

TEN MILE CREEK WATER PRESERVE AREA CRITICAL PROJECT TRANSFER  
ST. LUCIE COUNTY, FLORIDA  
Draft Environmental Assessment



Section 107 of the Energy and Water Development and Related Agencies Appropriations Act, 2016 (Division D of the Consolidated Appropriations Act, 2016, Public Law 114-113) (hereinafter “Section 107”) provides that the Ten Mile Creek Water Preserve Area Critical Restoration Project (“Project”) is no longer authorized as a Federal project upon execution of a transfer agreement between the U.S. Army Corps of Engineers (Corps) and the South Florida Water Management District (SFWMD) that includes the requirement for SFWMD to operate the Project as an environmental restoration project to provide water storage and water treatment options. The Corps is working toward execution of the transfer agreement within 180 days of December 15, 2015, as mandated by Congress. That effort includes conducting an appropriate National Environmental Policy Act (NEPA) analysis. The implementation of the selected alternative will provide a portion of the original purpose and benefits of the project, including capturing and storing stormwater run-off during wet periods to reduce excessive freshwater flows to the St. Lucie River and Estuary as well as treatment in the STA to improve water quality before releasing back to Ten Mile Creek during dryer periods.

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## **PROPOSED FINDING OF NO SIGNIFICANT IMPACT**

### **Ten Mile Creek Water Preserve Area Critical Project Transfer**

#### **Environmental Assessment**

#### **St. Lucie County, Florida**

Based on the information analyzed and presented in the Environmental Assessment (EA) attached hereto, dated February 2016, reflecting pertinent information obtained from agencies having jurisdiction by law and/or special expertise, I conclude that the proposed action will not significantly impact the quality of the human environment and does not require an Environmental Impact Statement. Reasons for this conclusion are, in summary:

- Congress directed the U.S. Army Corps of Engineers (Corps) to transfer the project to the non-Federal sponsor, the South Florida Water Management District (SFWMD) in section 107 of the Consolidated Appropriations Act of 2016 (Division D of the Consolidated Appropriations Act, 2016, Public Law 114-113). The transfer agreement requires the SFWMD to continue to operate the transferred project as an environmental restoration project to provide water storage and water treatment options.
- The project will not adversely affect existing fish and wildlife habitat.
- The project will not adversely affect protected species.
- Coordination with the Florida State Historic Preservation Officer and appropriate federally recognized tribes is ongoing. It is anticipated that the proposed project will cause no adverse effect on any sites of cultural or historic significance and prior to implementation this project will be fully in compliance with the National Historic Preservation Act through finalized consultation.
- The project is in compliance with the Clean Water Act. Water quality certification pursuant to 33 U.S.C. Section 1341 for this transfer and deauthorization is not required.
- The Corps is coordinating a consistency determination under the guidelines of the Coastal Zone Management Act (CZMA) through the circulation of this EA. The Corps has determined that the proposed action is consistent with the State of Florida coastal zone management programs. The Florida CZMA Evaluation can be referenced in Appendix B of this report.
- The transfer of the Ten Mile Creek WPA Critical Project to the SFWMD and deauthorization as a federal project will provide a portion of the original purpose and benefits of the project, including capturing and storing stormwater run-off during wet periods to reduce excessive freshwater flows to the St. Lucie River and Estuary as well as

treatment in the STA to improve water quality before releasing back to Ten Mile Creek during dryer periods.

- This finding is being coordinated with the public and agencies in accordance with 40 CFR 1501.4(e) and Engineer Regulation ER 200-2-2 (part 11 and Appendix A). The point of contact is Lisa Aley at 904-232-3756 or Lisa.E.Aley@usace.army.mil.

In view of the above, and after consideration of public and agency comments received on the project, I have concluded that the proposed action for Ten Mile Creek Water Preserve Critical Project will not result in a significant adverse effect on the human environment. This finding incorporates by reference all discussions and conclusions contained in the Environmental Assessment attached hereto.

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Jason A. Kirk, P.E.

Colonel, U. S. Army

District Commander

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Date

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## **1. PROJECT INTRODUCTION**

### **1.1 Project Authority**

The Ten Mile Creek Water Preserve Area (TMC WPA) Critical Project was authorized under section 528(b)(3) of the Water Resources Development Act of 1996, by Public Law 103-404. A state of Florida water quality certification was issued to the U.S. Army Corps of Engineers (Corps) by the Florida Department of Environmental Protection (FDEP) via Comprehensive Everglades Restoration Plan Regulation Act (CERPRA), file number 0192879. The permit is set to expire on July 10, 2018. FDEP also permitted South Florida Water Management District (SFWMD) operation of the project under the same authority with the same permit file number. The SFWMD's permit is set to expire in August of 2016.

### **1.2 Project Description**

The TMC WPA is an above ground reservoir located in St. Lucie County, Florida, near Fort Pierce. The TMC WPA includes an emergency overflow spillway and a pump station to move water from Ten Mile Creek into the reservoir; a treatment cell (also referred to as a polishing cell) with a pump station and culvert to move water from the reservoir into the treatment cell; and a culvert for release of water back into Ten Mile Creek; as well as all associated access roads, haul roads, ditches, and canals (*Figure 1* and *Figure 2*). The TMC WPA is designed to capture and retain water in the landscape for gradual release, for the purposes of mimicking a more natural stormwater flow regime. The reservoir capacity is approximately 5,000 acre-feet and has a maximum operating pool elevation of 29.0 feet (NGVD). The non-Federal sponsor is the SFWMD.

Ten Mile Creek flows west to east across the northern portion of the site. The project provides water quality improvements in the Ten Mile Creek and regulates delivery of fresh water to the St. Lucie River and in turn, to the Indian River Lagoon estuary (IRL). As originally intended, the reservoir would capture peak stormwater flows from Ten Mile Creek and route them to the STA to be slowly released back into the creek to moderate the salinity levels in the downstream St. Lucie River and Indian River Lagoon estuaries. Moderating salinity levels to achieve a more natural salinity regime in the estuaries will improve habitat conditions for a wide variety of estuarine species such as fish, oysters, and seagrasses. The reservoir's natural settlement processes would initially reduce particulates and phosphorus (P) concentrations. In the STA, the biological processes and emergent vegetation would further reduce nutrients and particulates. Water released from the STA would be cleaner than upstream creek flows and it would provide both salinity moderation and nutrient reduction benefits to Ten Mile Creek and the downstream estuaries.

Construction of TMC WPA was completed in January 2006. During project testing and monitoring from December 2011 to March 2012, significant design and construction-related problems were identified. The reservoir has been drawn down to minimize the potential for risks to public health, safety, and property damage. Consequently, the project cannot be operated at the design pool to achieve the originally intended project benefits because benefits are based on



the reservoir's capacity to reduce peak creek flows during the wet season and also to release fresh water during the dry season to avoid hypersalinity in the downstream estuaries.

In December 2015, Corps was directed to transfer the project to the non-Federal sponsor, the SFWMD by section 107 of the Consolidated Appropriations Act of 2016, Public Law 114-113. Upon execution of the agreement to transfer the project, it would no longer be federally authorized. The transfer agreement requires the SFWMD to continue to operate the transferred project as an environmental restoration project to provide water storage and water treatment options. This environmental assessment describes the effects of the transfer and deauthorization of the project.

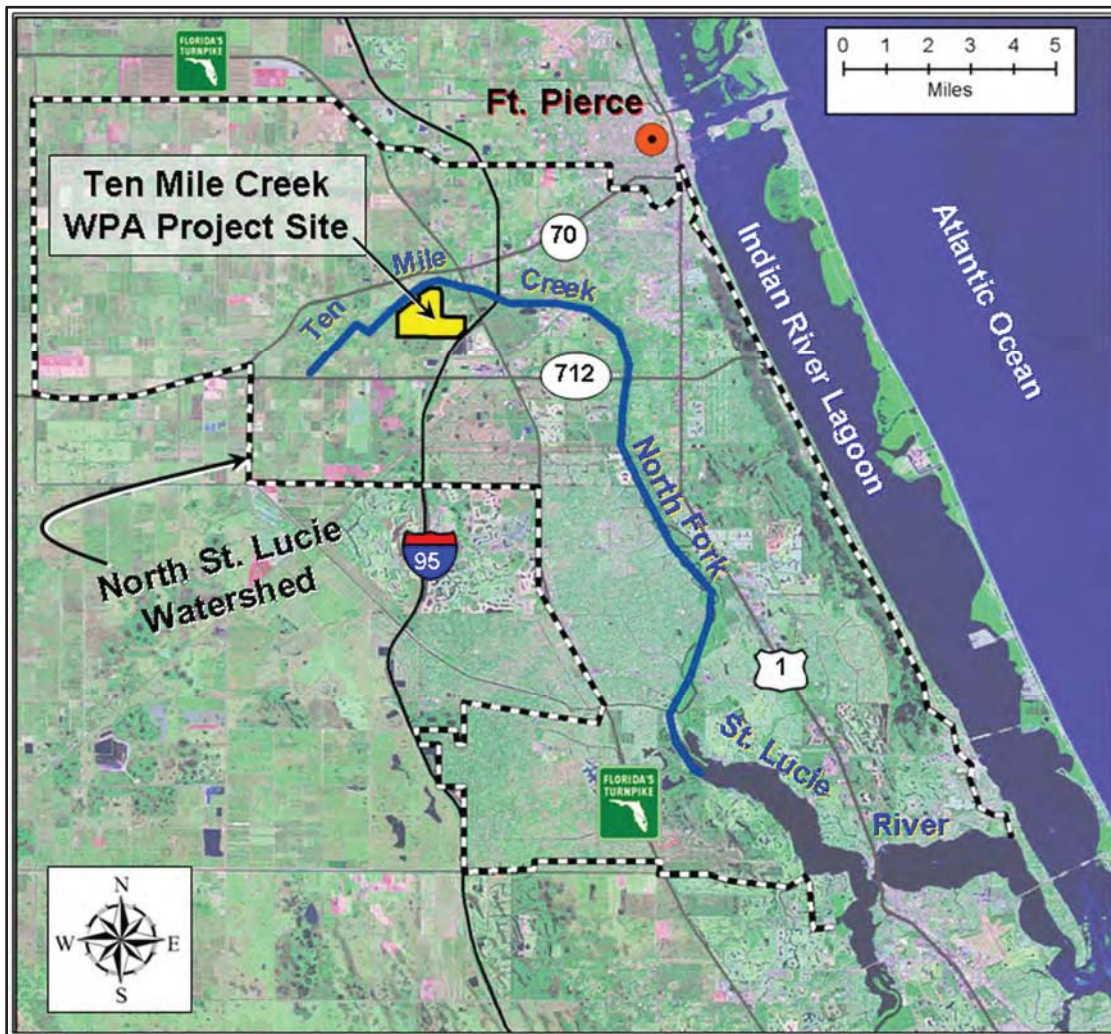


Figure 1: Ten Mile Creek Water Preserve Area Local Map



Figure 2: Project Layout

### 1.3 Agency Goal or Objective

The Corps has been directed by Congress to transfer the TMC WPA project to the SFWMD after which it will no longer be authorized as a Federal project. Upon execution of the transfer agreement, the SFWMD will operate the transferred project as an environmental restoration project to provide water storage and water treatment options.

### 1.4 Purpose of this Environmental Assessment

This EA evaluates the environmental impacts of transfer and deauthorization of the project. Because the Congressional directive (Section 107) does not require specific operations of the project by the SFWMD (beyond the requirement that SFWMD continue to operate TMC WPA as an environmental restoration project to provide water storage and water treatment options), the analysis in this EA will cover general rather than specific operational effects.

### 1.5 Public Involvement

The EA and Finding of No Significant Impact (FONSI) were coordinated with the public, including Federal, state, and local agencies and other interested stakeholders. Any comments received during the public coordination period will be included in the final document. All correspondence received from the public is included as Appendix A in this document.

## **2. ALTERNATIVES**

### **2.1 Description of Alternatives**

#### *2.1.1 Alternative 1. No Action*

The No Action Alternative includes the current Federal authorization of the TMC WPA. Operations would cease because SFWMD will not operate and maintain it and the Corps has no funds or authority to operate and maintain the project. The reservoir and treatment cell may fill with rainwater, but the pumps will not be operated to transfer water from the TMC WPA to Ten Mile Creek. As a result of maintaining the water level in the reservoir between 13.0 and 14.5 feet (NGVD), stormwater flows are not able to be captured and stored in the reservoir for later slow release. Under the No Action Alternative, the project cannot achieve the originally intended benefits to the creek or downstream estuaries.

