allow the use for interpretive tours driven by volunteers or thru private entity with SUP, and by hunters with a current year turkey permit, during the week of their scheduled hunt. This is extremely restrictive compared to the uses analyzed in the literature cited above. For one, the CD for ORVs prohibits tracked vehicles, boats, or motorcycles on the refuge, and no new roads are being established. Roads on the refuge have 15 MPH speed limits to reduce the likelihood of wildlife being hit or run over, and also reduce rutting of the roads.

Parking would occur in temporary sites designated along existing trails. A 2014 study in the Big Cypress National Preserve, Florida Panther NWR, and Everglades National Park concluded: “In Bear Island, an area with designated ORV trails, we found that variations in panther distances to trails appear to be driven by hydrology rather than hunter ORV use” (McCarthy et al. 2014). The best available science related to the effects of deer hunting on the Florida panther suggest there were effects on panther habitat selection in areas of high hunter activity, but no effect on the distribution near ORV trails (McCarthy et al. 2014). Effects of hunting activity and ORV use on panther habitat selection in Big Cypress NP found no relationship between hunter ORV use and selection for hardwood, forested wetlands, or conifer land-covers by denning female panthers (McCarthy et al. 2014).

As outlined in the Hunt Plan (Appendix A of the Florida Panther NWR Visitor Services Plan) and Hunting Compatibility Determination (Appendix C of the Florida Panther Visitor Services Plan) and as outlined in the Intra-Service Section 7 Biological Evaluation (Appendix G in the Florida Panther NWR Visitor Services Plan), the Service has determined that the hunt program at Florida Panther NWR is not likely to adversely affect the Florida panther population. While panthers can be born year round, the most common time is March through July. While spring turkey hunting (early March to early April for areas south of SR 70, as designated by the state of Florida) will overlap part of this time period, the use of previously disturbed areas, the small numbers of hunters and ORV use, and the limited days of hunting activities will limit associated disturbance and other impacts.

The compatibility determinations in Appendix C of the Florida Panther NWR Visitor Services Plan provide the stipulations and justification to ensure that all uses of Florida Panther NWR meet National Wildlife Refuge System standards of appropriateness and compatibility. If the Service determines that unacceptable impacts result from any use, the Service will alter or eliminate that use accordingly. We did not make any changes to the proposed action as a result of these comments.

The Service recognizes that ORVs can increase the spread of invasive plants along roads and trails. The Service has a robust invasive plant control program that aims to reduce the spread of invasive along the current management road structure. Utilizing contractors, staff, and volunteers we manage infestations using the principles of Early Detection and Rapid Response to manage infestations. Restoring the hydrology would also assist in managing infestations.

**Comment:** FWC made specific comments regarding the use of ORVs proposed in the VSP: “It may be worth explicitly stating that 4WD street legal vehicles are not permitted ORVs since these types of vehicles are allowed next door in the Bear Island unit of Big Cypress National Preserve. • Consider adding basic safety requirements for ORV use such as a maximum speed limit (15mph in Big Cypress) and rider limits (vehicles are limited to the number of riders intended by the manufacturer). • Consider posting trail markers to aid ORV users and other hunters in navigating the trail network.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Compatibility Determination for ORV’s on Page 223 list the types of vehicles we consider ORV’s and the stipulations required for use on the refuge. These regulations including speed limits will be published in the Refuge’s Hunt brochure and permit. Trails/roads will be named, signed and appropriately marked for ORV use or ORV excluded trail/road. We did not make any changes to the proposed action as a result of these comments.

## **Fishing**

**Comments:** “Because one of the primary goals of the Fish and Wildlife Act, the Endangered Species Act, and the NWRS mission is to maintain biological integrity and aid conservation, stocking Pistol Pond, a manmade quarry pond, with fish for recreational purposes would not be a warranted use of the land. The proposed construction and visitation included in the fishing plan, as discussed in the previous section, make it incompatible because it would further endanger the panthers.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The National Wildlife Refuge System Administration Act of 1956 and the National Wildlife Refuge System Improvement Act of 1997 direct the Service to provide opportunities for wildlife dependent recreation including wildlife observation, photography, environmental education, interpretation, hunting and fishing. The environmental assessment for the Florida Panther NWR Visitor Service Plan addresses fishing and stocking of pistol pond and improvements to facilities related to visitor services. Due to the closed system of Pistol Pond, stocking of the pond will not jeopardize the biological integrity of the Refuge or the ecosystem. Fishing within the pond may result in removal of non-native species, a result that would be beneficial. The construction of facilities is temporary in nature and the location is within an area that is already disturbed and that experiences human visitation and associated disturbances including noise. Due to the short term nature of construction and the minimal change expected in human disturbance, these activities associated with fishing were determined to have no to minimal impacts on the Florida Panther (U. S. Fish and Wildlife Service Section 7 Intra-Service Biological Evaluation 2021). We did not make any changes to the proposed action as a result of these comments.

## **Wildlife Observation and Wildlife Photography**

**Comment:** In regards to Standard 5, Objective 5.3 FWC would like the Service to explain what determines the seasonal day use nature of hiking trails. Time of year or water levels? Consider just leaving these trails open all year long for people who don’t mind getting their feet wet.

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. When the waters are waist deep and temperatures are hot, it poses a risk to hikers. With current and foreseeable staffing levels, backcountry hiking access year round would put a strain on staff resources for search and rescue efforts. Providing backcountry access for the months that pose the least risk to hikers is manageable for staff. We did not make any changes to the proposed action as a result of these comments.

## **Environmental Education**

**Comment:** In regards to Standard 6, Objective 6.3, FWC would like the Service to provide Living with Wildlife messaging at public access points and volunteer RV areas.

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. As part of any trailhead, the Service plans to utilize informational pamphlets, signs and electronic media to provide visitors appropriate messages for the safety of both visitors and wildlife. Staff, volunteers and visiting researchers living onsite receive a living with wildlife (bears and panthers), briefings as part of their on-boarding process. We did not make any changes to the proposed action as a result of these comments.

**Comments:** One comment suggested that the Service conduct education and outreach for newcomers on the need and importance of fire management activities.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. As outlined in the VSP and CDs, environmental education includes on the importance of habitat management and using fire management on the refuge. The importance of fire management on the refuge is also highlighted on the Florida Panther website along with the Refuge's Fire Management Plan. We did not make any changes to the proposed action as a result of these comments.

### **Other Recreational Use Opportunities**

**Comment:** "Biking and hiking should only be allowed on the already designated trails, i.e., no new trails, and should be allowed for daytime use ONLY so as not to disrupt the habits of the Florida panther and other nocturnal wildlife species."

**Service Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Per the Environmental Assessment (Section B in the Florida Panther Visitor Services Plan), no new trails will be constructed. All trails and boardwalks will be on fire breaks or woods roads that already exist for refuge management purposes. However, there will be construction of a gravel parking lot next to Pistol Pond and new facilities such as observation towers/overlooks, kiosks, and fishing piers. Trails are open daylight hours only, sunrise to sunset.

**Comment:** Some commenters did not support the use of Drones on the refuge.

"Many of the activities being considered for the Refuge are known to disturb wildlife (e.g., drones) and degrade habitat (e.g., off-road vehicles) and are not compatible with the main purpose of this particular refuge – the protection of the Florida panther and its habitat."

**Service Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The proposal only allows Unmanned Aerial Systems (UAS) ie. drones for scientific research or commercial filming and specifically prohibits casual or recreational use of UAS. The Service cannot regulate air space, but can regulate the take-off and landing of aircraft including UAS on refuge lands. As such, both manned and unmanned aircraft can currently fly over the refuge without additional refuge regulations as long as they do not take off or land from refuge lands. Allowing commercial photographers and researchers to use these systems from refuge lands gives us regulatory authority over the use and the requirements that a UAS pilot must have in order to obtain a special use permit. The regulations for the use are outlined in the Compatibility Determination in Appendix E. Regardless of where the aircraft takes off or lands, harassing wildlife is unlawful on the refuge and would be aggressively investigate.

### **Volunteers**

**Comments:** One comment praised the past cabbage palm removal activities and suggested that the Visitor Services Plan incorporate additional volunteer projects.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Recruiting and training volunteers to assist in the habitat management, maintenance of facilities and visitor services is an important aspect of the plan. We did not make any changes to the proposed action as a result of these comments.

**Comment:** "In regard to STANDARD 10: VOLUNTEERS AND FRIENDS, and specifically to the Friends: The Friends no longer publish Panther Tales and Notes from the Field and this paragraph should be deleted from the draft VSP."

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. This statement has been removed from the final document.

### **Recreational Fees**

**Comment:** In regards to Standard 11, Objective 11.1 FWC would like the Service to provide more details on the "Interagency Passes" that will be sold by the Refuge. Will FWC staff need to purchase these passes to conduct work on the Refuge?

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Standard 11 of the NWR System Visitor Services Plan discusses how we will implement a Recreation Fee Program. The Federal Lands Recreation Enhancement Act of 2004 (FLREA) allows land management agencies, such as the National Wildlife Refuge System, to charge fees for entry and certain amenities (user fees). The charging of entrance and user fees at national wildlife refuges can be a helpful management tool if the program is well-managed and implemented. These recreational fees can take place in many forms such as Entrance Fees or Hunting Fees and there are many strategies such as selling passes. This plan only seeks to implement a recreational fee for the Spring Turkey Hunt and while we would not charge an Entrance Fee to access the trails at the Florida Panther NWR, we could sell the Federal Lands Interagency Pass from the refuge office. These passes are excepted as an entrance fee at National Parks, National Wildlife Refuges and other Federal lands with and entrance fee. Agencies and contractors conducting research or work on the refuge are not subject to Recreation Fee Program. We did not make any changes to the proposed action as a result of these comments.