#### *2.1.2 Alternative 2. Transfer to SFWMD (Recommended Plan) Terminating Federal Authorization*

Upon the completion of the transfer, the project will no longer be authorized as a Federal project. The transfer agreement requires SFWMD to operate the project as an environmental restoration project to provide water storage and water treatment options. The implementation of this alternative will provide a portion of the original purpose and benefits of the project, including capturing and storing stormwater run-off during wet periods to reduce excessive freshwater flows to the St. Lucie River and Estuary, as well as treatment in the STA to improve water quality before releasing back to Ten Mile Creek during dryer periods. Any future changes in the project features or operation once the project is transferred will be addressed by the SFWMD in subsequent permitting actions by the FDEP, and possibly the Corps and other environmental regulatory agencies.

#### *2.1.3 Alternative 3. Full Remediation of Project Features with Structural Modifications*

This alternative includes completing all structural fixes necessary to enable the reservoir's maximum operating pool elevation of 29.0 feet NGVD to be achieved for the full benefits envisioned in the original letter report. The reservoir would be able to maintain the maximum storage volume as originally intended. This alternative would include a crest wall along the top of the reservoir embankment to achieve compliance with the wind and precipitation criteria for freeboard and would not require operational actions in advance of severe meteorological events.

### **2.2 Issues and Basis for Choice**

The Secretary was directed by Section 107 of the Consolidated Appropriations Act of 2016 to execute a transfer agreement with the SFWMD for the Ten Mile Creek WPA. SFWMD is not willing to pursue full remediation under the existing Project Cooperation Agreement.

### **2.3 Alternatives Eliminated from Detailed Evaluation**

Alternative 3 was not carried forward in the evaluation of environmental impacts because it is contrary to Congress' direction and is not supported by the non-Federal sponsor.

## 2.4 Preferred Alternative

The preferred alternative is Alternative 2: Transfer to SFWMD and Deauthorize. The transfer agreement requires the SFWMD to operate the project as an environmental restoration project to provide water storage and water treatment options.

## 3. AFFECTED ENVIRONMENT

### 3.1 Resources Eliminated from Detailed Analysis

The transfer and deauthorization of Ten Mile Creek will not significantly affect fisheries, recreation, aesthetics, noise levels, air quality, or socio-economics in the project area, and therefore are not described in detail within this EA.

### 3.2 General Environmental Setting

The project is juxtaposed to river floodplain, pasture, natural areas, residential developments, and a garbage disposal site creating a patchwork of habitats that is attractive to local and migratory wildlife. Ten Mile Creek flows west to east, along the project's northern boundary, then south through a narrow floodplain corridor to the North Fork of the St. Lucie River, and ultimately to the IRL. The reservoir was constructed in a retired citrus grove and the STA was located in an area which formerly consisted of pasture, wet pasture, pine flatwoods, wet prairie, and depression marsh. The eastern boundary of the project is bordered by St. Lucie County's Gordy Road Natural Area which consists of scrubby flatwoods and a man-made lake. South of the reservoir lies wet flatwoods and scattered freshwater marshes. To the west, there are a few houses on open pasture. The St. Lucie County Landfill is located immediately to the southeast of the project, separated from the project by I-95. A housing development is proposed immediately north of the project's floodplain boundary which currently remains in a semi-developed state.

### 3.3 Threatened and Endangered Species

The species identified in Table 1 and described below have the potential to exist in the study area.

Table 1: Species with the Potential to Exist in the Study Area

Group	Common Name	Scientific Name	Status	Potential to Exist in Project Area
Birds	Everglade snail kite	<i>Rostramus sociabilis plumbeus</i>	Endangered	This species has been encountered in the project area
	Wood stork	<i>Mycteria americana</i>	Threatened	This species has been encountered in the project area
	Audubon's crested caracara	<i>Polyborus plancus auduboni</i>	Threatened	This species has been encountered in the project area
Mammals	Florida bonneted bat	<i>Eumops floridanus</i>	Endangered	Potential to be in or near the study area

<b>Group</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>	<b>Potential to Exist in Project Area</b>
<b>Reptiles</b>	American alligator	<i>Alligator mississippiensis</i>	Threatened	This species has been encountered in the project area
	Eastern indigo snake	<i>Drymarchon corais couperi</i>	Threatened	This species has been encountered in the project area
	Gopher tortoise	<i>Gopherus polyphemus</i>	Candidate	This species has been encountered in the project area

Source: U.S. Fish and Wildlife Service, January 2016

### 3.3.1 *Everglade Snail Kite*

The snail kite is a medium-sized raptor, with a total body length for adult birds of 36 to 39.5 cm and a wingspan of 109 to 116 cm. The Florida population of snail kites is considered to be a single population with considerable distributional shifts. The combination of a range restricted to the watersheds of the Everglades, lakes Okeechobee and Kissimmee, and the upper St. Johns River, with a highly specific diet composed almost entirely of apple snails, makes the snail kite's survival directly dependent on the hydrology and water quality of these watersheds. Snail kite habitat consists of freshwater marshes and the shallow vegetated edges of lakes (natural and man-made) where apple snails can be found.

An Everglade snail kite was sighted by the SFWMD staff in January 2016 in the reservoir. It is unknown if the kite was nesting or just foraging in the area.

### 3.3.2 *Wood Stork*

Wood storks are wading birds that feed, nest, and roost in a variety of freshwater and estuarine wetland habitats from Florida to North Carolina. They forage in shallow waters including freshwater marshes, swamps, ponds, flooded pastures and ditches where prey, primarily small fish and crayfish, are concentrated by falling water levels. Wood storks actively use the site and have been spotted frequently in the project area.

### 3.3.3 *Audubon's Crested Caracara*

Caracara inhabit open country, including dry prairie and pastures with cabbage palm, cabbage palm/live oak hammocks, and shallow ponds and sloughs. Pasture habitat is their preferred foraging ground, and cabbage palm is their preferred nesting platform. Caracara are known to use the edges of wetlands for foraging. Caracara mating pairs are territorial and require large areas of suitable habitat within their territory.

Crested caracara were sighted in the pasture area due north of the reservoir pump station in March and July of 2007 when the project was actively pumping water. They also have the potential to exist in the pasture area west or south of the reservoir.

### 3.3.4 *Florida Bonneted Bat*

The Florida bonneted bat (also known as the Florida mastiff bat) is the largest species of bat in Florida. They are thought to be exceedingly rare, only occurring in a handful of counties in south Florida, and have one of the most restrictive ranges of any bat species in the U.S. To date, only a few bonneted bat nursery roosts have been documented. Bonneted bats have been detected foraging in a variety of habitats including semitropical forests with tropical hardwood, pineland, and mangrove habitats, as well as man-made areas such as golf courses and neighborhoods.

Little is known about this species and there are no confirmed sightings of them on the project site, but habitat exists for the bat so it has the potential to exist in the project area.

### 3.3.5 *American Alligator*

Alligators exist throughout the Southeast, from the Carolinas to Texas and north to Arkansas. Alligators have extremely varied diets, but primarily consume fish, turtles, and snails. Young alligators mostly feed on insects, crustaceans, snails, and fish. Although the American alligator is no longer threatened, related animals, such as several species of crocodiles and caimans, are still in decline. For this reason, the FWS continues to protect the alligator under the ESA classification as “threatened due to similarity of appearance.”

The American alligator currently exists in the project area. It preys on small animals at the edge of the water in the reservoir and STA.

### 3.3.6 *Eastern Indigo Snake*

Adjacent lands to the project support the federally threatened eastern indigo snake. Indigo snakes inhabit a wide variety of habitats including wetlands, hydric and mesic pine flatwoods, as well as xeric pinelands and scrub. They also use abandoned agricultural areas and human altered habitats. Indigo snakes typically forage on the edges of wetlands for fish, reptiles, amphibians, birds and mammals.

Eastern indigo snakes have the potential to exist in the STA if water levels are low, but not in the reservoir.

### 3.3.7 *Gopher Tortoise*

The range of the gopher tortoise extends along the coastal plain from South Carolina through Florida to southeastern Louisiana. The gopher tortoise most often lives on well-drained sandy soils in transitional (forest and grassy) areas. It is commonly associated with a pine overstory and an open understory with a grass and forb (non-woody) groundcover and sunny areas for nesting. Gopher tortoises can also sometimes be found in more marginal habitat such as roadsides, ditch banks, utility and pipeline rights-of-way, pastures, and even marginal wetland habitat, especially if their preferred habitat has been lost. They dig deep burrows for shelter and forage on low-growing plants. Gopher tortoises share these burrows with more than 350 other species, and are therefore referred to as a keystone species.

## 3.4 Fish and Wildlife Resources

Ten Mile Creek serves as a wildlife corridor, allowing for the movement of wildlife to the reservoir and STA for watering, foraging, and nesting opportunities, especially for waterfowl,

wading birds, fish, amphibians, and aquatic reptiles. Movement of wildlife between the creek, reservoir, and STA has been documented in considerable numbers. Some upland species from the surrounding natural areas, such as deer, feral hogs (*Sus scrofa*), and turkeys, are occasionally seen within the reservoir and STA. Vultures fly from the landfill and roost and forage in the project area. The TMC WPA area is expected to become increasingly important to wildlife as development pressures convert surrounding lands from wildlife habitat into residential and commercial uses.

Eighty-five species of birds have been documented within the project area, 83 species of which are considered migratory birds under the Migratory Bird Treaty Act (MBTA). There were 13 ground-nesting birds, 10 of which have successfully nested on site. Black-necked stilts, mottled ducks (*Anas fulvigula*), black-bellied whistling ducks (*Dendrocygna autumnalis*), common moorhen, killdeer (*Charadrius vociferous*), pied-billed grebe (*Podilymbus podiceps*), Florida sandhill crane (*Grus canadensis pratensis*), and purple gallinule (*Porphyrio martinica*) established ground nests in the reservoir or STA. Anhingas (*Anhinga anhinga*) and double-crested cormorants (*Phalacrocorax auritus*) established nests in shrubby vegetation in the STA. Many wading birds forage and loaf on both the reservoir's bench and the shallow-water interior areas, and within the STA.

The floodplain of Ten Mile Creek is in close proximity to the reservoir, and is a popular roost site for raptors, including bald eagles (*Haliaeetus leucocephalus*), red-shouldered hawks (*Buteo lineatus*), wood storks, and vultures. Black vultures (*Coragyps atratus*) and turkey vultures (*Cathartes aura*) perch, by the hundreds, in nearby pines, oaks and water hickories, and frequent the nearby St. Lucie County Landfill. They also prey on wildlife that has become entrapped on the reservoir's interior soil cement embankment. Tree snags in the STA serve as roosts for anhingas, double-crested cormorants, wood ducks (*Aix sponsa*), and black-bellied whistling ducks.

Aquatic reptiles are a natural component of lakes and streams, and the TMC WPA has a variety of species in abundance, including the Florida redbelly turtle (*Pseudemys nelsoni*), chicken turtle (*Deirochelys reticularia*), peninsula cooter (*Pseudemys floridana peninsularis*), Florida softshell turtle (*Apalone ferox*), striped mud turtle (*Kinosternon baurii*), Florida water snake (*Nerodia fasciata pictiventris*) and American alligator (*Alligator mississippiensis*).

The TMCP and adjacent uplands provide habitat for whitetail deer (*Odocoileus virginianus*), wild hog (*Sus scrofa*), raccoon (*Procyon lotor*), turkey (*Meleagris gallopavo*), river otter (*Lutria canadensis*), armadillo (*Dasypus novemcinctus*), opossum (*Didelphis marsupialis*), and terrestrial reptiles, including gopher tortoise (*Gopherus polyphemus*), box turtle (*Terrapene carolina*), southern black racer (*Coluber constrictor priapus*), southern ring-necked snake (*Diadophis punctatus punctatus*), yellow rat snake (*Elaphe obsoleta quadrivittata*), and eastern garter snake (*Thamnophis sirtalis sirtalis*).

Although wildlife is abundant in the project area, several structural components of the reservoir pose problems for wildlife, including the interior soil cement embankment, wave run-up steps, the interior bench at the base of the embankment, the pump station discharge drop structure, and

the project's exterior fence. The uneven bottom of the reservoir interior combined with the lower than anticipated water levels have resulted in a mosaic of exposed bottom areas and flooded areas (shallow depth). This type of habitat is attractive as nesting and reproductive habitat for migratory bird species April 1 – August 31, which is peak breeding season for many migratory bird species including waterfowl and wading birds. Long legged shorebirds, such as the Black Necked Stilt (*Himantopus mexicanus*), use the shallow water as foraging habitat, and nest on exposed higher areas, including the reservoir apron.

Waterfowl, such as mottled ducks, purple gallinules, and moorhens, nest in emergent patches and forage in deeper water areas. The young of the species often are unable to ascend the step-like wave-breaking benches on top of the levees to exit the reservoir (Figure 3).



**Figure 3: Mother Duck and hatchlings retreating from wave-break bench.**

Turtles have been found in the reservoir prior to, during, and after cessation of operational testing. The turtles were present in the reservoir when it was full of water. Turtle movements are year round, but are increased by water level decline. The turtles were found all along the inner perimeter of the wave break steps and are often unable to exit the reservoir (Figure 4). Most showed injuries to the lower shell and legs from scraping, became trapped at the edge of the wave break bench or “step,” flipped during ascent/descent, and are heavily predated by vultures.





*Figure 4: Turtle at edge of wave break bench.*

### **3.5 Water Quality**

The North St. Lucie River (North Fork) is a relatively large natural river segment that is fed by the Five Mile and Ten Mile Creeks. Ten Mile Creek is the major tributary of the North Fork of the St. Lucie River, an Outstanding Florida Water (OFW). The North Fork flows southward where it widens to form the tidal embayment known as the St. Lucie River Estuary. The Ten Mile Creek basin is located in the prime grapefruit-producing area of St. Lucie County which has been ranked as first among Florida counties. Because most groves were developed before the advent of modern stormwater treatment systems, runoff in the vicinity flows unimpeded into the North Fork.

The original EA for this project dated September 1999 described, in detail, the without project water quality conditions as being moderately to significantly degraded due to agricultural runoff which contributed to salinity level decreases and transporting undesirable constituents into the downstream estuaries. Suspended solids, nutrients, and pesticides comprise the major undesirable constituents that are loaded into the St. Lucie estuary by Ten Mile Creek. The impact of these constituents on the estuary is limited growth of seagrasses, reduction of light penetration, and high oxygen demand thus causing depleted dissolved oxygen concentrations in the water columns. Nutrients in stormwater also increase biological activity such as increased algal presence. Furthermore, excess levels of nutrients in the water column generate adverse turbidity and color conditions. In the long term, nutrient-laden sediment accumulation occurs, enabling nutrient recycling, which increases eutrophication. Over the 1986 to 1995 reporting period, the Florida State Water Quality Summary 305b report showed an increasing trend for both TN and TP concentrations in the St. Lucie with the TP nutrient limits exceeding the screening criteria for this nutrient, and the Trophic State Index (TSI) computed for the St. Lucie is 60, indicating moderately poor water quality conditions for an estuary.

Estimates reported in the 1999 EA show the C-24 canal contributing approximately 20-32 percent of the nutrient load to the St. Lucie River basin. Past sampling events for pesticide contamination by the FDEP show violations of water quality standards in the C-24 waterway. In

the North Fork of the St. Lucie River concentrations of Simazine (3.5 ppb), Diazinon (0.15 ppb) and Ethion (0.12 ppb) were found to exceed state standards. At the same location, concentrations of pesticides in bottom sediments (Endosulfan II and Ethion) were found at concentrations that indicate the presence of probably toxic conditions. Voluntary reduction in the use of Ethion by citrus growers may play a role in lowering sediment Ethion concentrations (FDEP; January, 1998). To date, no study has been conducted to quantify the impact of agricultural pesticide loads. However, because of the extensive acreage of agricultural uses in the region surrounding the Ten Mile Creek Basin, it is probable that significant loads occur. This may be especially true in those areas where citrus groves are adjacent to the creek.

Following construction of the Ten Mile Creek facility, these conditions remain unaffected due to the facility's inability to operate and function as designed. This has led to continually degraded conditions to the downstream estuaries.

### **3.6 Hazardous, Toxic, and Radioactive Waste**

The completed project has had no effect any Hazardous, Toxic, and Radioactive Waste (HTRW) material and the Federal action evaluated as part of this updated EA requires no changes to the project that may impact HTRW. Any HTRW found onsite during any future phases of the project would be remediated in accordance with local, state and federal laws and would be the responsibility of the SFWMD as the land and project owner.

### **3.5 Air Quality**

Air quality at Ten Mile Creek is fairly good. Some of the property does border I-95, a major Florida highway, so the site is slightly affected by car exhaust. There is no industry on the site that could contribute to adverse air quality. Since the facility has not operated as designed, there has been virtually no impact on air quality generated by this project. All air permitting requirements are the responsibility of the SFWMD.

### **3.7 Cultural Resources**

Prior to construction of the 10 Mile creek project the Corps conducted archaeological investigations throughout the project area and identified four prehistoric archaeological sites 8SL1180, 8SL0007, 8SL1181, and 8SL1182. In addition, two Archaeological Occurrences were identified during this survey and determined not to represent any archaeological sites but simply isolated prehistoric materials. The Corps determined that all four of the archaeological sites were significant in accordance with the National Historic Preservation Act (NHPA) and that planned impacts would adversely affect the National Register eligibility of site 8SL1181.

Per the implementing regulations (36 CFR 800) of the NHPA, the Corps entered into a Memorandum of Agreement (MOA) with Florida State Historic Preservation Officer (SHPO). This MOA specified stipulations for mitigation of effects for impacts to site 8SL1181 through data recovery investigations on the archaeological site. In addition, the MOA specified ongoing protection of the remaining three archaeological sites. This MOA was implemented on 13 January 2003, and in a letter dated 16 December 2004, the SHPO acknowledged the completion of the data recovery project with delivery of a report entitled: *Phase III Data recovery of*

8SL1181 at Ten Mile Creek, St. Lucie County Florida (DHR #2004-9073). Currently required preservation of the three additional sites remains in place (See Appendix D).

### **3.8 Native Americans**

There is no known tribal or reservation land within the project area. However, Native American groups lived throughout the region in the past and their decedents continue to live within the State of Florida and throughout the US. Prior consultation under section 106 of the National Historic Preservation Act on various aspects of the project has not indicated any historic use although it certainly remains possible. Consultation will be updated with both tribes in regards to project impacts.

## **4. ENVIRONMENTAL EFFECTS**

### **4.1 General Environmental Setting**

#### *4.1.1 No Action Alternative*

The No Action Alternative maintains the water level in the reservoir between 13.0 and 14.5 feet (NGVD), therefore stormwater flows are not able to be captured and stored in the reservoir for later slow release. The project cannot achieve the originally intended benefits in the creek or downstream estuaries unless it can function as initially planned for.

#### *4.1.2 Alternative 2: Transfer to SFWMD and Deauthorize*

The preferred alternative will provide a portion of the original purpose and benefits of the project, including capturing and storing stormwater run-off during wet periods to reduce excessive freshwater flows to the St. Lucie River and Estuary as well as treatment in the STA to improve water quality before releasing back to Ten Mile Creek during dryer periods.

### **4.2 Threatened and Endangered Species**

#### *4.2.1 No Action Alternative*

The No Action Alternative, letting the Ten Mile Creek WPA lay fallow, will generally have no effect on listed species in the project area as compared to current operations. Lower water levels in the reservoir and STA would generally reduce habitat and foraging for most of the listed species. However, under this scenario, environmental restoration and water storage and treatment as originally intended by the project will not be achieved and future habitat in the project area is uncertain.

#### *Everglade Snail Kite*

Continued low water levels in the STA as a result of TMC WPA laying fallow will detour or prohibit the snail kite from foraging and nesting in the area.

#### *Wood Stork*

Wood storks are currently using the site and are likely continue for the foreseeable future. The No Action Alternative will have no effect on the wood stork.

*Audubon's Crested Caracara*

Although caracaras have been sighted in the area, the amount of forage is limited under current conditions. It is probable that the caracaras will continue to use the area to forage if the No Action Alternative is implemented.

*Florida Bonneted Bat*

The No Action Alternative will have no effect on the Florida bonneted bat, which has not been documented in the project area, but has the potential to exist.

*American Alligator*

The No Action Alternative will have no effect on the American alligator, which is currently using the project area and is likely to continue in the future.

*Eastern Indigo Snake*

The No Action Alternative may benefit the eastern indigo snake, which has the potential to exist in the STA if water levels are low, but not in the reservoir.

*Gopher Tortoise*

Low water levels associated with fallow conditions may benefit the gopher tortoise, which prefer dryer habitat.

*4.2.2 Alternative 2: Transfer to SFWMD and Deauthorize*

*Everglade Snail Kite*

The STA could potentially become snail kite foraging and nesting habitat if the project is transferred and operated by the SFWMD at higher water levels. The reservoir may also be used by kites for foraging in the future depending on the water depth.

*Wood Stork*

Wood storks are currently using the site and will likely increase their use under the SFWMD proposed operation as water levels increase and prey for storks increases.

*Audubon's Crested Caracara*

Current site conditions are too overgrown for caracaras to use as the amount of forage is limited. If the project is transferred and maintained by SFWMD, forage would be more acceptable and would benefit caracaras.

*Florida Bonneted Bat*

Higher water levels should increase insect productivity for foraging bonneted bats. If they exist in the project area, this alternative will benefit their food source.

*American Alligator*

American alligators are currently using the site and will likely increase their use under the SFWMD proposed operation as water levels increase and prey increases.

### *Eastern Indigo Snake*

Eastern indigo snakes have the potential to exist in the STA under dry conditions, therefore increasing water levels would reduce snake habitat in the project area, however, the surrounding areas to TMC provide drier habitat for snakes.

### *Gopher Tortoise*

Because gopher tortoises prefer dry habitat, the implementation of this alternative would reduce their habitat in the area. Any gopher tortoises that move into the levee system from surrounding areas would be relocated so that they do not undermine the integrity of the levee.

## **4.3 Fish and Wildlife**

### *4.3.1 No Action Alternative*

Although the project is an attraction to wildlife, fallow conditions (lower, un-regulated water levels) are undesirable for many species. Several structural components of the reservoir pose problems for wildlife, including the interior soil cement embankment, wave run-up steps, the interior bench at the base of the embankment, the pump station discharge drop structure, and the project's exterior fence, as described in further detail below.

Impacts of the soil cement embankment:

More of the soil cement embankment is exposed during low water events. This embankment is an obstacle to wildlife movement, and increases their exposure to weather and predation. Additionally, the surface is abrasive to crawling wildlife, especially turtles. From January 20 through August 8, 2008, 108 turtles were found entrapped or dead on the interior soil cement embankment (FWS, 2009). The soil cement is also problematic because it can radiate intense heat, causing heat stress to turtles, chicks, and other wildlife traversing the exposed grade. Predators such as black and turkey vultures roost on the steps and use this as a hunting area (Figure 10). Many rescued turtles displayed scratches on their carapaces from vulture attacks.

Impacts of the wave run-up steps and temporary ramps:

Entrapment of turtles, bird chicks (black-necked stilts, moorhens, mottled ducks), and small garter snakes were documented at the base of the wave run-up steps over the entire interior embankment (FWS, 2009). Drawdown of water has been noted to cause an increase in turtle movement, however, endemic aquatic turtles nest year round, and movement between water bodies is expected at any time (Jackson 2008). Attempts to climb or descend the steps may result in the turtles flipping onto their carapace, and eventual death. Areas with gradual inclines on the embankment without wave run-up steps would not impede wildlife movement (FWS, 2009).