**Comment:** "For the privilege of using Refuge resources that exist to protect wildlife, the fees for access should be hefty. This would discourage all but the most desirous of comingling with Nature. While it is noble to attempt to instill appreciation of the natural environment among those unfamiliar, it is also important to remember that many see the world solely as a venue for their personal entertainment—neat, tidy, nonthreatening, manipulable. Such are willing to pay big bucks to go to Disney World. And they should pay well to partake of Nature's creation. After all, entrance fees at Disneyesque tourist attractions enrich the purses of CEOs. User fees for publicly owned lands repays the taxpayers—for our tax-dollar investment."

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Federal Lands Recreation Enhancement Act (FLREA; 16 U.S.C. §§6801-6814) authorizes the Service to charge and collect recreation fees on federal recreational lands and waters. Fee criteria in FLREA were intended to promote fairness and consistency among agencies and locations and to minimize confusion, burden, and overlap of fees. Fees are to be commensurate with benefits and services provided. The Service is to consider comparable fees charged elsewhere, and consider the aggregate effect of fees on

recreation users and providers. Following this plan's approval, the Service will prepare a Recreation Fee Package. If approved, the fee will be commensurate with other National Wildlife Refuges and State WMAs. We did not make any changes to the proposed action as a result of these comments.

### **Filming Activities**

**Comment:** One comment was received regarding the restriction of filming activities. Specifically, the concern expressed that such a restriction would limit the exposure of the abuse to animals caused by hunters.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Wildlife photography is an appropriate use under the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. §§ 668dd-668ee) (NWRSA). As outlined in Appendix A (III) (f), the Service has determined that wildlife photography as well as commercial recording are compatible with the mission of the refuge system and purposes for which the refuge was established. Commercial recording includes photos, video and audio recordings, and this use will only be allowed under a Special Use Permit. Minor to positive effects can occur by photographs and recordings being widely shared informing a broader public about the resources in Southwest Florida, the Panther, and Greater Everglades ecosystem. Animal abuse is illegal under multiple Federal regulations and state statutes; the Service would aggressively investigate and pursue prosecution should an illegal action take place on the Refuge. We did not make any changes to the proposed action as a result of these comments.

**Comment:** In regards to Standard 3 and 5, FWC would like the Service to address trail camera usage by the public should be throughout the plan, particularly in the hunting and photography sections.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Under this proposal, trail cameras would only be permitted as a form of commercial recording or scientific research and administered through a Special Use Permit. Unauthorized trail cameras would be considered abandoned personal property. 50 CFR 27.93 prohibits abandoning, discarding, or otherwise leaving any personal property in any National Wildlife Refuge. We did not make any changes to the proposed action as a result of these comments.

### **Limiting Visitation**

**Comments:** Multiple comments were received regarding other visitor activities, ranging from support for the Visitor Services Plan to opposition to opening the refuge to further public use. Concerns include not allowing new trails, increased disturbance to the resources of the refuge, opposition to commercial tours, use of artificial lights, need to limit access to the refuge to protect wildlife and habitat in a developed landscape, need to limit any public use of the refuge to only daytime use, allowing only limited and controlled public use activities. Excerpts from some of the comments are listed below.

"I am in support of low impact recreational activities such as hiking, tours, photography, wildlife watching, limited basic camping, & Fishing in selected areas. My preference is to allow for (phase 1) expanded foot traffic only. Then see how this initially impacts the

wildlife & habitat, before opening it up to more intensive human use (phase 2). such as: limited non motorized bicycle use on trail only. Limited hunting of turkey, only if they are deemed in abundance, remembering that turkey can be a staple prey of panthers, so as long as the panther biologists have the science backing that this will NOT pose a negative impact to panthers.”

“While the Conservancy supports recreation access and opportunities for the public to enjoy, experience, and recreate in publicly-protected lands, increased access and use may not always be compatible for the FPNWR given its founding purpose, particularly in light of these current and potential future use of lands surrounding the preserve. The Refuge has served to-date as a relatively quiet and isolated area and given the threats mentioned above, we recommend that activities proposed on the FPNWR continue to be limited.”

“Continued and increased environmental education and wildlife observation facilitated by FPNWR outreach staff or volunteers is supported by the Conservancy. We had previously written that we would also support some additional opportunities for wildlife viewing and fishing at Pistol Pond or other more easily accessible points. Expanded access for education, wildlife viewing and photography, or fishing should minimize conversion of natural lands and wetlands.”

“While future FPNWR Expansion may provide additional lands that may have opportunities and compatibilities for recreational uses like hunting, we support the CCP in establishing that it continues to be prudent to “strictly monitor and control the amount of human use on refuge lands” (US Fish and Wildlife Service, 2000. Florida Panther National Wildlife Refuge Comprehensive Conservation Plan. P.17).”

“A majority of the proposed new uses DO NOT fit the descriptions outlined in the Act and will “materially interfere with or detract from the fulfillment of the mission of the System or the purposes of the refuge.”

“Expansion of various activities on the Florida Panther Refuge must not take place in a manner that detracts from other wildlife-dependent priority public uses, including wildlife observation, photography, environmental education and interpretation.”

“There is no mention of how artificial lighting would be controlled by those doing primitive camping.”

“Take a look at improving some parts of the visitor plan to account for nocturnal activities and to make sure we respect as much as a nocturnal environment for our wildlife out there.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Hunting and fishing on U.S. Fish and Wildlife Service lands is a tradition that dates back to the early 1900s. The National Wildlife Refuge Administration Act, as amended, stipulates that hunting, fishing, wildlife observation and photography, and environmental education and interpretation, if found to be compatible, is a legitimate and priority general public use of a refuge and should be facilitated. In passing the National Wildlife Refuge System Improvement Act in 1997, Congress reaffirmed that the National Wildlife Refuge System was created to conserve fish, wildlife, plants, and their habitats, and would facilitate opportunities for Americans to participate in compatible wildlife-dependent recreation, including hunting and fishing on Refuge System lands. We prioritize wildlife-

dependent recreation, including hunting and fishing, when doing so is compatible with the purpose of the refuge and the mission of the NWRS. The Service has adopted policies and regulations implementing the requirements of the Administration Act that refuge managers comply with when considering public use programs. Compatibility Determinations (<https://www.fws.gov/policy/603fw2.html>) were developed for all proposed uses on the refuge in the visitor services program (Appendix C of the Florida Panther NWR Visitor Services Plan).

As outlined in the Environmental Assessment (Section B in the Florida Panther Visitor Services Plan), as long as the refuge continues to utilize ecologically based management and/or expands this form of management, impacts resulting from the new projects proposed under Alternative B are anticipated to produce only negligible to minor effects. Ecologically based management, coupled with improved sustainable levels of public use, provides both preferred habitat and increased public wildlife observation/educational opportunities. Hunting and fishing along with the other uses including: wildlife observation, photography, environmental education, interpretation, bicycling, instructor-led small group activities, small group camping, commercial recording, commercial tours, UAS drones, and scientific research as proposed are expected to have positive impacts by increasing the Refuge's ability to reach new audiences while having a minimal footprint and infrastructure on the Refuge.

The National Wildlife Refuge Improvement Act identifies six priority wildlife dependent public uses that are appropriate on all National wildlife Refuges. The act doesn't specifically exclude other uses, but rather prioritizes these uses above others. The Compatibility Determinations in Appendix E outlines the stipulations necessary to ensure compatibility of each recreational use proposed. The Refuge was established for the purpose of recovering endangered species; Most notably the Florida Panther. It is the Service's assessment in the Florida Panther Recovery plan, that a "majority of outdoor recreational activities are compatible with the recovery of the Florida panther if they are conducted in a manner consistent with existing local, state, and Federal laws and regulations." (USFWS 2008)

This plan allows for semi-primitive camping at a single location on the refuge for small Scouting groups no more than one time a month between December and February and for the Family/youth Turkey Hunt Camp weekend in March. There is a single fire ring that would be authorized for use to consolidate the light source and reduce artificial lighting. The camp site is previously disturbed that was once used as a Hunting club and is in an Oak hammock with large trees that provide a canopy cover, thus shielding ambient light in the night sky. Visitor use of the trails are Sunrise to Sunset. The only night time activity authorized would be small scouting groups camping and during the family hunt/camp weekend. The occasional special event for astronomy or night sky viewing would be limited to small instructor led groups with and issued a Special Use Permit with special conditions.

## **REFUGE MANAGEMENT AND ADMINISTRATION**

### **Funding and Staffing Concerns**

**Comments:** Multiple comments were received regarding funding and staffing concerns. Multiple comments expressed concern that the existing and expected level of staffing for Florida Panther NWR are insufficient to support the proposed action. Multiple comments expressed the need and support for increased funding to cover the proposed activities and project in the Visitor Services Plan, including the hiring of additional staff. Other comments suggested additional funding for the refuge to support hunting activities, and invasive species control. Multiple comments expressed concern that funding and staffing outlined in the action were insufficient to ensure compatibility of the uses. Excerpts from some of the comments are listed below.

“Given the shortage of staffing and funding facing the refuge right now, we have serious concerns about opening it up to the variety and scale of new and expanded public use opportunities....particularly concerned that the lack of capacity could prevent effective oversight, monitoring, and enforcement to support the plan”.