Migratory Birds Nesting on the Bench:

Water levels would remain low if Ten Mile Creek were to lay fallow. A bench at the base of the reservoir's interior embankment is exposed during lower water levels which serves as a nesting platform for ground-nesting birds. These ground nesters either build primitive nests in the vegetation, or lay eggs on the exposed bench. Bird chicks that cannot swim are trapped on this

narrow shelf between the borrow ditch and the steps at the top of the soil cement embankment. Although nesting habitat is provided at lower water events, the narrow bench provides little cover, exposing the parents and chicks to increased predation, limited food resources, and exposure to weather (FWS, 2009).

Pump station discharge drop structure:

The S-382 pump station discharge drop structure is a rectangular cement containment structure which fills with water and overflows into the reservoir during pumping operations. The pumped water flows from the basin down a cement flume equipped with cement baffles. Under this alternative, the pumps are not in use and the flume is dry. The flume is used as a ramp to access the discharge drop structure by wildlife, that ultimately fall or jump into the basin. Once inside the water-filled basin, animals become trapped as all four sides of the basin are vertical cement walls. Unless they are rescued, they either die of starvation, exposure, or predation. Entrapment of bird chicks, turtles, and alligators have been documented in the discharge drop structure.

Fencing:

There is a perimeter hog-wire fence surrounding the Ten Mile Creek WPA property for security purposes, and to limit feral hogs from entering the site. This fence is approximately 4-feet tall and extends to the ground, creating an obstacle to wildlife unable to climb through or over the fence.

#### *4.3.2 Alternative 2: Transfer to SFWMD and Deauthorize*

The Federal action is the transfer and deauthorization of TMC WPA. Once the project is transferred to SFWMD, it will be operated as an environmental restoration project to provide water storage and water treatment options, which would create more habitat for wildlife. However, facility operations and maintenance as a result of the transfer may impact wildlife during scheduled hydrologic fluctuations and routine operations.

Impacts of the soil cement embankment:

Less soil cement will be exposed during higher water events. Although the embankment is still an obstacle to wildlife movement, higher water provides more cover for species in the project area and will regulate the heat slightly more than if the water levels were lower.

Impacts of the wave run-up steps and temporary ramps:

Even during higher water levels, wildlife entrapment would still occur at the base of the wave run-up steps over the entire interior embankment because higher water levels would not cover the steps. A lack of rapid drawdowns may reduce turtle movement and lessen levels of injury and predation.

Migratory Birds Nesting on the Bench:

The bench is less exposed during higher water levels, which deters birds from nesting. Although this alternative reduces habitat for nesting migratory birds, the poor-quality habitat that provides

little cover, exposing the parents and chicks to increased predation, limited food resources, and exposure to weather (FWS, 2009).

Pump station discharge drop structure:

Under this alternative the pumps will be in use much of the time and the flume will be at least partially filled with water, discouraging animals from entering and getting trapped. However, under certain circumstances when the pumps are not in use and the flume is dry it can be used as a ramp to access the discharge drop structure by wildlife that become trapped in the basin.

Fencing:

Unless the fence is removed by SFWMD, it will continue to be an obstacle to wildlife unable to climb through or over the fence.

#### **4.4 Water Quality**

##### *4.4.1 No Action Alternative*

The no action alternative will provide no opportunity for improvements on the continually degrading water quality conditions if the facility remains nonfunctional.

##### *4.4.2 Alternative 2: Transfer to SFWMD and Deauthorize*

Transfer of TMC WPA will allow additional flexibility in the operations of the facility, thereby, allowing the project to achieve at least some of the desired benefits once envisioned for the project. Due to the uncertainties in the State's future plans for the facility, this EA does not attempt to quantify water quality benefits based on varying possibilities for operations. The SFWMD will be responsible for obtaining any required permits and associated NEPA/ESA consultation for the actions they decide to pursue after project transfer. Benefits and impacts will be more clearly defined during those coordination efforts. It is envisioned that the intent of the project will still be pursued, however, the benefits realized may be achieved to a lesser quantifiable amount than originally anticipated should the facility have functioned as designed.

Under the SFWMD's ownership, TMC WPA will attenuate stormwater flows into the North Fork of the St. Lucie River. These flows, which originate in the Ten Mile Creek basin, are to be captured and stored in the reservoir and subsequently pumped into a polishing pond before release back into the creek. The resulting hydrodynamic, physical and biological treatment is expected to ultimately result in the reduction of undesirable freshwater loads being delivered to the St. Lucie estuary.

The anticipated water quality improvements are to occur in response to a two-phase treatment approach. The first phase consists of the use of a deeper water storage area that borders Ten Mile Creek to the north and northwest. During high discharge events, a prescribed portion of flow will be captured from the Ten Mile Creek and pumped up gradient into the deeper water storage area. This would then flow into a polishing pond before being released into Ten Mile Creek.

After polishing pond treatment, the project is expected to provide relief to the St. Lucie Estuary from damaging freshwater discharges. Implementation of this project would greatly enhance the ability to maintain appropriate salinity in the North Fork Aquatic Preserve and offset the damaging effects of Lake Okeechobee flood releases until other components of the Comprehensive Plan for the C&SF Project can be implemented.

The storage area treatment would reduce sediment, nutrient and pesticide loads delivered to the St. Lucie Estuary. The polishing cell will remove nutrients by incorporating them into the aquatic plant biomass within the reservoir. Phosphorus is removed by adsorption, absorption, complexation and precipitation in wetlands. Studies have shown a general rate of phosphorous removal capability (or settling rate) of about 1 to 8 grams per meter square per year for such shallow water systems on a continuing basis. If plants die, then nutrients are released (unless they are mechanically harvested); therefore, this condition should be avoided.

#### **4.5 Hazardous, Toxic, and Radioactive Waste (HTRW)**

##### *4.5.1 No Action Alternative*

The no action alternative has no impact on HTRW.

##### *4.5.2 Alternative 2: Transfer to SFWMD and Deauthorize*

The project transfer has no impact on HTRW materials. Any HTRW found onsite during any future phases of the project would be remediated in accordance with local, state and Federal laws and would be the responsibility of the SFWMD as the land and project owner.

#### **4.6 Air Quality**

##### *4.6.1 No Action Alternative*

The no action alternative has no impact on air quality.

##### *4.6.2 Alternative 2: Transfer to SFWMD and Deauthorize*

The Federal action evaluated as part of this EA requires no pump station operations, thus no air quality impacts, under the change in Federal authority. However, the pump station is still anticipated to be operated by the landowner, the SFWMD. Operation of the facility's pump station may have some disruption of air quality as evaluated under the original project Environmental Assessment. The SFWMD will be responsible for any changes to air quality conditions, will obtain any permits required to authorize operations of the facility and will comply with all regulatory requirements. Any impacts are anticipated to be minimal and negligible. It is anticipated that the operations to be performed by the SFWMD will be less impactful with fewer emissions than once anticipated for the original operations of the project. Therefore, any impacts to air quality as a result of this Federal action evaluated in this EA would be less than previously coordinated under the 1999 EA.

#### **4.7 Cultural Resources**

##### *4.7.1 No Action Alternative*

Selection of the no action alternative would have no new effects on cultural resources. As discussion in section 3, the Corps entered into and MOA to mitigate the effects of the project to



known significant cultures resources. Protection measures as specified with the MOA would be maintained for there are three cultures resources (i.e. 8SL0007, 8SL1180, and 8SL1182).

#### *4.7.2 Alternative 2: Transfer to SFWMD and Deauthorize*

As discussed in section 3, the Corps is currently in compliance with the MOA in regards to completion of all required mitigation for site 8SL1180. The data recovery was conducted to mitigate impacts to elements that made the site eligible for inclusion on the National Register. Transfer and deauthorization of this project and continued used of the project by the SFWMD will not change the status of this resource

As the Corps has been directed to deauthorize the project (see project purpose), it must also take into account the potential effects that may result from the associated action. As part of the transfer and deauthorization, the Corps will terminate its responsibilities under the existing MOA for ongoing protection of the remaining sites (i.e. 8SL0007, 8SL1181, and 8SL1182) (see Appendix D). Since the undertaking for which the MOA was created is deauthorized, the Corps will no longer have authorization to maintain such an agreement. In addition, the deauthorization is contingent upon the State of Florida's assumption of responsibility for the project and its continued use for environmental restoration. Therefore, deauthorization will result transference of the project to the state of Florida which is obligated as the property owner to maintain protection of these sites in accordance with Chapter 276, Florida Statutes. As stipulated in FS 267.061(2)(d) "Each state agency of the executive branch shall assume responsibility for the preservation of historic resources which are owned or controlled by such agency." No appreciable difference between the level of protection afforded under the Florida Statutes as compared to that afforded under Federal law is anticipated. In light of these considerations, the Corps has determined that transfer and project deauthorization will have no adverse effect on the ongoing protection of the three sites.

### **4.8 Native Americans**

#### *4.8.1 No Action Alternative*

There are no anticipated effects to Native Americans. Current conditions will remain in place. As discussed in Chapter 3, there are no known Native American properties within the project area and the project should not have any effects to Native Americans.

#### *4.8.2 Alternative 2: Transfer to SFWMD and Deauthorize*

As part of the transfer and deauthorization of this project, consultation is ongoing between the Corps and the two federally recognized tribes within the immediate area of potential effect. As discussed in Chapter 3, there are no known Native American properties within the project area and the project should not have any effects to Native Americans. However, consultation with both federally recognized tribes within the region is ongoing and will be updated upon further consultation on this project. Of concern are archaeological sites that are with the project area as discussed under cultural resources. Once consultation is complete additional updates may be needed.

#### **4.9 Cumulative Impacts**

Cumulative effects are defined in 40 CFR 1508.7 as those effects that result from:

*...the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

Cumulative environmental effects for the project were assessed in accordance with guidance provided by the President's Council on Environmental Quality (CEQ). The Corps has determined that there is no net cumulative impact as a result of the Federal transfer of TMC WPA to SFWMD and deauthorization. The future operation and maintenance of TMC WPA by SFWMD would benefit habitat within the project area and downstream in the St. Lucie Estuary and IRL.

#### **4.10 Irreversible and Irrecoverable Commitment of Resources**

An irreversible commitment of resources is one in which the ability to use and/or enjoy the resource is lost forever. An irretrievable commitment of resources is one in which, due to decisions to manage the resource for another purpose, opportunities to use or enjoy the resource as they presently exist are lost for a period of time. There would be no irreversible or irretrievable commitments of resources resulting from the Federal transfer of TMC WPA to SFWMD and deauthorization because the project would continue to be operated for its original purpose, environmental restoration.

#### **4.11 Unavoidable Adverse Environmental Effects**

The transfer and deauthorization of TMC WPA is not expected to result in adverse environmental impacts. The transfer agreement requires SFWMD to operate the project as an environmental restoration project to provide water storage and water treatment options that would benefit the St. Lucie Estuary and IRL downstream.

#### **4.12 Compatibility with Federal, State, and Local Objectives**

The Corps has been in collaboration with FWS and SFWMD since the initiation of the TMC WPA. FWS has provided guidance and recommendations regarding several fish and wildlife resource conservation issues for the project, including participation in meetings and providing letters. Further, recommendations from FWS during the planning, design, construction, and operation of the project are applicable to other reservoirs and STAs operated by SFWMD. The re-operation and maintenance of TMC WPA has wide support and is compatible with Federal, state, and local objectives.

#### **4.13 Conflicts and Controversy**

Conflict and controversy are not expected as a result of the transfer of the project to SFWMD and deauthorization. This EA is being coordinated with local, state, and Federal agencies as well as interested stakeholders during a 30 day public review and comment period that began on February 17<sup>th</sup>, 2016. All public correspondence has been included as Appendix A.

## **5. ENVIRONMENTAL COMMITMENTS AND COMPLIANCE**

### **6. ENVIRONMENTAL COMMITMENTS**

This EA discusses the effects of the transfer of the project to SFWMD and deauthorization as a Federal project. If the SFWMD changes features, operations, or maintenance of the TMC WPA in the future, that action would be subject to additional environmental and cultural resource evaluation requirements.

#### **6.1 Clean Air Act of 1972, As Amended**

This Act is not applicable. The Federal action involves only the transfer and deauthorization of the TMC WPA.

#### **6.2 Clean Water Act of 1972, As Amended**

This Act is not applicable. The Federal action involves only the transfer and deauthorization of the TMC WPA.