“We are concerned, however, that the limited human and financial resources available make it very difficult for the Service to provide adequate oversight and enforcement of the variety and scale of the new and expanded uses proposed in the VSP/EA. These exceed the capacity and funding for current refuge staff to provide sufficient monitoring and effective enforcement to support the VSP necessary to protect natural resources from damage due to human activities (e.g. riding ORVs or bicycles off trails and trampling sensitive vegetation, improper extinguishing of camp fires, littering) and harm from poaching, illegal collection and other illicit activities.”

“A budget for each of the proposed public activity improvements should be provided.”

“The cost to add littoral areas to the entire area of pistol pond would be awfully expensive and may never occur.”

“We strongly feel for this plan to move forward the Refuge must have full-time, permanent personnel in three main categories:”

- Maintenance - “Any facility needs regular maintenance to keep from falling into disrepair. A full-time Maintenance Specialist is vital for ensuring the new facility will be properly cared for, and that millions of dollars will not be wasted because there is no designated staff to care for the facility once it is built. The visitor services plan greatly underestimates the costs of personnel associated with such a permanent facility.
- Law Enforcement - “For the safety of the public, other staff, and the native plant and animal life, a Law Enforcement Officer is a non-negotiable full time position that must be filled. The costs associated with this position are greatly underestimated in the proposed Visitor Services Plan. “
- Outreach and Education - “A full-time Visitor Services Specialist, or similar positions, will be key in implementing the new hunting and fishing opportunities, educating the public on the resources of the Refuge, and ensuring the transition from a closed Refuge to a partially open Refuge is seamless. This position will also allow for the coordination of resident and non-resident volunteers which have always been a large part in the functioning of the Refuge. The costs associated with a diverse full-time position such as this is greatly underestimated in the Visitor Services Plan.”

“Given the limited staffing and funding for the Southwest Florida Gulf Coast Refuge Complex, which includes both the FPNWR and 10,000 Islands National Wildlife Refuge, **the (Florida Wildlife) Federation has grave concerns about both the variety and scale of the proposed expanded public use opportunities to be offered as part of this Visitor Services Plan.** Particularly, the (Florida Wildlife) Federation believes that the **current staffing** (which consists of only two permanent and dedicated staff) **and funding will not be sufficient to ensure the oversight, monitoring and appropriate enforcement to support the Plan.** Expanding public use opportunities without adequate oversight and enforcement could result in unintended impacts to wildlife including disturbance, feeding, harassment, and poaching. Additionally, recreational users may unintentionally impact

native vegetation, and unfortunately, the Refuge would be at risk to littering that can threaten both habitat quality and wildlife. ... **The USFWS lacks the funding necessary to administer the variety of activities proposed in the Draft Visitor Services Plan.**”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. While staffing levels at the Florida Panther NWR have declined over the past 10 years as the Refuge System’s budget has remained flat. The proposed activities within this plan would be implemented on a timeline based on the availability of resources to provide a safe visitor recreational experience with quality customer service from agency staff. Currently, there are several vacancies in management, maintenance and law enforcement positions at the refuge that are key to implementing the plan. Also, the Service would increase volunteer opportunities and partnerships from non-governmental organizations in the overall maintenance of facilities as well as conducting education and outreach activities. The Service also relies on state and local agency partners as well as other federal agencies to assist in law enforcement efforts as necessary.

Appendix E contains the Compatibility Determinations (CD) for each use. Within each CD, is a table that includes the anticipated costs needed to administer the use as well as any potential offsetting costs from the issuance of Special Use Permits.

Adding littoral zones to Pistol pond can be done by existing refuge staff and equipment by removing the steep bank edge of dirt in the dry season when the waters in the pond are naturally low. As the waters rise, emergent vegetation would begin to colonize the zone naturally, and in some cases replanting emergent vegetation may be necessary. This restoration activity can take place over the course of several years making the most use of refuge staff time and talents.

We did not make any changes to the proposed action as a result of these comments.

### **Future Permitting**

**Comment:** The Florida State Clearinghouse outlined potential future permitting requirements associated with future actions under the Visitor Services Plan, including South Florida Water Management District and/or Florida Department of Environmental Protection (FDEP) Environmental Resource Permit(s), FDEP Drinking Water Permit, FDEP Domestic Wastewater Facility Permit, FDEP Domestic Wastewater Collection/Transmission System Permit, and FDEP National Pollutant Discharge Elimination System Stormwater Permit. Further, the state of Florida outlined needed coordination with the Florida Department of State, Division of Historical Resources regarding any discovery of prehistoric or historic artifacts within the area under the action (i.e., Florida Panther NWR) and the cessation of all work on a project in the event that unmarked human remains are encountered followed by all needed state and Federal coordination.

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service acknowledges that any future construction or ground disturbing activity will be required to undergo appropriate planning and analysis under the National Environmental Policy Act and would be required to meet all other applicable laws, regulations, and policies, including Section 106 of the National Historic Preservation Act. While potential future facilities were outlined in the Visitor Services Plan, detailed planning and analysis for these facilities would be required and completed prior to permitting and construction activities. We did not make any changes to the proposed action as a result of these comments.

## **Other Refuge Management Goals and Uses**

**Comment:** Multiple comments were received concerning existing refuge management goals. Excerpts from some of the comments are listed below.

"We would also like to see the Refuge planning process to continue and prioritize the goals of facilitating protected species on the FPNWR. For example, goal 2.1.2 of the CCP talks about constructing nesting boxes for Big Cypress fox squirrel; if this has not been completed, it should be included in the new document. Additionally, we support the CCP goals of facilitating additional red-cockaded woodpeckers (RCWs) onto the FPNWR, i.e. goal 2.1.5. Furthermore, there is an opportunity to incorporate research studies on imperiled species such as eastern indigo snake, Everglades mink, and bonneted bat."

"The current Visitors Plan speaks to littoral restoration of Pistol Pond, which we support. We would also like to see the Refuge planning process to continue and prioritize the goals of facilitating protected species on the FPNWR. For example, goal 2.1.2 of the CCP talks about constructing nesting boxes for Big Cypress fox squirrel; if this has not been completed, it should be included in the new document. Additionally, we support the CCP goals of facilitating additional red-cockaded woodpeckers (RCWs) onto the FPNWR, i.e. goal 2.1.5. Furthermore, there is an opportunity to incorporate research studies on imperiled species such as eastern indigo snake, Everglades mink, and bonneted bat."

**Service's Response to Comment:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Although these comments are outside the scope of the Visitor Services Plan and Hunt Plan, the Service is in the process of reviewing and updating the Comprehensive Conservation Plan and step down Habitat Management Plan for the refuge, which would address habitat and wildlife management. We did not make any changes to the proposed action as a result of these comments.

**Comment:** "The potential exists for wading bird nesting activity where trees and shrubs are surrounded by water within both forested and vegetated non-forested wetlands on the project site. FWC staff recommends that specific surveys be conducted for wading birds in these areas prior to the commencement of any clearing, grading, or filling activities associated with the proposed additional visitor facilities. Surveys should be conducted during their breeding season, which extends from March through August. Additional information and guidance for conducting surveys can be found in the Species Conservation Measures and Permitting Guidelines for state threatened wading birds (<https://myfwc.com/media/18634/threatenedwadingbirdsguidelines.pdf>). If there is evidence of nesting during this period, FWC staff recommends that any wading bird nest sites be buffered by 100 meters (330 feet) to avoid disturbance by human activities. If nesting is discovered after site activities have begun, if the removal or trimming of trees with active nests is unavoidable, or if maintaining the recommended buffer is not possible, the applicant may contact the FWC staff identified below to discuss potential permitting alternatives."

**Service's Response:** Due to significant hydrologic alterations that have occurred adjacent to the refuge (e.g., major canals like the Barron Canal and I-75 Canal, intensive agriculture, and major roads like SR-29 and I-75), the hydrology of critically important wetlands (e.g., Fakahatchee Strand and Okaloacoochee Slough) on the refuge has been negatively impacted.

Similarly, wading birds and historic wading bird rookeries have been negatively impacted by these human alterations. The Refuge includes approximately 18,000 acres of wetlands that support a high diversity of water birds and wading birds. The most abundant wading bird species on the refuge include wood storks; great blue, little blue and tricolored herons; black and yellow-crowned night-herons; great, snowy and cattle egrets; white ibis; anhingas; limpkin, and double-crested cormorants. Approximately six rookeries, with 10 to 50 nests were active on the refuge in 1999 with a full complement of colonial species, mostly great egrets. Other small rookeries historically occurred east and southwest of the Hog Pond rookery, and in small ponded areas in remote locations on the Refuge. Unfortunately, wading bird nesting on the refuge is practically non-existent today. However, one of the largest wading bird/woodstork rookeries in Collier County occurs within manmade borrow pit ponds that are approximately 1.25 miles north of the refuge boundary, and directly adjacent to State Road 29. During 2017, the refuge received upwards of 101 inches of rain, and Collier County received the highest recorded rainfall ever documented to date. The flooding and lengthened hydroperiod created by the 2017 record rainfall created ideal conditions for wading birds and aquatic species, and likely mimicked what the hydrology of south Florida once was before humans began altering it. As a result of the record rainfall, many areas in south Florida documented the highest wading bird reproduction ever documented since the early to mid 1900's. The refuge actually documented the largest wading bird rookery ever documented on the Refuge during 2018. This rookery was located within the Fakahatchee Strand on the refuge, and provided a glimpse of what wading bird rookeries might have once looked like before the hydrology of Fakahatchee Strand/Okaloacoochee Slough was altered by the historic Seaboard Coastline Railroad, current State Road 29, Barron Canal, I-75 Canal, and intensive agriculture north of the refuge. Unfortunately, this huge rookery has not been active again since 2018.