#### **6.3 Coastal Barrier Resources Act and Coastal Barrier Improvement Act of 1990**

This Act is not applicable. The Federal action involves only transfer and deauthorization of the TMC WPA.

#### **6.4 Coastal Zone Management Act of 1972, As Amended**

A Federal consistency determination is included in this EA as Appendix B. The State's consistency review for this project was performed during the coordination of this EA.

#### **6.5 Endangered Species Act of 1973, As Amended**

The Corps sent a no affect determination letter to FWS in February 2016. A letter of concurrence will be received and dated in the final draft of this EA. This project is in compliance with this act.

#### **6.6 Estuary Protection Act of 1968**

No designated estuary would be affected by the project transfer, although the St. Lucie Estuary may eventually benefit from the transfer in the future. This Act is not applicable.

#### **6.7 Farmland Protection Policy Act of 1981**

This Act is not applicable. The Federal action involves only the transfer and deauthorization of the project and does involve the disturbance of soils.

#### **6.8 Federal Water Project Recreation Act of 1965, As Amended**

The Federal action would not affect outdoor recreation. The project is in compliance with this Act.

#### **6.9 Fish and Wildlife Coordination Act of 1958, As Amended**

The Federal action involves only the transfer and deauthorization of the TMC WPA, therefore the Corps has determined that this action will not affect listed species. The project is in compliance with this Act.

**6.10 Magnuson-Stevens Fishery Conservation and Management Act**

This Act is not applicable. The Federal action involves only the transfer and deauthorization of the TMC WPA.

**6.11 Marine Protection, Research, and Sanctuaries Act of 1972, As Amended**

Ocean disposal of dredged material is not proposed as a part of this project. This Act is not applicable. The Federal action involves only the transfer and deauthorization of the TMC WPA.

**6.12 Migratory Bird Treaty Act and Migratory Bird Conservation Act**

The Federal action involves only the transfer and deauthorization of TMC WPA and would not destroy migratory birds, their active nests, their eggs, or their hatchlings. The project is in compliance.

**6.13 National Environmental Policy Act of 1969, As Amended**

Environmental information on the project has been compiled and this EA has been prepared. The EA and proposed FONSI were circulated for review by public notice dated February 17<sup>th</sup>, 2016. The project is in compliance with the National Environmental Policy Act.

**6.14 National Historic Preservation Act of 1966, As Amended**

The Proposed Action is in compliance with Section 106 of the National Historic Preservation Act, as amended (PL89-665). As part of the requirements and consultation process contained within the National Historic Preservation Act implementing regulations of 36 CFR 800, this project is also in compliance through ongoing consultation with the Archaeological and Historic Preservation Act, as amended (PL93-29), Archeological Resources Protection Act (PL96-95), American Indian Religious Freedom Act (PL 95-341), Native American Graves Protection and Repatriation Act (NAGPRA), Executive Order 11593, 13007, and 13175, the Presidential Memo of 1994 on Government to Government Relations and appropriate Florida Statutes. Consultation with the Florida SHPO, appropriate federally recognized tribes, and other interested parties has been initiated and is ongoing. The Proposed Action will be in compliance with the goals of this Act upon completion of coordination as stated above.

**6.15 Resource Conservation and Recovery Act, As Amended by the Hazardous and Solid Waste Amendments of 1984, Comprehensive Environmental Response Compensation and Liability Act As Amended by the 5.26.21 Superfund Amendments and Reauthorization Act of 1996, Toxic Substances Control Act of 1976**

The Federal action involves only the transfer and deauthorization of the TMC WPA. The SFWMD is the landowner of TMC WPA. The project is in compliance with this Act.

**6.16 Rivers and Harbors Act of 1899**

The project is in compliance with the Rivers and Harbors Act of 1899 as it was constructed by the Corps in accordance with plans recommended by the Chief of Engineers and authorized under delegated authority of the Secretary of the Army. The proposed transfer does not affect any navigable water of the U.S.

**6.17 Safe Drinking Water Act of 1974, As Amended**

This Act is not applicable. The Federal action involves only the transfer and deauthorization of the TMC WPA.

**6.18 Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646)**

The purpose of PL 91-646 is to ensure that owners of real property to be acquired for Federal and federally assisted projects are treated fairly and consistently and that persons displaced as a direct result of such acquisition would not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. This Act is not applicable. The Federal action involves only the transfer and deauthorization of the TMC WPA.

**6.19 Wild and Scenic Rivers Act of 1968, As Amended**

This Act is not applicable. The Federal action involves only the transfer and deauthorization of the TMC WPA. Additionally, Ten Mile Creek is not designated a Wild and Scenic River.

**6.20 Executive Order (E.O.) 11990, Protection of Wetlands**

The Federal action involves only the transfer and deauthorization of the TMC WPA. No wetlands would be affected by project activities. The project is in compliance with the goals of this E.O.

**6.21 E.O. 11988, Floodplain Management**

The transfer and deauthorization of TMC WPA would have no adverse effects to floodplain management. The project is in compliance with the goals of this E.O.

**6.22 E.O. 12898, Environmental Justice**

This E.O. requires the Federal government to review the effects of their programs and actions on minorities and low-income communities. The transfer and deauthorization of TMC WPA would have no adverse effects on minorities and low-income communities. The project is in compliance with the intent of this E.O.

**6.23 E.O. 13045, Protection of Children**

This E.O. requires each Federal agency to “identify and assess environmental risks and safety risks [that] may disproportionately affect children” and ensure that its “policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.” The project has no environmental or safety risks that may disproportionately affect children. The project is in compliance with the intent of this E.O.

**6.24 E.O. 13112, Invasive Species**

The Federal action involves only the transfer and deauthorization and of the TMC WPA. The project would not contribute to nutrient loading or disturbance that could favor invasive species. The project is in compliance with the intent of this E.O.

**6.25 E.O. 13186, Migratory Birds**

The Federal action involves only transfer and deauthorization of the TMC WPA. Currently the project provides undesirable habitat for migratory birds. When the project is transferred and

operated by SFWMD, water levels in the reservoir will be higher, thus discouraging migratory birds from nesting on the reservoir bench. Although higher water levels reduces habitat for nesting migratory birds, the existing habitat is poor-quality habitat that provides little cover, exposing the parents and chicks to increased predation, limited food resources, and exposure to weather. Therefore, this project is in compliance with the intent of this E.O.

**7. LIST OF PREPARERS**

The individuals involved in the preparation of this Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) are listed in Table 2. In addition to the individuals listed below, this EA and FONSI were reviewed by the supervisory chain of the Environmental Branch, Planning and Policy Division of the U.S. Army Corps of Engineers (Corps), Jacksonville District.

Table 2. List of Preparers and Reviewers

Name	Discipline/Expertise	Agency	Role in Document
Lisa Aley	Environmental Engineer	Corps	Document preparation
Dan Hughes	Archeologist	Corps	Cultural and historic resources
Tamela Kinsey	Environmental Engineer	Corps	Water quality and HTRW
Gretchen Ehlinger	Biologist	Corps	NEPA Review
Jason Spinning	Biologist	Corps	NEPA Review
Michael Collis	Program Manager	Corps	NEPA Review

**8. PUBLIC INVOLVEMENT**

The EA and FONSI were coordinated with the public, including tribes, Federal, state, and local agencies and other interested stakeholders by Notice of Availability (NOA) dated 17 February, 2016. Any comments will be incorporated into the EA and responded to in Appendix D.

**9. REFERENCES**

USACE, 1999. Ten Mile Creek Water Preserve Area Critical Project, St. Lucie County, FL. Environmental Assessment. U.S. Army Corps of Engineers, Jacksonville District

USFWS, 2016. Environmental Conservation Online System. Species by County Report. <http://eos.fws.gov>

USFWS, 2009. Letter-Service Recommendations to Corps for Ten Mile Creek Water Preserve Area Critical Restoration. South Florida Ecological Services Office, Vero Beach FL 32960

Appendix A  
Public Involvement



**DEPARTMENT OF THE ARMY**  
**JACKSONVILLE DISTRICT CORPS OF ENGINEERS**  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

To Whom it May Concern:

Pursuant to the National Environmental Policy Act and the U.S. Army Corps of Engineers (Corps) Regulation (33 CFR 230.11), this letter constitutes the Notice of Availability of the Environmental Assessment and Proposed Finding of No Significance (EA/FONSI) for the Ten Mile Creek Water Preserve Area Critical Project Transfer. The project is located in St. Lucie County, Florida.

The EA/FONSI is available for your review on the Corps Environmental planning website, under St. Lucie County:

<http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx>

A copy of the report is also available at the Fort Pierce Library at 101 Melody Lane, Fort Pierce, FL 34950.

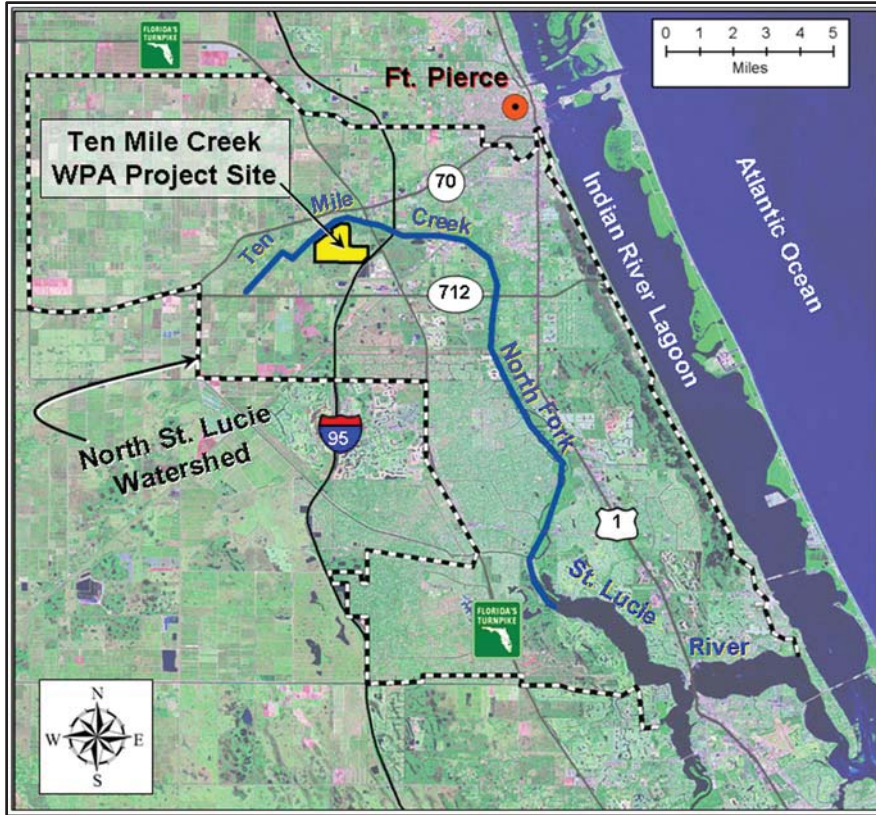
Any comments you may have must be submitted in writing to the letterhead address within 30 days after the date stamped on this letter. Questions concerning the EA can be submitted to Lisa Aley at the letterhead address, by email [Lisa.E.Aley@usace.army.mil](mailto:Lisa.E.Aley@usace.army.mil), or by telephone 904-232-3756.