It is important to note that the proposed activities in the VSP will almost exclusively occur along existing roads and disturbed sites (e.g., SR-29, woods roads, fire breaks, former rock quarry, former hunt club and cabin area, and former oil exploration site/current office site), which have been in place and negatively impacted by humans for decades. All proposed project areas have been repeatedly visited and surveyed by researchers and FPNWR biological staff since the refuge was established, and Service employees and researchers drive/walk/visit many of these areas upwards of five days per week. Long-term wildlife monitoring on the refuge includes 89 breeding bird monitoring points, forty-two infrared camera traps, annual Christmas Bird Count, annual FWC monitoring of collared pumas, as well as insightful data produced from various research projects being conducted on the refuge (e.g., South Florida Deer Study, which was the largest and most comprehensive white-tailed deer/panther-prey study ever completed in the state of Florida).

Some activities proposed in the VSP are conceptual in nature, and will require additional environmental analysis as required by the National Environmental Policy Act (NEPA) and similar laws/Service policies (e.g., constructing a public access point, trail/boardwalk, informational kiosk, vault style bathroom, and wildlife viewing structure within Unit 44). In order to ensure that implementation of the proposed activities minimize impacts to natural resources as much as possible, the Service would conduct appropriate environmental analysis and prepare required environmental compliance documents for proposed activities that require additional analysis. In addition to our ongoing long-term avian monitoring on the refuge, the Service will also conduct appropriate site-specific wildlife surveys in order to ensure that proposed activities minimize avian impacts to the greatest extent practicable. We did not make any changes to the proposed action as a result of these comments.

## **Registration of All Users of Florida Panther NWR**

**Comment:** One commenter expressed that “all visitors should be registered before being allowed admission to the Florida Panther National Wildlife refuge.”

**Service’s Response to Comment:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Visitors are recorded by staff and volunteers manually at special events and the Visitor Center, and automatically using traffic counters for vehicles, entering the refuge and using trails. Hunters will be required to provide harvest data to the Florida Fish and Wildlife Conservation Commission as part of their permit. The Florida Fish and Wildlife and Conservation Commission will provide the information to the Service each year. We did not make any changes to the proposed action as a result of these comments.

## **Law Enforcement Concerns**

**Comments:** Commenters were concerned the added public use activities could result in added wildlife and habitat disturbance, littering, and safety concerns. Excerpts from some of the comments are listed below.

“The Service, Florida Fish and Wildlife Conservation Commission (FWC), National Park Service, Florida Park Service and other land management agencies should collaborate on monitoring, enforcement and management oversight programs to ensure adequate resource protection is achieved at Florida Panther NWR. Adaptive management relies upon knowledge of changes and impacts to refuge resources and would benefit from partnerships with other agencies.”

“We are concerned about the negative effects of off-road vehicles on refuge resources, namely that not all vehicle operators will stay on designated trails. Leaving trails and driving on refuge lands has the potential to cause detrimental impacts by damaging and destroying habitat, trampling or disturbing wildlife and affecting vegetation, soils, hydrology, water quality and helping to spread invasive species.”

“We do not believe that the refuge has the capacity to patrol these areas and enforce the requirement that off-road vehicles stay on designated trails. We also question refuge staff’s capacity to monitor habitat degradation in areas near designated trails as well as the Service’s ability to fund costs associated with monitoring and enforcement (not to mention restoration of damaged habitat).”

“Expanding public use opportunities without adequate oversight could result in poaching, disturbing, feeding, or harassment of wildlife, littering, trampling of vegetation, and other undesirable outcomes that are not compatible with managing a National Wildlife Refuge.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. As outlined in the Visitor Services Plan, Hunt and Fish Plan, Compatibility Determinations, and Environmental Assessment, in addition to FWS Law Enforcement Officers, FWC law enforcement also enforce all applicable State regulations on the refuge. Other law enforcement agencies such as Collier County Sheriff’s Office and the National Park Service are additional resources available. Law enforcement in relation to this hunt plan will include field compliance checks for licenses, permits, legal means and methods, and legal equipment. It is illegal to abandon property or dispose of waste on a refuge (see 50 CFR 27.93 and 27.94), whether fishing-related or not. It is also illegal to disturb or injure any

non-target plants or wildlife (see 50 CFR 27.51) on a refuge. Further, many refuges have specific regulations to guard against littering associated with fishing.

Hunters on NWRs must comply with State regulations and any refuge-specific regulations, which would ban taking wildlife illegally (poaching). The Service takes poaching very seriously, as allowing poaching would seriously undermine the conservation mission of the NWRs. Refuge managers use a variety of techniques to help ensure that hunters are aware of relevant laws and regulations, such as requiring hunters to carry a signed refuge hunt brochure at all times while in the field. The priority for Federal Wildlife Officers and other refuge staff is to educate the public so that violations do not occur in the first place. In addition, our Federal Wildlife Officers routinely partner with State and other Federal law enforcement agents to coordinate efforts and share information to counter poaching.

We did not make any changes to the proposed action in response to these comments.

### **Future Refuge Management**

**Comments:** Many comments suggested that the Service not implement the Visitor Services Plan and instead focus future management of Florida Panther NWR on providing safe habitat for panthers and other wildlife without providing additional visitor access and use.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The National Wildlife Refuge Administration Act, as amended, stipulates that hunting, fishing, wildlife observation and photography, and environmental education and interpretation, if found to be compatible, is a legitimate and priority general public use of a refuge and should be facilitated. In passing the National Wildlife Refuge System Improvement Act in 1997, Congress reaffirmed that the National Wildlife Refuge System was created to conserve fish, wildlife, plants, and their habitats, and would facilitate opportunities for Americans to participate in compatible wildlife-dependent recreation, including hunting and fishing on Refuge System lands. While the Service will continue to focus on providing high quality habitat for the Florida Panther, it is the Service's opinion that adding some additional public access won't materially interfere with the purpose of recovering endangered species such as the Florida Panther. It is the Service's assessment in the Florida Panther Recovery plan, that a "majority of outdoor recreational activities are compatible with the recovery of the Florida panther if they are conducted in a manner consistent with existing local, state, and Federal laws and regulations" (USFWS 2008). We did not make any changes to the proposed action as a result of these comments.

### **General Edits**

**Comment:** FWC had some general clarifying and editorial comments for certain sections, as listed.

"In regards to Appendix A: Draft Hunt and Sport Fishing Plan FWC would like the Service to: 1) Clarify whether guest hunters are permitted and whether they share the bag limit; 2) Maintain consistency of hunter requirements throughout the document; and 3) on Pages 158 and 162 state the need for a Hunter Education Certificate. However, on page 154 (paragraph 8) the Hunter Education Certificate requirement is left out, as in the Environmental Assessment (page 106; paragraph 5) Appendix A, Section III.F The term "Game Warden " on page 159 is outdated and could be removed.

Appendix A, Section IV.E.3 Clarify the description and obligatory nature of the quota permit requirement.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. The Service intends to mirror the State WMA regulations for guest hunters. Guest hunters: For each non-transferable spring turkey quota permit issued through GoOutdoorsFlorida.com, a quota permit holder (host) may take a guest hunter by obtaining a guest permit. A guest hunter is not allowed during the family turkey hunt. A guest hunter must possess a completed guest permit while hunting except the following persons may be a guest hunter without a guest permit: a youth under 16 years of age, a youth supervisor, a mentor license holder, or a mentor license supervisor. A host may only bring 1 guest hunter at a time and may only use 1 guest permit per day. The following persons are not considered to be guest hunters: other quota permit holders and non-hunters. The guest hunter and host must enter and exit the refuge together and must share an ORV/ATV while hunting on the refuge. The guest hunter may hunt only while the host is on the refuge. These rules would be printed on the refuge hunting brochure and permit.

For Consistency, The Service amended the document to add Hunter Education Certificate requirements to the EA and Hunt plan.

The Service changed the document to replace the term Game Warden to Law Enforcement Officer throughout the document.

Appendix A section IV. E. 3. references the licenses and permits required by hunters. “All hunters must possess a valid State of Florida hunting license (or proof of exemption), a required State turkey permit, and a free refuge hunt brochure (signed). Hunters drawn from the quota lottery will receive an official letter and permit stating that they have been drawn to participate in this hunt.” The Service will utilize the FWC Quota/Limited Entry Hunt Application process as detailed on the FWC website: <https://myfwc.com/license/limited-entry/> to select permittees.

## **LANDSCAPE FACTORS**

### **Impacts from Adjacent Development and Oil and Gas Exploration and Drilling**

**Comments:** Comments were received regarding the impacts to the refuge and its role in a developing landscape as refugia given the adjacent development and oil and gas exploration and drilling and the impacts of those activities combined with the proposed visitor activities on the refuge. One comment focused on the value of outdoor recreation opportunities such as Florida Panther NWR as more and more areas are developed in the surrounding landscape. While other comments focused on the critical role of the refuge to protect the Florida panther and its habitat in this developed and developing landscape, since ongoing development and human activities place Florida panthers at greater risk of mortality; this comment opposed opening the refuge to any additional human activities. Multiple comments expressed concern with the impacts to natural resources, including the Florida panther, from not only the developed and developing landscape, but also the proposed activities in concert with the other stressors. Excerpts from some of the comments are listed below.