Sincerely,

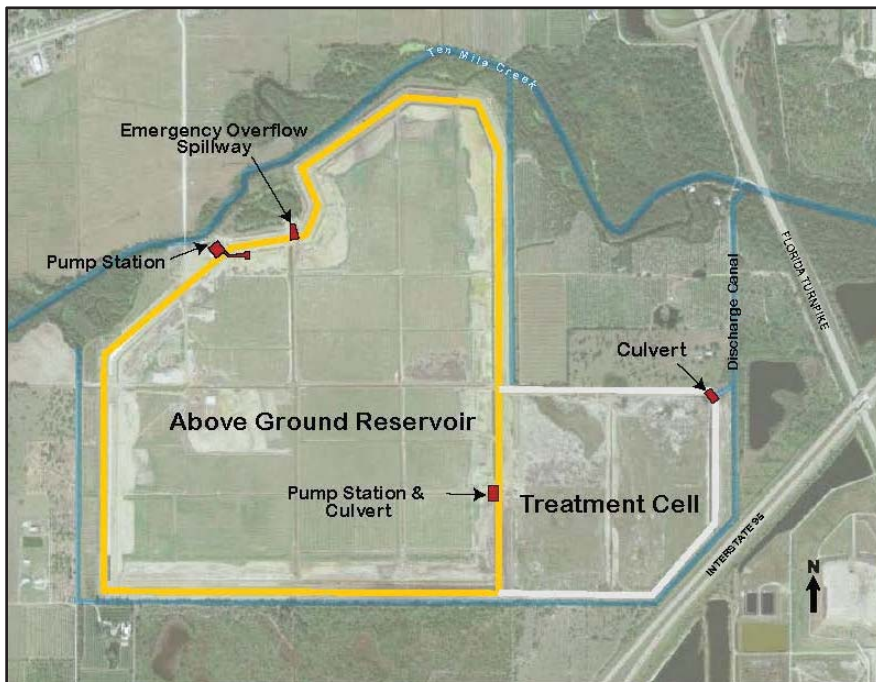
Jason J. Spinning  
Acting Chief, Environmental Branch

Enclosure





Ten Mile Creek Water Preserve Area Regional Location Map



Ten Mile Creek Water Preserve Area Project Layout

Appendix B  
Coastal Zone Management Act Federal Consistency Determination

**COASTAL ZONE MANAGEMENT ACT AND FLORIDA COASTAL MANAGEMENT  
PROGRAM FEDERAL  
CONSISTENCY DETERMINATION**

**Enforceable Policy.** Florida State Statues considered “enforceable policy” under the Coastal Zone Management Act ([www.dep.state.fl.us/cmp/federal/24\\_statutes.htm](http://www.dep.state.fl.us/cmp/federal/24_statutes.htm) ). Florida Department of Environmental Protection is the lead in implementing this chapter for those projects which SFWMD is the local sponsor.

**Applicability of the Coastal Zone Management Act.**

The following summarizes the process and procedures under the Coastal Zone Management Act for Federal Actions and for non-Federal Applicants\*.

<b>Item</b>	<b>Non-Federal Applicant (15 CFR 930, subpart D)</b>	<b>Federal Action (15 CFR 930, subpart C)</b>
Enforceable Policies	Reviewed and approved by NOAA (in FL <a href="http://www.dep.state.fl.us/cmp/federal/24_statutes.htm">www.dep.state.fl.us/cmp/federal/24_statutes.htm</a> )	Same
Effects Test	Direct, Indirect (cumulative, secondary), adverse or beneficial	Same
Review Time	6 months from state receipt of Consistency Certification (30-days for completeness notice) Can be altered by written agreement between State and applicant	60 Days, extendable (or contractible) by mutual agreement
Consistency	Must be Fully Consistent	To Maximum Extent Practicable**
Procedure Initiation	Applicant provides Consistency Certification to State	Federal Agency provides “Consistency Statement” to State
Appealable	Yes, applicant can appeal to Secretary (NOAA)	No (NOAA can “mediate”)
Activities	Listed activities with their geographic location (State can request additional listing within 30 days)	Listed or Unlisted Activities in State Program
Activities in Another State	Must have approval for interstate reviews from NOAA	Interstate review approval NOT required
Activities in Federal Waters	Yes, if activity affects state waters	Same

\* There are separate requirements for activities on the Outer Continental Shelf (subpart E) and for “assistance to an applicant agency” (subpart F).

\*\* Must be fully consistent except for items prohibited by applicable law (generally does not count lack of funding as prohibited by law, 15 CFR 930.32).

Chapter 161, Beach and Shore Preservation. The intent of the coastal construction permit program established by this chapter is to regulate construction projects located seaward of the line of mean high water and which might have an effect on natural shoreline processes.

Response: The Ten Mile Creek Water Preserve Area (TMC WPA) is not located seaward of the mean high water line. It is intended to provide water quality improvements in the Ten Mile Creek basin and regulate delivery of fresh water to the St. Lucie River and in turn, to the Indian River Lagoon estuary and would not affect shorelines or shoreline processes.

Chapters 186 and 187, State and Regional Planning. These chapters establish the State Comprehensive Plan which sets goals that articulate a strategic vision of the State's future. Its purpose is to define in a broad sense, goals and policies that provide decision-makers directions for the future and provide long-range guidance for orderly social, economic and physical growth.

Response: TMC WPA meets the primary goal of the State Comprehensive Plan through preservation and protection of the environment. The proposed work will be coordinated with the State through review of this document.

Chapter 252, Disaster Preparation, Response and Mitigation. This chapter creates a state emergency management agency, with the authority to provide for the common defense; to protect the public peace, health and safety; and to preserve the lives and property of the people of Florida.

Response: The purpose of TMC WPA is ecosystem restoration. Therefore, this work would not interfere with the efforts of Division of Emergency Management.

Chapter 253, State Lands. This chapter governs the management of submerged state lands and resources within state lands. This includes archeological and historical resources; water resources; fish and wildlife resources; beaches and dunes; submerged grass beds and other benthic communities; swamps, marshes and other wetlands; mineral resources; unique natural features; submerged lands; spoil islands; and artificial reefs.

Response: TMC WPA is juxtaposed to river floodplain, pasture, natural areas, residential developments, and a garbage disposal site creating a patchwork of habitats that is attractive to local and migratory wildlife. Additionally, Ten Mile Creek serves as a wildlife corridor, allowing for the movement of wildlife to the reservoir and STA for watering, foraging, and nesting opportunities, especially for waterfowl, wading birds, fish, amphibians, and aquatic reptiles. It provides habitat for special status species, including the Everglade snail kite, wood stork, Audubon's crested caracara, Florida bonneted bat, American alligator, eastern indigo snake, and gopher tortoise.

The Corps determination is that protected species and wildlife resources will benefit from the de-authorization and transfer of TMC WPA to South Florida Water Management District (SFWMD) as compared to the No Action Alternative and no adverse modification to critical habitat will occur from the transfer. If any modifications are made to TMC WPA after the transfer, preconstruction surveys will be conducted to minimize any disturbance in compliance with the USFWS consultation.

The Corps is currently in compliance with a Memorandum of Agreement (MOA) in regards to completion of all required mitigation for site 8SL1180. The data recovery was conducted to mitigate impacts to elements that made the site eligible for inclusion on the National Register. Transfer and deauthorization of federal participation in this project and continued use of the project by the SFMWD will not change the status of this resource. As the Corps has been directed to deauthorize the project, it must also take into account the potential effects that may result from the associated action. As part of the transfer and deauthorization process, the Corps will terminate its responsibilities under the existing MOA for ongoing protection of the remaining sites (i.e. 8SL0007, 8SL1181, and 8SL1182). Since the undertaking for which the MOA was created is deauthorized, the Corps will no longer have authorization to maintain such an agreement. In addition, the deauthorization is contingent upon the State of Florida's assumption of responsibility for the project and its continued use for environmental restoration. Therefore, deauthorization will result transference of the project to the state of Florida which is obligated as the property owner to maintain protection of these sites in accordance with Chapter 276, Florida Statutes. See the Environmental Assessment for further discussion of cultural resources.

Chapters 253, 259, 260, and 375, Land Acquisition. This chapter authorizes the state to acquire land to protect environmentally sensitive areas.

Response: The property proposed for this project is already in public ownership. The proposed project would comply with the intent of this chapter.

Chapter 258, State Parks and Aquatic Preserves. This chapter authorizes the state to manage state parks and preserves. Consistency with this statute would include consideration of projects that would directly or indirectly adversely impact park property, natural resources, park programs, management or operations.

Response: The transfer of TMC WPA would help improve environmental conditions at state parks or aquatic preserves in the region. It is consistent with this chapter.

Chapter 267, Historic Preservation.

This chapter establishes the procedures for implementing the Florida Historic Resources Act responsibilities. This project has been coordinated with the State Historic Preservation Officer (SHPO). Because of the nature of the project there is little potential for impact to historic properties as resources will be protected under this statute. The project is consistent with this chapter.

Chapter 288, Economic Development and Tourism. This chapter directs the state to provide guidance and promotion of beneficial development through encouraging economic diversification and promoting tourism.

Response: Contribution of TMC WPA area to the State's tourism economy would not be compromised by project implementation. TMC WPA would be compatible with environmental tourism for this area. Therefore, TMC WPA would be consistent with the goals of this chapter.

Chapters 334 and 339, Transportation. This chapter authorizes the planning and development of a safe, balanced, and efficient transportation system.

Response: This project will have no effect on transportation in the local area.

Chapter 370, Saltwater Living Resources. This chapter directs the state to preserve, manage and protect the marine, crustacean, shell and anadromous fishery resources in state waters; to protect and enhance the marine and estuarine environment; to regulate fishermen and vessels of the state engaged in the taking of such resources within or without state waters; to issue licenses for the taking and processing products of fisheries; to secure and maintain statistical records of the catch of each such species; and, to conduct scientific, economic, and other studies and research.

Response: The purpose of the reservoir is to capture peak stormwater flows from Ten Mile Creek and route them to the STA to be slowly released back into the creek to moderate the salinity levels in the downstream St. Lucie River and Indian River Lagoon estuaries. Moderating salinity levels to achieve a more natural salinity regime in the estuaries will improve habitat conditions for a wide variety of estuarine species such as fish, oysters, and seagrasses. This project is consistent with the goals of this chapter.

Chapter 373, Water Resources. This chapter provides the authority to regulate the withdrawal, diversion, storage, and consumption of water.

Response: The TMC WPA is being transferred over to the South Florida Water Management District, which is the state agency responsible for implementing this statute. Coordinated planning has been done with this agency to ensure compatibility with established policies. The transfer of the project is consistent with the goals of this chapter.

Chapter 376, Pollutant Spill Prevention and Control. This chapter regulates the transfer, storage, and transportation of pollutants and the cleanup of pollutant discharges.

Response: This work does not involve the transportation or discharging of pollutants. Conditions will be placed in the contract to handle any inadvertent spill of pollutants. Therefore, the transfer of the project would comply with this chapter.

Chapter 377, Oil and Gas Exploration and Production. This chapter authorizes the regulation of all phases of exploration, drilling, and production of oil, gas, and other petroleum products.

Response: This work does not involve the exploration, drilling or production of gas, oil or petroleum product and therefore does not apply.

Chapter 380, Environmental Land and Water Management. This chapter establishes criteria and procedures to assure that local land development decisions consider the regional impact nature of proposed large-scale development. This chapter also deals with the Area of Critical State Concern program and the Coastal Infrastructure Policy.

Response: The work does not involve land development as described by this chapter; therefore, this chapter is not applicable.

Chapter 388 (Mosquito/Arthropod Control). Chapter 388 provides for a comprehensive approach for abatement or suppression of mosquitoes and other pest arthropods within the state.

Response: The work would not further the propagation of mosquitoes or other pest arthropods.

Chapter 403, Environmental Control. This chapter authorizes the regulation of pollution of the air and waters of the state by the Florida Department of Environmental Protection.

Response: An Environmental Assessment has been prepared and will be reviewed by the appropriate resource agencies including the Department of Environmental Protection.

Chapter 582, Soil and Water Conservation. This chapter establishes policy for the conservation of the state soil and water through the Department of Agriculture. Land use policies will be evaluated in terms of their tendency to cause or contribute to soil erosion or to conserve, develop, and utilize soil and water resources both onsite or in adjoining properties affected by TMC WPA. Particular attention will be given to projects on or near agricultural lands.

Response: The de-authorization and transfer of TMC WPA to SFWMD will not affect soil erosion or water resources on or near agricultural lands. Future compliance with this regulation once the transfer is complete will be performed by SFWMD.

Appendix C  
Permit Correspondence



Permit correspondence will be included in final Environmental Assessment

Appendix D  
Pertinent Correspondence



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

FEB 17 2016

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

Mr. Bob Progulske  
US Fish and Wildlife Service  
South Florida Ecological Services Office  
1339 20th Street  
Vero Beach, FL 32960

Dear Mr. Progulske:

The U.S. Army Corps of Engineers, Jacksonville District (Corps) is proposing to transfer the Ten Mile Creek Water Preserve Area (TMC WPA) project to the South Florida Water Management District (SFWMD) after which it will no longer be authorized as a Federal project. Upon execution of the transfer agreement, the SFWMD will operate the transferred project as an environmental restoration project to provide water storage and water treatment options. The Corps is consulting to fulfill Endangered Species Act (ESA) requirements.