“The Conservancy monitors on-going proposals for developments, roadways, mining, oil drilling and exploration, and other projects intensifying or developing natural lands in southwest Florida. Numerous projects have been proposed throughout Collier County and on lands adjacent to the FPNWR or within its contributing watersheds. The US Fish

and Wildlife Service (USFWS) is currently considering approval of 45,000 acres of residential and commercial development within the Collier County Rural Lands Stewardship Area through the proposed Eastern Collier Habitat Conservation Plan (HCP). The HCP, if approved, could also authorize intensified agricultural uses, active recreation, and oil and gas exploration and production activities. Additional projects, including roadway widening, would be pursued outside of the HCP as well. Many of these projects in the area of the FPNWR are also pursuing authorizations and permitting at the local and state levels as well."

"Additionally, a renewed interest in oil drilling is occurring in southwest Florida. For several years, the Conservancy and our partners have been advocating against seismic and drilling work within the Big Cypress National Preserve (BCNP), a neighbor to the FPNWR. Proposed oil projects will add to the indirect and cumulative impacts of activities near the Refuge."

"These current and future development pressures could affect the FPNWR in its biodiversity, hydrology, management of exotics, fire management, and other factors, in addition to adversely affecting species that utilize the FPNWR."

"The proposals extending recreational use should be viewed as a "privilege". Just because other Refuges allow them does not mean that this one needs to also. It was created "For the Panther", and benefits by default so much more. Its OK to remain a unique & necessary space for the panther. Especially when Wildlands are shrinking at a threatening rate, so much development in the surrounding area has already had negative impacts on local wildlife, with more development already on the table, the Wellbeing of Florida's Wildlife & Lands should remain the Highest priority!"

"In the EA, the FWS failed to evaluate the cumulative impacts of the four phases of seismic exploration and proposed new oil drilling by the Burnett Oil Company in Florida panther habitat in nearby Big Cypress National Preserve (hereinafter, Preserve)."

"FWS fails to consider all of the potential cumulative impacts on wildlife in both the Refuge and the Preserve. In addition to the potential cumulative impacts from all four phases of oil exploration and proposed new oil drilling in the Preserve, there are additional potential impacts from several other new major development projects that are currently in Florida panther and other wildlife habitat. These major development projects will involve massive construction activities that will put increased pressure on Florida panthers and other wildlife, birds, and reptiles, potentially leading to loss of habitat, degradation of habitat, increased habitat fragmentation, significant increases in traffic, increased road crossings by Florida panthers and Florida black bears, and other potential impacts."

"The human population continues to grow in Collier County and population projections indicate a much larger population settling in the eastern portion of the County, with a village being proposed just one mile east of the Refuge. This, in turn, will increase the potential visitorship of the surrounding natural areas that offer recreational opportunities, including the FPNWR. For this reason, it is critical that the recreational opportunities proposed through the Visitor Services Plan be compatible with the goals of the Refuge."

"A 2009 study concluded that road density and vehicular traffic could substantially affect the population dynamics of large carnivores with large home ranges, like the Florida

panther; habitat fragmentation and anthropogenic barriers to movement have limited the dispersal capability of species, reducing gene flow among populations and resulting in genetically distinct populations [Paetkau, D. and C. Strobeck. 1994. Microsatellite analysis of genetic variation in black bear populations. *Mol Ecol*, 3(5): 489-495., Johnson, W.E., E. Eizirik, M. Roelke-Parker, and S.J. O'Brien. 2001. Applications of genetic concepts and molecular methods to carnivore conservation. In J.L. Gittleman et al. (Eds.), *Carnivore Conservation*. New York: Cambridge University Press. Pp. 335-358]. Large carnivores may be much more susceptible to losses in genetic variation due to habitat fragmentation because of their large home ranges, low population densities, and long generation times [Paetkau, D. and C. Strobeck. 1994. Microsatellite analysis of genetic variation in black bear populations. *Mol Ecol*, 3(5): 489-495., Johnson, W.E., E. Eizirik, M. Roelke-Parker, and S.J. O'Brien. 2001. Applications of genetic concepts and molecular methods to carnivore conservation. In J.L. Gittleman et al. (Eds.), *Carnivore Conservation*. New York: Cambridge University Press. Pp. 335-358]. Isolation is reinforced when travel between subpopulations is limited due to significant barriers, such as high-volume roads [Paetkau, D. and C. Strobeck. 1994. Microsatellite analysis of genetic variation in black bear populations. *Mol Ecol*, 3(5): 489-495., Johnson, W.E., E. Eizirik, M. Roelke-Parker, and S.J. O'Brien. 2001. Applications of genetic concepts and molecular methods to carnivore conservation. In J.L. Gittleman et al. (Eds.), *Carnivore Conservation*. New York: Cambridge University Press. Pp. 335-358]. Thus, roads and other anthropogenic obstacles can substantially reduce gene flow among populations [Dixon, J.D., M.C. Wooten, J.W. McCown. 2007. Genetic consequences of habitat fragmentation and loss: the case of the Florida black bear (*Ursus americanus floridanus*). *Conserv Genet*, 8: 455-464; Kyle, C.J. and C. Strobeck. 2001. Genetic structure of North American wolverine (*Gulo gulo*) populations. *Mol Ecol*, 10, 337-347 at 343-346; Walker, C.W., C. Vila, A. Landa, M. Linden, and H. Ellegren. (2001). Genetic variation and population structure in Scandinavian wolverine (*Gulo gulo*) populations. *Mol Ecol*, 10, 53-63; Ernest, H.B., W.M. Boyce, V.C. Bleich, B. May, S.J. Stiver, and S.G. Torres. (2004). Genetic structure of mountain lion (*Puma concolor*) populations in California. *Conserv Genet*, 4: 353]. ... Roads directly kill wildlife through road fatalities and indirectly through habitat fragmentation, genetic isolation, pollution, and a host of other impacts. As America's transportation network expands, so does the wildlife death toll, with estimates as high as 1 million direct vertebrate fatalities along America's roadways each day [Andrews, K. M., J. W. Gibbons, and D. M. Jochimsen. Literature Synthesis of the Effects of Roads and Vehicles on Amphibians and Reptiles. Federal Highway Administration (FHWA), U.S. Department of Transportation, Report No. FHWA-HEP-08-005. Washington, D.C. 151 pp. (2006)]. There were 22 confirmed panther deaths in 2020, and panther death count for 2021 is currently confirmed to be 18, with 13 killed by vehicles (Florida Fish and Wildlife Conservation Commission, Panther Pulse, Florida Panther Program, <https://myfwc.com/wildlifehabitats/wildlife/panther/pulse/>).“

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. As outlined in the Environmental Assessment (Section B of the Visitor Services Plan), public lands such as the Florida Panther NWR play a critical role in the conservation of rare species and native habitats, which sometimes receive little formal protection or conservation on private lands. The Service recognizes that during the next 10 to 50 years, human populations are expected to continue to expand in Collier County, leading to increased impervious surfaces, reduced forested habitat, increased traffic, and additional constraints on an already impacted prescribed burning program on the Florida Panther NWR. Management can do nothing to stem this trend of rapid urbanization, but the refuge and other conservation lands (both private and public) would become even more important as repositories

of biodiversity. While the proposed activities are anticipated to result in only negligible cumulative environmental effects, the proposed activities offer proactive means to address the current and future recreational demands in this currently rural portion of Collier County.

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time. The refuge hunt and fish program is designed to be sustainable through time, given relatively stable conditions, particularly because of close coordination with FWC. The limited hunt duration and number of days, and fishing location would not conflict with most other uses of the refuge and would not be anticipated to result in negative cumulative impacts to refuge resources. Hunt areas would be closed to other uses during the hunting days to create a safe buffer distance around concentrated areas of public use and facilities. There would be minor to no impact to geology, topography, soils, water quality and quantity, air quality, and hydrology due to the limited minor increase in motor vehicle during the dry season. No new roads or trails, are proposed to accommodate hunting on the refuge. The use of existing roads and trails would accommodate turkey hunting. Any negative impacts to the physical environment would be mitigated by additional restrictions on ORVs, and the limited number of permits issued. The cumulative impacts of hunting on Wild Turkey populations at the refuge are negligible. The proportion of the refuge's harvest of these species is negligible when compared to local, regional, and State-wide populations and harvest. Based on FWC reported hunter success rates for the 2019 Special-Opportunity Turkey Hunts, average hunter days per harvested turkey was 8.1 days (FWC personal communication). Because of the regulatory process for harvest management in place within the Service, the setting of hunting seasons largely outside of the breeding seasons of resident and migratory wildlife, the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, and the wide geographic separation of individual refuges, we anticipate no direct or indirect cumulative impacts on resident wildlife, migratory birds, and nonhunted wildlife of by use of hunting on the refuge.

Minor positive impacts to the surrounding community would be expected from gaining an additional recreational opportunity on the refuge. These impacts could have long term effects on hunter retention and recruitment providing a positive hunting experience to youth and others that may not have other opportunities to hunt. Cumulative impacts may be seen from the combination of uses on the refuge including hunting, wildlife observation, photography, education, interpretation, habitat management and research. Conflicting programs that occur in the same space and time can cause decreased satisfaction from user groups and increase disturbance to wildlife from frequent human visitation, consumptive or non-consumptive. Management actions such as prescribed fire, water management and timber management are necessary aspects of refuge management. Likewise, research which may require undisturbed areas to allow scientific rigor. The refuge considers all uses as activities are planned on a yearly basis and programs are structured to allow multiple uses with high quality while not overlapping. Hunting seasons and locations allow for hunters to pursue this public use while other uses may be located in other areas of the refuge or at other times to reduce conflicts.