The TMC WPA is an above-ground approximately 526-acre reservoir with an adjacent 132-acre stormwater treatment area located southwest of Ft. Pierce, in St. Lucie County. It is designed to capture and retain water in the landscape for gradual release, for the purposes of mimicking a more natural stormwater flow regime. The reservoir capacity is approximately 6,000 acre-feet and has a maximum operating pool elevation of 29.0 feet (NGVD). The reservoir structures include an inflow pump station, an emergency spillway, an STA pump station and associated water control structures. The non-Federal sponsor is the SFWMD.

The transfer of the Ten Mile Creek WPA Critical Project to the SFWMD and deauthorization as a federal project will provide a portion of the original purpose and benefits of the project, including capturing and storing stormwater run-off during wet periods to reduce excessive freshwater flows to the St. Lucie River and Estuary as well as treatment in the STA to improve water quality before releasing back to Ten Mile Creek during dryer periods.

Pursuant to the ESA, the Corps has determined that the proposed action discussed above and identified in the EA would not affect the Everglade snail kite (*Rostramus sociabilis plumbeus*), the woodstork (*Mycteria americana*), Audubon's crested caracara (*Polyborus plancus auduboni*), Florida bonneted bat (*Eumops floridanus*), American alligator (*Alligator mississippiensis*), Eastern indigo snake (*Drymarchon corais couperi*), and Gopher tortoise (*Gopherus Polyphemus*). The Federal action only involves transfer and deauthorization of the TMC WPA.

We request your concurrence with our determination pursuant to the ESA. If you have any questions concerning this project or our determination, please contact Lisa Aley by email [Lisa.E.Aley@usace.army.mil](mailto:Lisa.E.Aley@usace.army.mil) or telephone 904-232-3756. Thank you for your assistance in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Spinning", written over a printed name and title.

Jason Spinning  
Acting Chief, Environmental Branch

Enclosure



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

FE 1 16

Planning and Policy Division  
Environmental Branch

Mr. Fred Dayhoff, Tribal Representative  
NAGPRA, Section 106  
Miccosukee Tribe of Indians of Florida  
Post Office Box 440021  
Tamiami Station  
Miami, Florida 33144

Dear Mr. Dayhoff:

The U.S. Army Corps of Engineers (Corps), Jacksonville District, is studying the environmental effects associated with the de-authorization of the Ten Mile Creek Water Preserve Area (TMC). The TMC WPA is an above-ground 526 acre reservoir with an adjacent 132 acre storm water treatment area (STA) located southwest of Ft. Pierce, in St. Lucie County (Figures 1&2). The WPA is designed to capture and retain water in the landscape for gradual release, for the purposes of mimicking a more natural storm water flow regime. The reservoir capacity is approximately 6,000 acres and has a maximum operating pool elevation of 29.0 feet (NGVD). The reservoir structures include an inflow pump station, an emergency spillway, an STA pump station and associated water control structures. The Corps was directed to Federally de-authorize TMC and transfer the project to the non-Federal sponsor, the South Florida Water Management District (SFWMD) by section 107 of the Consolidated Appropriations Act of 2016, Public Law 114-113. The transfer agreement requires the SFWMD to continue to operate the transferred project as an environmental restoration project to provide water storage and water treatment options.

Prior to construction of TMC, the Corps conducted archaeological investigations throughout the project area and identified four prehistoric archaeological sites 8SL1180, 8SL0007, 8SL1181, and 8SL1182. The Corps determined that all four of the archaeological sites were significant in accordance with the National Historic Preservation Act (NHPA) and that planned impacts would adversely affect the National Register eligibility of site 8SL1181.

Per the implementing regulations (36 CFR 800) of the NHPA, the Corps entered into a Memorandum of Agreement (MOA) with Florida State Historic Preservation Officer (SHPO). This MOA specified stipulations for mitigation of effects for impacts to site 8SL1181 through data recovery investigations on the archaeological site. In addition, the MOA specified ongoing protection of the remaining three archaeological sites. This MOA was implemented on 13 January 2003 and in a letter dated 16 December 2004, the SHPO acknowledged the completion of the data recovery project with delivery of a report entitled: *Phase III Data recovery of 8SL1181 at Ten Mile Creek, St. Lucie County Florida* (DHR #2004-9073). Currently required preservation of the three additional sites remains in place.

As the Corps has been directed to de-authorize the project, it must also take into account the potential effects that may result from the associated action. As part of the de-authorization process, the Corps will terminate its responsibilities under the existing MOA through an amendment for ongoing protection of the remaining sites (i.e. 8SL0007, 8SL1181, and 8SL1182). Since the undertaking for which the MOA was created is de-authorized, the Corps will no longer have authorization to maintain such an agreement. In addition, the de-authorization is contingent upon the State of Florida's assumption of responsibility for the project and its continued use for environmental restoration. Therefore, de-authorization will result in the transference of the project to the state of Florida which is obligated as the property owner to maintain protection of these sites in accordance with Chapter 276, Florida Statutes. As stipulated in FS 267.061(2)(d) "Each state agency of the executive branch shall assume responsibility for the preservation of historic resources which are owned or controlled by such agency." No appreciable difference between the level of protection afforded under the Florida Statutes as compared to that afforded under Federal law is anticipated. In light of these considerations, the Corps has determined that project de-authorization will have no adverse effect on the ongoing protection of the three sites.

I request your comments on the determination of No Adverse Effect. If there are any questions, please contact Dr. Dan Hughes at 904-232-3028 or e-mail at [daniel.b.hughes@usace.army.mil](mailto:daniel.b.hughes@usace.army.mil).

Sincerely,



Jason Spinning  
Acting Chief, Environmental Branch

Enclosure

AMENDMENT NO. 1  
TO THE  
MEMORANDUM OF AGREEMENT  
BETWEEN  
THE U.S. ARMY CORPS OF ENGINEERS, JACKSONVILLE DISTRICT  
AND THE  
FLORIDA STATE HISTORIC PRESERVATION OFFICE  
PURSUANT TO 36 C.F.R. 800.6(a)  
FOR THE MITIGATION OF CERTAIN ADVERSE EFFECTS  
OF THE TEN MILE CREEK WATER PRESERVE, ST. LUCIE COUNTY, FLORIDA

WHEREAS, on January 13, 2003, the U.S. Army Corps of Engineers, Jacksonville District (“Corps”) and the Florida State Historic Preservation Office (“FL SHPO”) executed a Memorandum of Agreement (Agreement) setting forth stipulations to address certain adverse effects to four (4) significant archaeological resources (Sites 8SL7, 8SL1180, 8SL1181, and 8SL1182) that would be affected by the Ten Mile Creek Water Preserve Project, St. Lucie County, Florida (“Project”);

WHEREAS, construction of the Project was completed in 2006;

WHEREAS, Section 107 of the Energy and Water Development and Related Agencies Appropriations Act, 2016 (Division D of the Consolidated Appropriations Act, 2016, Public Law 114-113), provides that the Project shall no longer be authorized as a Federal project upon execution of a transfer agreement that requires South Florida Water Management District (“SFWMD”) to operate the transferred project as an environmental restoration project to provide water storage and water treatment options;

WHEREAS, the Corps has fulfilled its obligations under the Agreement;

WHEREAS, upon execution of the transfer agreement and the simultaneous deauthorization of the Project, the Corps will no longer be authorized to carry out Project-related activities;

WHEREAS, any activities to preserve the archaeological resources and mitigate the effects of the SFWMD’s operations after transfer of the Project will be in accordance with applicable state law and any agreement between the South Florida Water Management District and FL SHPO; and

WHEREAS, the Corps and FL SHPO desire to amend the Agreement to terminate the Corps’ Section 106 responsibilities for the Project.

NOW, THEREFORE, the Corps and FL SHPO agree to amend the Agreement as follows:

1. The following is added as Stipulation 9:

“9. As of the effective date of Amendment No. 1 to the Agreement, the Corps has fulfilled all Section 106 requirements for the Project. The Corps will continue to fulfill its requirements under the Agreement until the transfer agreement with SFWMD is executed in accordance with Section 107 of the Energy and Water Development and Related Agencies Appropriations Act, 2016 (Division D of the Consolidated Appropriations Act, 2016, Public Law 114-113).”

2. The following is added as Stipulation 10:

“10. Upon execution of the transfer agreement, the Corps shall no longer be required to comply with the requirements of the Agreement or to undertake any further measures to address adverse effects arising from construction or operation of the Project, and the Agreement will be deemed to be terminated. The Corps shall immediately notify the FL SHPO once the transfer agreement is executed.”

This Amendment No. 1 to the Agreement shall become effective upon the date it is signed by the FL SHPO.

AGREED TO BY:

U.S. ARMY CORPS OF ENGINEERS, JACKSONVILLE DISTRICT

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Jason A. Kirk, P.E.  
Colonel, U.S. Army  
District Commander

FLORIDA STATE HISTORIC PRESERVATION OFFICER

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Timothy Parsons  
Acting Florida State Historic  
Preservation Officer



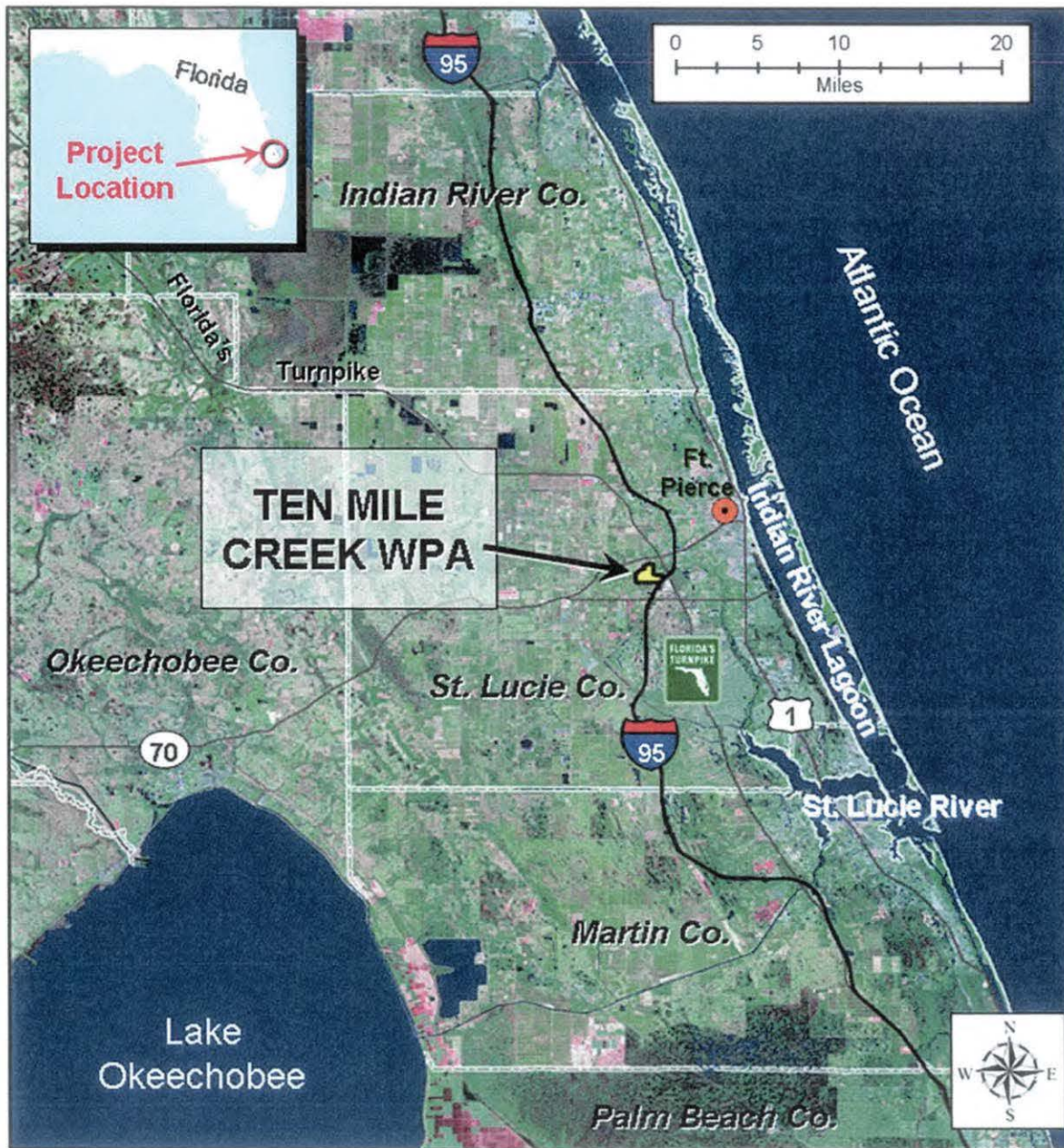


Figure 1. Location map showing the approximate location of TMC project area.