The Florida Panther National Wildlife Refuge was established for the purpose of recovering Endangered Species, most notably the Florida Panther. The refuge is also one of over 560 National Wildlife Refuges in the US. As outlined in the National Wildlife Refuge System Improvement Act (PL 105-57, 1997), national wildlife refuges are part of a national system with the mission to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and

their habitats within the United States for the benefit of present and future generations of Americans. The Act states first and foremost that we focus our National Wildlife Refuge System mission on conservation of fish, wildlife, and plant resources and their habitats. The Act also determined that wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation are legitimate and appropriate public uses of the Refuge System.

The Compatibility Determination for ORV's (Appendix C) list the types of vehicles we consider ORV's and the stipulations required for use on the refuge. Street legal 4 wheeled drive vehicles aren't permitted. These regulations including speed limits will be published in the Refuge's brochures and permits. The roads will have a 15 MPH speed limit to avoid wildlife collisions. The Service is not constructing new roads and only opening existing roads to ORV use to permitted hunters and for interpretive tours with through the issuance of Special Use Permit. The limited use of these existing roads avoids further fragmenting the habitats.

Cumulative impacts of the 4 phases of Burnett Oil Company's drilling in Big Cypress NP is outside the scope of this EA.

We did not make any changes to the proposed action as a result of these comments.

### **Impacts from Pythons**

**Comment:** One comment expressed concern with the impacts of the growing population of pythons on the Florida panther, including direct competition for prey and the resultant need for panthers to forage further afield for food with inevitable roadway crossings and the related potential for injury and mortality from collisions.

**Service's Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. Pythons have not been documented on the Florida Panther National Wildlife Refuge, but have been removed from areas immediately adjacent to the refuge. There has been documented evidence that pythons have consumed both adult White-tailed deer and fawns which is the main prey sources for the Florida Panther. This plan doesn't propose deer hunting on the refuge.

We did not make any changes to the proposed action as a result of these comments.

### **Climate Change and Sea Level Rise**

**Comments:** Multiple comments were received regarding climate change and sea level rise. Excerpts from some of the comments are listed below.

"Please adhere to the Service's strategic plan for climate change."

"The FWS must analyze and disclose how its decisions could lead to the elimination or degradation of these crucial carbon sinks, resulting loss of carbon storage, and related climate change impacts, including a consideration of the time lag between leasing and any reclamation and the significance of the loss of carbon sinks on GHG emissions and climate change during that time period."

"The FWS must utilize the best available science to analyze and disclose to the public the

impacts of climate change on the Florida panther and its limited remaining habitat before making any decisions on activities that could further jeopardize panthers or their habitats.”

“The FWS failed to analyze the potential impacts off-road vehicle use on climate Change. For example, the FWS failed to analyze whether greenhouse gas (GHG) emissions would be equal to or less than current emissions. It is unclear whether FWS knows the current GHG emissions levels from ORV activity in the Refuge and nearby Preserve.”

“Running electricity for upgraded hard structures means greater consumption of fossil fuels, unless, of course, you are planning to go solar or similar. Bathrooms producing more waste to be absorbed by already compromised waters won’t benefit wildlife either. Even composting toilet facilities will dump the waste in situ while septic systems will require heavy trucks for frequent (if your visitation estimates are successful) pump-out. Hardened surfaces for trails will necessitate further alteration to an already degraded landscape that history has shown often means water tables that fluctuate incompatibly with the needs of nesting birds and other wildlife.”

**Service’s Response:** The Service appreciates the interest in future management of visitor services on the Florida Panther NWR. According to the Service’s 2010 Climate Change Strategic Plan, the Service would follow six guiding principles in responding to climate change:

- We would continually evaluate our priorities and approaches, make difficult choices, take calculated risks and adapt to climate change.
  - We would commit to a new spirit of coordination, collaboration and interdependence with others.
  - We would reflect scientific excellence, professionalism, and integrity in all our work.
  - We would emphasize the conservation of habitats within sustainable landscapes, applying our Strategic Habitat Conservation framework.
  - We would assemble and use state-of-the-art technical capacity to meet the climate change challenge.
  - We would be a leader in national and international efforts to address climate change.
- (USFWS, 2010)

The environmental assessment, Section B of the Florida Panther NWR Visitor Services Plan addresses trends and potential impacts from climate change. Greenhouse gases are addressed on page 110-111 of this plan. The 2021 Hunt Plan analyzed within the EA specifies that ORVs and motorized vessels may only be used for those visitors specifically permitted for hunting activities. Hunts are limited to three weekends per year for a total of 6 days and permits are limited to 70 total issued for the entire hunt season. These measures are in place in part to provide environmental protection.

The Service is committed to achieving the requirement set forward in EO 13693 as amended by EO 13990 sets broad agency requirements for strengthening the sustainable practices of previous EOs. Specific elements of this EO include:

- Reduce fleet-wide per-mile greenhouse gas emissions 30% by 2025 using a 2014 baseline.
- Plan for zero emissions vehicles plug-in hybrid vehicles to compose 20% of new acquisitions by 2020, and 50% by 2025.
- Reduce energy intensity in buildings annually 2.5% through 2025 using a FY 2015 baseline.
- Ensure that 30% of total building electricity comes from renewable energy by 2025.
- Reduce water consumption 36% by FY 2025 using a FY 2007 baseline.

- Construct federal buildings designed to achieve energy net-zero, and where feasible, water or waste net-zero by FY 2030.
- Expand green procurement and electronic management.
- Reduce the use of chemicals and toxic materials and find alternatives.

Of the facilities and activities in the plan, no additional electrical systems are required. The construction of an office and visitor center would replace two older modular buildings with a more energy efficient building would reduce energy demands. The service also plans on installing solar power to the new structure, further reducing our need for fossil fuels. The plan also calls for vault toilet facilities at the existing refuge trails and at the pistol pond fish area. Currently the trails have a temporary port-o-potty in the parking lot and is serviced once a week. Any new restroom facilities at Pistol pond would be within the parking area that is described in the plan. Both of these areas would not require new “hardening of surfaces for trails.”

We did not make any changes to the proposed action as a result of these comments.

#### **Citations:**

U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), Florida Fish and Wildlife Conservation Commission (FWC). 2008. Interagency Florida Panther Response Plan, 2008. USFWS, Atlanta, GA.

U.S. Fish and Wildlife Service (USFWS). 2008. Florida Panther Recovery Plan 3<sup>rd</sup> revision. U.S. Fish and Wildlife Service, Atlanta, GA, page 215

McCarthy, K.P., and R.J. Fletcher. 2015. Does hunting activity for games species have indirect effects on the resource selection by the endangered Florida panther?. *Animal Conservation* 18:2 138-145

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## **APPENDIX I: Finding Of No Significant Impacts and Decision to Implement the Visitor Services, Hunt and Fish Management Plan at Florida Panther National Wildlife Refuge**

The U.S. Fish and Wildlife Service (Service) is expanding wildlife-dependent recreational uses including: wildlife observation, photography, environmental education, and interpretation on the Florida Panther National Wildlife Refuge. In addition, the Service is opening new wildlife-dependent uses of turkey hunting, fishing and new commercial uses (e.g. tours, recording), instructor-led small group activities, private ceremonies, and UAVs (scientific research and recording) by permitted allowance in designated areas. The Service is also opening new supporting uses (hiking, bicycling, camping, and use of off-road vehicles (ORVs)) to support compatible wildlife-dependent recreation in accordance with the Florida Panther National Wildlife Refuge (FPNWR, Florida Panther NWR, or refuge) Comprehensive Conservation Plan (CCP) (USFWS 2000), Visitor Services Plan and Hunt and Fish Management Plan.

These additional compatible wildlife-dependent recreational opportunities will result in minimal impacts on physical and biological resources, while meeting the Service's mandates under the National Wildlife Refuge System Administration Act (NWRSA) and various Secretarial Orders.

### **Selected Action**

#### **Alternative B—Proposed Action Alternative:**

Under the Preferred Action Alternative, visitor services and public recreational activities will be enhanced on the Florida Panther NWR, while also meeting the goals and objectives of the CCP (USFWS 2000). These enhancements will include the following projects:

1. Expanding opportunities for wildlife observation and photography
  - a. Constructing a public access point, trail/boardwalk, informational kiosk, vault style bathroom, and wildlife viewing structure within Unit 44 pending Section 106 archeological consultation.
  - b. Establishing new year-round and seasonal hiking trails. These new trails will include: 1) A year-round non-motorized trail that originates at refuge Headquarters, and traverses along 2 +/- miles of existing woods roads. This trail will also include interpretive messaging and an observation tower/photo blind to provide wildlife observation, photography, and interpretive opportunities; Establish a year-round non-motorized trail loop at Pistol Pond (+/- 3.5 miles), which also traverses along existing woods roads; 3) Allow seasonal non-motorized public use of approximately 20 miles of existing fire breaks/woods roads on the east side of FPNWR from December to March; and 4) Develop an approximately .5 mile out-and-back hiking trail with observation overlook at northern boundary of Unit 44 to provide wildlife observation and photography opportunities.
  - c. Construct benches along the edges of the Conservation Club site.
  - d. Allowing non-motorized bicycling and e-bikes
2. Expanding opportunities for environmental education and interpretation
  - a. Replacing current headquarters and biological laboratory with a permanent building that will include a visitor contact station, classrooms, auditorium, and educational exhibits.
  - b. Installation of electricity at McBride's Cabin through solar panels.
  - c. Update and install new kiosks.