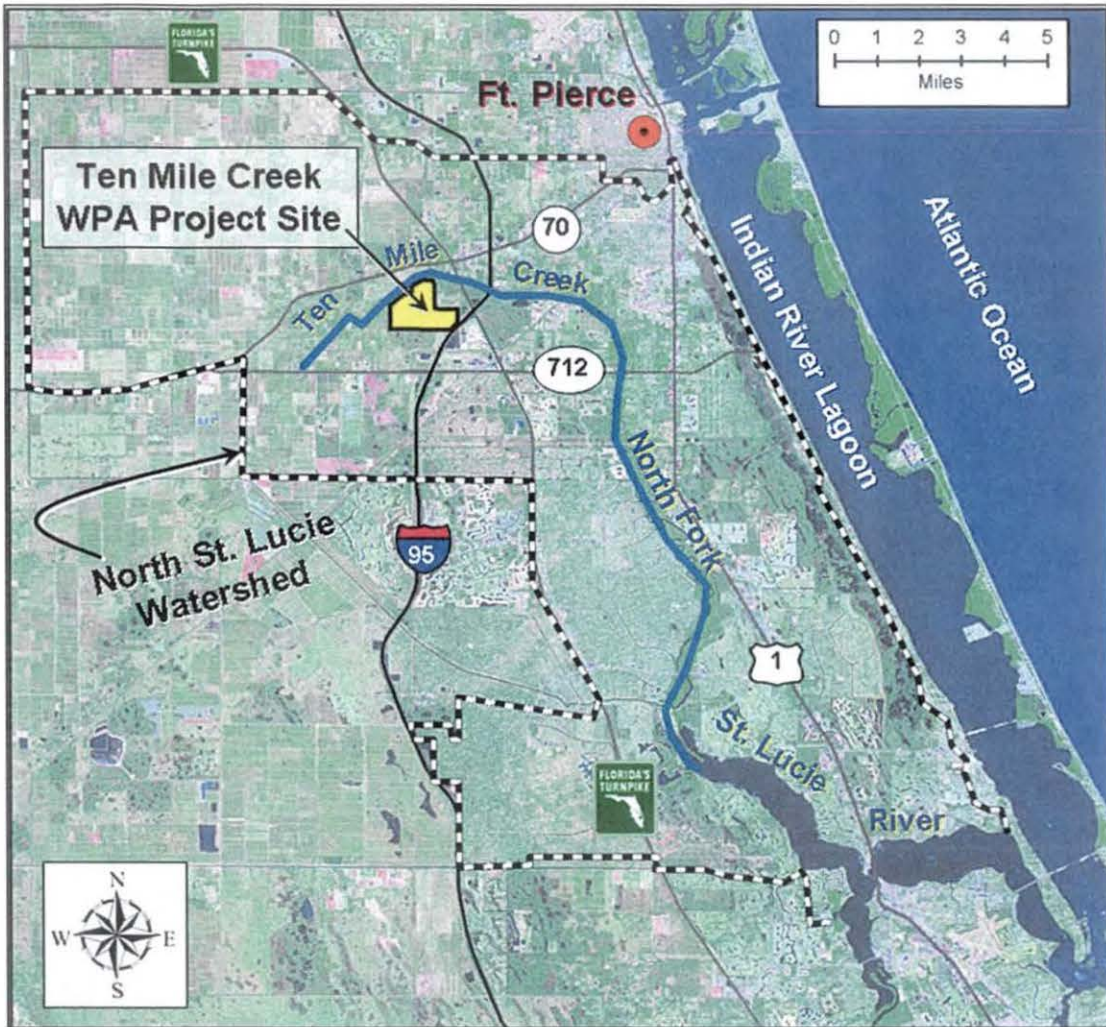


Figure 2. Location map showing the location of Ten Mile Creek Project.



REPLY TO  
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DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

FEB 1 2016

Planning and Policy Division  
Environmental Branch

Dr. Paul Backhouse, THPO  
Seminole Tribe of Florida  
Tribe Historic Preservation Office  
30290 Josie Billie Highway  
PMP 1004  
Clewiston, FL 33440

Dear Dr. Backhouse:

The U.S. Army Corps of Engineers (Corps), Jacksonville District, is studying the environmental effects associated with the de-authorization of the Ten Mile Creek Water Preserve Area (TMC). The TMC WPA is an above-ground 526 acre reservoir with an adjacent 132 acre storm water treatment area (STA) located southwest of Ft. Pierce, in St. Lucie County (Figures 1&2). The WPA is designed to capture and retain water in the landscape for gradual release, for the purposes of mimicking a more natural storm water flow regime. The reservoir capacity is approximately 6,000 acres and has a maximum operating pool elevation of 29.0 feet (NGVD). The reservoir structures include an inflow pump station, an emergency spillway, an STA pump station and associated water control structures. The Corps was directed to Federally de-authorize TMC and transfer the project to the non-Federal sponsor, the South Florida Water Management District (SFWMD) by section 107 of the Consolidated Appropriations Act of 2016, Public Law 114-113. The transfer agreement requires the SFWMD to continue to operate the transferred project as an environmental restoration project to provide water storage and water treatment options.

Prior to construction of TMC, the Corps conducted archaeological investigations throughout the project area and identified four prehistoric archaeological sites 8SL1180, 8SL0007, 8SL1181, and 8SL1182. The Corps determined that all four of the archaeological sites were significant in accordance with the National Historic Preservation Act (NHPA) and that planned impacts would adversely affect the National Register eligibility of site 8SL1181.

Per the implementing regulations (36 CFR 800) of the NHPA, the Corps entered into a Memorandum of Agreement (MOA) with Florida State Historic Preservation Officer (SHPO). This MOA specified stipulations for mitigation of effects for impacts to site 8SL1181 through data recovery investigations on the archaeological site. In addition, the MOA specified ongoing protection of the remaining three archaeological sites. This MOA was implemented on 13 January 2003 and in a letter dated 16 December 2004, the SHPO acknowledged the completion of the data recovery project with delivery of a report entitled: *Phase III Data recovery of 8SL1181 at Ten Mile Creek, St. Lucie County Florida* (DHR #2004-9073). Currently required preservation of the three additional sites remains in place.

As the Corps has been directed to de-authorize the project, it must also take into account the potential effects that may result from the associated action. As part of the de-authorization process, the Corps will terminate its responsibilities under the existing MOA through an amendment for ongoing protection of the remaining sites (i.e. 8SL0007, 8SL1181, and 8SL1182). Since the undertaking for which the MOA was created is de-authorized, the Corps will no longer have authorization to maintain such an agreement. In addition, the de-authorization is contingent upon the State of Florida's assumption of responsibility for the project and its continued use for environmental restoration. Therefore, de-authorization will result in the transference of the project to the state of Florida which is obligated as the property owner to maintain protection of these sites in accordance with Chapter 276, Florida Statutes. As stipulated in FS 267.061(2)(d) "Each state agency of the executive branch shall assume responsibility for the preservation of historic resources which are owned or controlled by such agency." No appreciable difference between the level of protection afforded under the Florida Statutes as compared to that afforded under Federal law is anticipated. In light of these considerations, the Corps has determined that project de-authorization will have no adverse effect on the ongoing protection of the three sites.

I request your comments on the determination of No Adverse Effect. If there are any questions, please contact Dr. Dan Hughes at 904-232-3028 or e-mail at [daniel.b.hughes@usace.army.mil](mailto:daniel.b.hughes@usace.army.mil).

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Spinning", is written over the typed name and title.

Jason Spinning  
Acting Chief, Environmental Branch

Enclosure

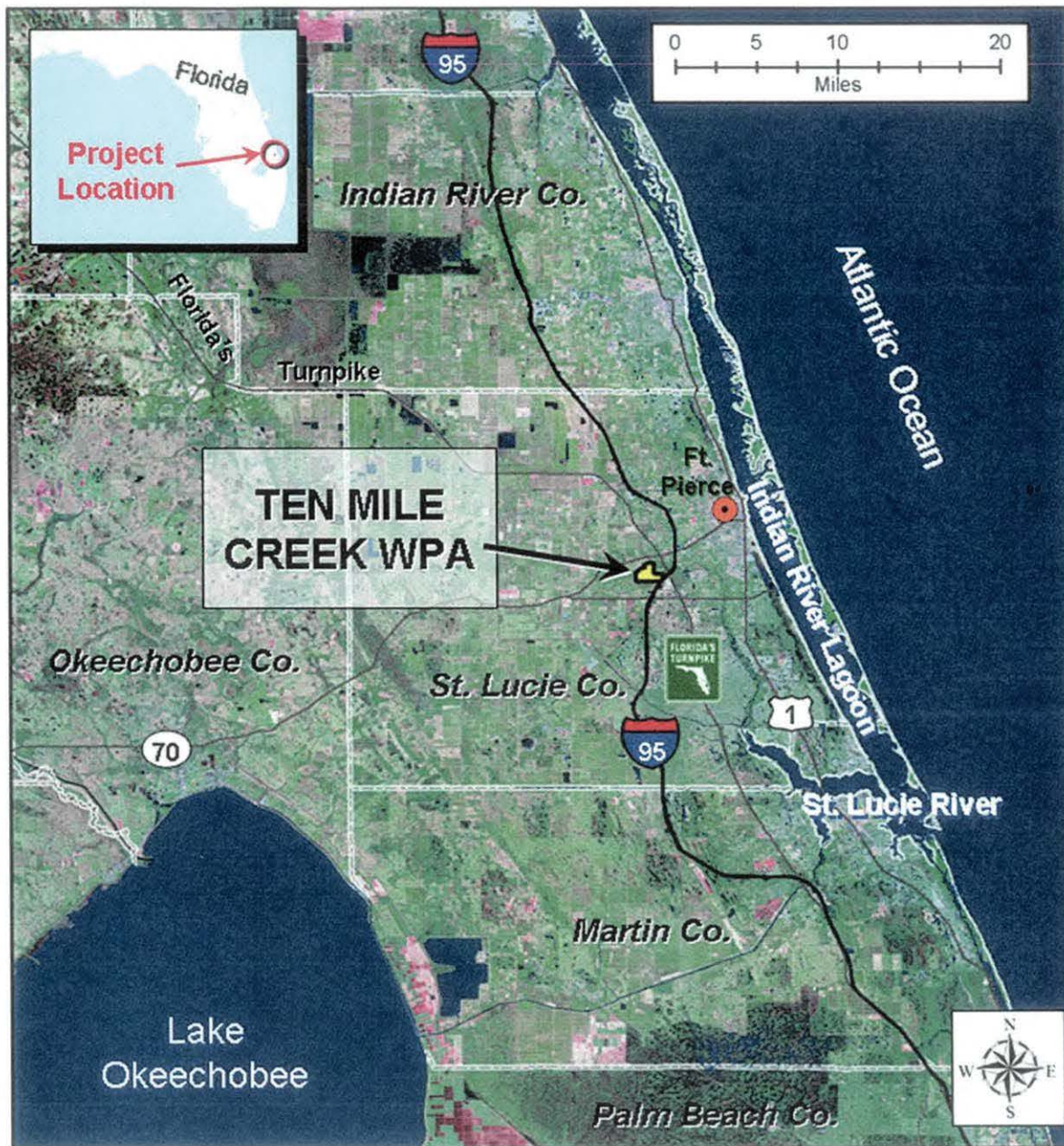


Figure 1. Location map showing the approximate location of TMC project area.



Figure 2. Location map showing the location of Ten Mile Creek Project.