- d. Develop a traveling interpretive display
  - e. Allowing camping for small youth groups (e.g., Scouts and Outward Bound).
  - f. Open opportunities for interpretive biking, hiking, or swamp buggy tours on designated trails.
  - g. Allowing up to two instructor-led small group activities monthly, including but not limited to astronomy club night sky viewing, yoga and meditation, and field skills workshops.
- 3. Opening the refuge to turkey hunting.
  - a. Allowing limited entry turkey hunts on 25,560 acres of the Refuge.
  - b. Allowing ORV use during hunts only.
  - c. Allow camping for 1 weekend family hunt and small your scouting groups.
- 4. Opening the Refuge to fishing.
  - a. Allowing fishing on Pistol Pond
  - b. Constructing a parking lot with wildlife diversion fencing, and access gates, informational kiosks, and vault style bathroom.
  - c. Constructing two ADA fishing piers Construction of up to four ~20 ft x 50 ft fishing/observation platforms.
  - c. Restoring Pistol Pond littoral zones to improve fish and wildlife habitat.
  - d. Host youth fishing and invasive species roundup events.
- 5. Expand partnerships and volunteer program
  - a. Constructing vehicle camper pads for volunteer work campers and researchers.
  - b. Collaborate with FWC and other partners to host Outdoor Skills workshops.
- 6. Establishing a recreation fee program on the Refuge.
- 7. Exploring commercial use activities
  - a. Allow unmanned aerial vehicle/drone use for research and commercial photography.
  - b. Explore partnerships for commercially guided specialty hunts or to facilitate ecotourism with interpretive tours.
  - c. Allowing only commercial video recording on the Refuge that features the refuge mission purpose and for environmental education purposes that tie back to the refuge mission and objectives.

This alternative was selected over the other alternatives because it offers the best opportunity for public use that would result in a minimal impact on physical and biological resources, while meeting the Service's mandates under the NWRSA and Secretarial Order 3356, and aligns more fully with the State of Florida's hunting and fishing regulations.

### **Other Alternatives Considered and Analyzed**

#### **Alternative A—[No Action Alternative]**

Under Alternative A, public use opportunities on the Refuge will be limited to uses and levels covered under the 2000 CCP (USFWS 2000). There would be no change in current refuge implementation of these priority, compatible wildlife-dependent public uses. Opportunities to create additional outdoor recreation experiences by adding additional compatible wildlife-dependent public uses would be lost. In addition, the Refuge's ability to connect with certain

segments of the public would potentially be diminished and thus the Refuge's ability to reach those members of the public and promote natural resources conservation, environmental education and natural resources stewardship may be more limited.

This alternative was not selected, because it would not offer the range of public uses listed under the preferred alternative.

### **Summary of Effects of the Selected Action**

An Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) to provide decision-making framework that 1) explored a reasonable range of alternatives to meet project objectives, 2) evaluated potential issues and impacts to the refuge, resources and values, and 3) identified mitigation measures to lessen the degree or extent of these impacts. The EA provided more detailed analysis of the potentially affected natural resources and visitor use and experience with no or negligible impacts anticipated for geology and soils, air quality, water quality, floodplains, Wilderness, cultural resources, refuge management and operations, and socioeconomics. The EA is incorporated as part of this finding.

Implementation of the agency's decision would be expected to result in the environmental, social, and economic effects summarized in the EA.

As described in the EA, the preferred action's potential impacts to natural resources and visitor use and services including the take of fish and turkey through hunting and fishing, degradation of soils and vegetation, the spread of invasive plants, disturbance to wildlife, increase in litter and potential user conflicts. However, given the anticipated level of use, effective monitoring and the mitigation and avoidance measures discussed above reduce these potential impacts to a negligible level. Specifically hunting, and its associated activities, can result in positive or negative impacts to wildlife and other Refuge resources. With proper management and monitoring, turkey hunting (as proposed for the Refuge) is expected to cause only negligible to minor negative impacts. Fishing access will require some small facilities such as a parking area and wildlife fencing similar to the existing trails. Fishing can also have impacts such as excessive litter. Pistol pond is a former quarry that was excavated for limestone rock material. Therefore, adding infrastructure to this highly disturbed area will have negligible impacts.

Hunting and Fishing along with the other uses including: wildlife observation, photography, environmental education, interpretation, bicycling, instructor-led small group activities, small group camping, commercial recording, commercial tours, UAS drones, and scientific research as proposed are expected to have positive impacts by increasing the Refuge's ability to reach new audiences while having a minimal footprint and infrastructure on the Refuge.

The Service has determined that these changes in the VSP are compatible with the purposes of the Florida Panther National Wildlife Refuge and the mission of the NWRS.

The Refuge Manager may establish specific regulations for individual species or portions of the Refuge depending on conflicts with other wildlife dependent recreation priorities. Permanent or periodic public use closures or closures of portions of the Refuge may be necessary if the Refuge Manager determines that there is specific habitat, wildlife protection and/or public safety requirements. The need to implement mitigation measures will be evaluated annually. All public uses will be conducted in accordance with all applicable State, Refuge and federal regulations. Coordination with the public and Refuge stakeholders including the State will promote continuity and understanding of the Refuge and Service

resource goals and objectives, and will help assure that the decision-making process takes into account all interests.

### **Measures to Mitigate and Minimize Adverse Effects**

To ensure that implementation of the action alternative protects natural and cultural resources that are unimpaired and the quality of the visitor experience, a consistent set of mitigation measures will be applied to actions proposed in this plan. The Service will prepare appropriate environmental compliance (i.e., those required by the NEPA, National Historic Preservation Act (NHPA), and other relevant legislation) for these future actions. As part of the environmental compliance, the Service will avoid, minimize, and mitigate adverse impacts when practicable. The implementation of a compliance-monitoring program will be within the parameters of NEPA and NHPA compliance documents, U.S. Army Corps of Engineers Section 404 permits, etc. The compliance-monitoring program will oversee these mitigation measures and will include reporting protocols.

The following mitigation measures and best management practices will be applied to avoid or minimize potential impacts from implementation of the action alternatives. Mitigation measures for the proposed uses includes:

1. Avoidance of an impact through not taking an action or parts of an action;
2. Minimizing impacts through limiting the degree or magnitude of an action; or
3. Rectifying impacts by repairing, rehabilitating, or restoring the affected environment.

For instance, mitigating the use of ORVs, is done by avoiding regular use, minimizing impacts by only allowing them on existing trails, and monitoring the trail width and depth to identify potential closures and maintenance and rehabilitation needs. We also may temporally closed due to high water events or other management needs. All other tracked vehicles, boats, or motorcycles are prohibited on the refuge. To prevent disruption of natural surface water flows, all trails that will receive ORV, hiking, biking, (for Service operations or public use) will be designed, built, and/or maintained so the trail surface is kept at the natural grade of the surrounding landscape.

Techniques that will help minimize trail rutting that could otherwise occur in wet areas of the Addition include “at-grade” maintenance, trail stabilization with aggregate material, the use of culverts, and low-water crossings. This mitigation will help preserve the natural sheet flow through the Addition at a local and regional level. In addition, if trail conditions eventually become degraded in areas and surface flow becomes altered, the indicator and standards monitoring program will be applied to remedy the situation and restore surface water flows (as described in the previous User Capacity section). The use of culverts, low-water crossings, and at-grade trail construction and maintenance are examples of such techniques.

For new facilities, and to the extent practicable for existing facilities, stormwater management measures will be implemented to reduce nonpoint source pollution discharge from parking lots and other impervious surfaces. Such actions could include use of oil/sediment separators, street sweeping, infiltration beds, permeable surfaces, and vegetated or natural filters to trap or filter stormwater runoff.

Areas used by visitors (e.g., trails, developed areas, and designated campsites) will be monitored for signs of native vegetation disturbance. Public education, revegetation of disturbed areas with native plants, erosion control measures, and barriers will be used to control potential impacts on plants from trail erosion or social trailing.

To the extent possible, new or rehabilitated facilities will be sited to avoid sensitive wildlife habitats, including feeding and resting areas, major travel corridors, nesting areas, and other sensitive habitats. Construction activities will be timed to avoid sensitive periods, such as nesting or breeding seasons. Ongoing visitor use and NPS operational activities could be restricted if their potential level of damage or disturbance warranted doing so.

Measures will be taken to reduce the potential for wildlife to get food from humans. Wildlife-proof garbage containers will be required in developed areas (including visitor centers, picnic areas, trails, and interpretive waysides). Signs will continue to educate visitors about the need to refrain from feeding wildlife.

Other visitor impacts on wildlife will be addressed through such techniques as visitor education programs, restrictions on visitor activities, and ranger patrols.

### **Monitoring**

The Service and Florida Fish and Wildlife Conservation Commission (FWC) have historically worked closely together on Florida panther research and monitoring efforts. Since the Refuge's establishment, the Refuge has been a critical component in the State's ongoing inventory and monitoring effort for the Florida panther. In 2008, the Service, FWC, and National Park Service developed an Interagency Response Plan (USFWS et al. 2008) to properly respond to human/panther conflicts, document depredations and coordinate outreach efforts among the three agencies. The Service also works with the FWC on various wildlife research activities beyond the Florida panther.

Since its establishment in 1989, a major objective of the Biological Program has been to inventory flora and fauna on the FPNWR. The objectives of wildlife inventories on FPNWR are to discern the distribution, abundance and population dynamics of indigenous species. Data derived from these inventories also augment ongoing and future research, and allow objective formulation and evaluation of wildlife management on the refuge. Long-term definitive wildlife inventory objectives include, but are not limited to:

- a) Species presence
- b) Species abundance/densities
- c) Habitat preferences
- d) Diurnal and seasonal variation in habitat preferences
- e) Use of treated and untreated habitats (e.g., fire maintained ecosystems and invasive plant treatments)
- f) Shifts in habitat use due to water levels, vegetation stage, or unknown factors
- g) Predator/prey relationships
- h) Competing species relationships

As we add new or expand uses, the Refuge will add the monitoring of visitor use impacts to this list of objectives. Specifically, monitoring changes in vegetation by the transfer of invasive plant seed sources, disturbance to wildlife, human/wildlife conflicts, and soil compaction. Specific to the use of ORV's, the Service will monitor the width of trails, depth of trails at sensitive locations along the existing trail network both before and after the hunting season. Trail width is often an indicator of the degree of suitable substrate within a trail. As trails become rutted, ORV operators travel parallel to the rutted area in order for the vehicle to have traction to cross the area. This practice often increases the width of the trail. The trail depth is related to the rutting caused by vehicles traveling through moist soils. The displacement of soils by vehicles deepens trails over time. These indicators will allow the Service to maintain trails or temporary trail closures should the integrity of the adjacent soils, vegetation and habitats be

degraded. Monitoring of litter and trash at Pistol pond is also necessary. The use of the refuge is strictly “pack it in pack it out.” Should litter become a burden on staff resources (spending more than 10 hours a year to clean litter in a given area), it may trigger management actions to restrict areas or possible closure of the use.

The Florida Panther NWR has one of the longest running camera trap programs in the state of Florida, and have amassed 100's of thousands of images and videos. The Refuge plans to continue maintaining camera traps on the Refuge in order to better assess any potential trend changes for species such as the Osceola wild turkey, Florida panther, Florida black bear, bobcat, white-tailed deer, and other species suitable to be monitored by camera traps. Florida Panther NWR plans to work with partners, Friends of the Florida Panther Refuge, researchers, and volunteers to continue evaluating and analyzing past data obtained from the FPNWR camera trap grid. The use of the is camera grid will also assist us in monitoring the public use on trails and the impact to the species above.

FWC also monitors turkey brood rearing success statewide through a citizen's science app. Citizens can report wild turkey sightings, helping provide a way to gauge wild turkey nesting success, brood survival, and population dynamics at a statewide level. Florida's annual summer wild turkey survey is part of a larger regional study designed to provide more insight into the distribution and abundance of wild turkeys. The information, combined with harvest data, lets FWC biologists scientifically manage the wild turkey population—ensuring we have a thriving population now and in the future.

In addition to camera traps, long-term monitoring has included water level recorders to monitor water tables on the Florida Panther NWR, and forest bird monitoring, which has been conducted since 2010.

The Florida Panther NWR Wildlife Inventory and Monitoring Plan (1993) identifies and describes the procedures for the census of certain wildlife populations on the refuge, and discerns their distribution, abundance and population dynamics. Data developed from monitoring activities described in the plan were hoped to augment ongoing and future research. Since its development in 1993, many inventory and monitoring ideas in the Florida Panther NWR Wildlife Inventory and Monitoring Plan have been replaced by numerous research projects, which provided more scientific data within funding and personnel capabilities. A revised Florida Panther NWR Wildlife Inventory and Monitoring Plan will likely be developed once the Florida Panther NWR Comprehensive Conservation Plan revision is approved.

### **Public Review**

The Service sent letters regarding the Draft Hunting Plan, draft hunting and fishing compatibility determinations, regulations, and EA to the state of Florida in October 2020 and April 2021. Refuge staff will continue to coordinate with FWC to address annual implementation of hunting activities. The Service also sent letters requesting comments and consultation in October 2020 and follow up emails in April 2021 to:

- Seminole Tribe of Florida
- Miccosukee Tribe of Indians of Florida
- Seminole Nation of Oklahoma
- Poarch Band of Creek Indians

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Visitor Services Plan, draft Hunting and Sport

Fishing Plan, Environmental Assessment, and draft Compatibility Determinations for Florida Panther National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice including a Public Information Bulletin and draft planning documents were posted on the refuge's website on April 15, 2021 this also included an announcement of a Virtual Public Meeting that was held May 11, 2021. National public notice was provided through the Federal Register ([Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from 600 members of the general public and non-governmental organizations (including the Humane Society of the United States, Mountain Lion Foundation, Conservancy of Southwest Florida, Friends of the Florida Panther Refuge, The Future of Hunting in Florida Inc., Big Cat Rescue, Florida Wildlife Federation, Florida Chapter of Backcountry Hunters and Anglers, United Waterfowlers-FL Inc., Loxahatchee Group of the Sierra Club, Sierra Club Conservation Committee, Sierra Club, Sierra Club Calusa Group, Defenders of Wildlife Florida Office, Isaac Walton League, Safari Club International, Safari Club International South Florida Chapter, Everglades Coordinating Council, South Florida Engineering and Consulting, Center for Biological Diversity, The Nature Conservancy, and South Florida Wildlands Association, Natural Resources Defense Council), the Seminole Tribe of Florida, and the Florida Fish and Wildlife Conservation Commission. Of these 600, 26 comments were submitted verbally at the May 11, 2021 virtual public meeting that included 73 participants. The Florida State Clearinghouse reviewed the action (SAI #FL202106029249C), determining that the project is consistent with the Florida Coastal Management Program. The individual state agencies submitting comments through the Florida State Clearinghouse included Florida Fish and Wildlife Conservation Commission, South Florida Water Management District, Florida Department of Environmental Protection, and Florida Department of State Division of Historical Resources. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published in Appendix H of this document.

### **Finding of No Significant Impact**

While refuges, by their nature, are unique areas protected for conservation of fish, wildlife and habitat, the proposed action will not have a significant impact on refuge resources and uses for several reasons, as listed.

- Any future construction or ground disturbing activity will be required to undergo appropriate planning and analysis under the National Environmental Policy Act and would be required to meet all other applicable laws, regulations, and policies, including Section 106 of the National Historic Preservation Act. While potential future facilities were outlined in the Visitor Services Plan, detailed planning for these facilities would be required prior to permitting and construction activities.
- In the context of local/State/refuge hunting/fishing programs, the proposed action will only result in a harvest of less than 1% of additional species. The Service works closely with the State to ensure that additional species harvested on a refuge are within the limits set by the State to ensure healthy populations of the species for present and future generations of Americans.
- The action will result in beneficial impacts to the human environment, including the biodiversity and ecological integrity of the refuge, as well as the wildlife-dependent

recreational opportunities and socioeconomics of the local economy, with only negligible adverse impacts to the human environment as discussed above.

- The adverse direct and indirect effects of the proposed action on air, water, soil, habitat, wildlife, aesthetic/visual resources, and wilderness values are expected to be minor and short-term. The benefits to long-term ecosystem health that these efforts will accomplish far outweigh any of the short-term adverse impacts discussed in this document.
- The NWRS uses an adaptive management approach to all wildlife management on refuges, monitoring and re-evaluating the public use opportunities on the refuge on an annual basis. This ensures the public use programs continue to contribute to the biodiversity and ecosystem health of the refuge and these opportunities do not contribute to any cumulative impacts to habitat or wildlife from climate change, population growth and development, or local, State, or regional wildlife management.
- The action, along with proposed mitigation measures, will ensure that there is low danger to the health and safety of refuge staff, visitors, and the public.
- The action is not in an ecologically sensitive area;
- The action will not impact any candidate, threatened, or endangered species; or any Federally-designated critical habitat;
- The action will not impact any cultural or historical resources;
- The action will not impact any wilderness areas;
- There is no scientific controversy over the impacts of this action and the impacts of the proposed action are relatively certain.
- The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988.

Based upon a review and evaluation of the information contained in the EA as well as other documents and actions of record affiliated with this proposal, the Service has determined that the proposals to implement the 2021-22 Visitor Service Plans and Hunting and Fishing Management Plan on the Florida Panther NWR do not constitute major Federal actions significantly affecting the quality of the human environment under the meaning of section 102 (2) (c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required.

## **References**

U.S. Fish and Wildlife Service. 1993. Wildlife Inventory Plan for Florida Panther National Wildlife Refuge. Atlanta, GA.

U.S. Fish and Wildlife Service. 2000. Comprehensive Conservation Plan for Florida Panther National Wildlife Refuge. Atlanta, GA.

U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), Florida Fish and Wildlife Conservation Commission (FWC). 2008. Interagency Florida Panther Response Plan, 2008. USFWS, Atlanta, GA.

U.S. Fish and Wildlife Service. 2021. Draft Visitor Services Plan and Hunt and Sport Fishing Plan for Florida Panther National Wildlife Refuge. U.S. Department of the Interior Unified Regions 2 and 4. April 2021. Atlanta, GA.

**Decision**

The Service has decided to implement the 2021-22 Visitor Service Plan and Hunting and Fishing Management Plan for the Florida Panther NWR.

This action is compatible with the purposes of the refuges and the mission of the National Wildlife Refuge System. See the attached compatibility determination for Florida Panther NWR (Appendix C).

The action is consistent with applicable laws and policies.

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Signature, Title Date