DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

CESAM-PD-EI

May 22, 2023

**U.S. ARMY CORPS OF ENGINEERS,
MOBILE DISTRICT**

**NOTICE OF AVAILABILITY FOR THE**

**AQUATIC PLANT MANAGEMENT
MERRITT'S MILL POND**

**FLORIDA**

**TO ALL INTERESTED PARTIES:**

The U.S. Army Corps of Engineers (USACE), Mobile District requests your review and comment on the proposed Aquatic Plant Management, Merritt's Mill Pond, Florida. A copy of the draft environmental assessment is located on the following website: https://www.sam.usace.army.mil/Missions/Planning-Environmental/Environmental-Assessments/. The document is being circulated to resource agencies and interested members of the public for a 15-day comment period.

The proposed action consists of two components: 1) Conduct water exchange studies utilizing Rhodamine WT tracer dye and 2) Conduct herbicide treatments to control invasive aquatic plants. Coordination with the U.S. Fish and Wildlife Service and Florida State Historic Preservation Officer is ongoing.

Correspondence concerning this draft Environmental Assessment should be directed via email to Ms. Velma Diaz at velma.f.diaz@usace.army.mil or via mail to U.S. Army Corps of Engineers, Mobile District, CESAM-PD-EI, Attention: Ms. Velma Diaz, Post Office Box 2288, Mobile, Alabama 36628. Comments must be received within 15 days of date of this notice.

Jeremy M LaDart

Digitally signed by Jeremy M LaDart
Date: 2023.05.22 11:20:50 -05'00'

Jeremy M. LaDart
Chief, Planning and Environmental Division

# Draft Finding of No Significant Impacts and Environmental Assessment

# Aquatic Plant Management
# Merritt's Mill Pond
# Florida

**Prepared By:**
**U.S. Army Corps of Engineers**
**Mobile District**
**Mobile, Alabama**
**May 2023**

US Army Corps
of Engineers
Mobile District

# DRAFT FINDING OF NO SIGNIFICANT IMPACT

## AQUATIC PLANT MANAGEMENT
## MERRITT'S MILL POND
## FLORIDA

The U.S. Army Corps of Engineers (USACE), Mobile District has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. This draft Environmental Assessment (EA) dated **8 May 2023** for the **Aquatic Plant Management** at Merritt's Mill Pond addresses **the invasive aquatic plants within Merritt's Mill Pond** and identifies opportunities for the **reduction of acres of invasive aquatic plants, predominantly hydrilla. The study consisted of water exchange studies utilizing Rhodamine WT tracer dye and herbicide treatments to control invasive aquatic plants**.

The EA, incorporated herein by reference, evaluated the **control of invasive aquatic plants** of the area.

1. PROPOSED ACTION. The proposed action is to reduce the acreage of invasive aquatic plants predominantly hydrilla (*hydrilla verticillate*) within Merritt's Mill Pond. The proposed action consists of two components:

- Conduct water exchange studies utilizing Rhodamine WT tracer dye.
- Conduct herbicide treatments to control invasive aquatic plants.

The following describes the characteristics of each of the proposed action components:

Conduct Water Exchange Studies Utilizing Rhodamine WT Tracer Dye. The first component of the proposed action is to conduct water exchange studies utilizing Rhodamine WT tracer dye.

To assess water exchange dynamics and simulated dissipation rates, the inert florescent tracer dye will be applied to the system at up to 10 parts per billion (ppb) and quantified using hand-held fluorometers. Rhodamine WT has been used extensively in aquatic sites throughout the United States to simulate aquatic herbicide movement for decades. The goal of this component is to determine application methods and timings that will provide optimal invasive plant control in component two.

Herbicide Treatment. The second component of the proposed action consists of applying herbicides to areas in the system containing invasive aquatic plants that interfere with system function and public use. This component of the plan would treat the entire system up to twice a year.

2. ALTERNATIVES.

No Action Alternative: Under the No Action Alternative, there would be no change to current conditions at Merritt's Mill Pond. Chemical treatment of the invasive aquatic vegetation would continue infrequently by state of Florida agencies only. This action would continue with current management which may be unable to keep up with current growth rates which would cut off access to boat traffic. There would also be a decline in fisheries habitat and recreational opportunities due to the growth rates of the invasive aquatic plants.

Insects as Biological Agents: Several insect species have been identified that feed on hydrilla. A number of these species have been investigated as potential control agents. Insects that have received the most attention include the tuber-feeding weevil (*Bagous affinis*), the Australian stem-boring weevil (*Bagous hydrillae*) and the leaf-mining fly (*Hydrellia pakistanae* and *Hydrellia balciunasi*).

For a variety of reasons, only a few of these insect species have proven to be effective for use in the United States. The stem-boring weevil (*B. hydrillae*) was released in 1992 in Lake Seminole (near Merritt's Mill Pond) in an attempt to control hydrilla. However, that insect failed to become established in the lake. During 1990-1993, the leaf-mining fly (*H. pakistanae*) was also introduced into Lake Seminole. Although subsequent surveys indicate this insect appears to have become established within the lake, there is no evidence that this species has significantly impacted hydrilla in the lake. According to the 1998 Hydrilla Action Plan for Lake Seminole, monitoring of hydrilla in the lake as of that time had not indicated damage levels had reached the threshold level necessary to reduce biomass and the surface matting capacity of hydrilla on the lake.

The 1998 Hydrilla Action Plan for Lake Seminole concluded that based on the literature and field data observed for Lake Seminole it is unlikely the use of insects as biological control agents will be able to reduce hydrilla on Lake Seminole in the near future. No evidence has been generated since 1998 to invalidate that earlier conclusion. Therefore, the use of insects as biological control agents was eliminated.

Release of Grass Carp: The release of triploid (sterile) grass carp (i.e., white amur or *ctenopharyngodon Idella*) has been successful for hydrilla control in other systems across the southeast United States. However, triploid grass carp are largely non-selective towards aquatic plants which poses risk for reducing stands of desirable native plant species currently found in Merritt's Mill Pond. In addition, containing triploid grass carp in Merritt's Mill Pond would be difficult and the potential for escapes into the Chipola river is high which would lead to a lack of hydrilla control and off-site movement of a non-selective herbivorous fish species.

Mechanical Manipulation: Mechanical manipulation of aquatic plants uses mechanical devices to cut, rip, or shred submersed aquatic plants. The cut portions of the plants may be removed from the water and loaded on a work barge for transportation to a

central collection area from which the plant matter would be removed from the waterbody, placed on dry land, and allowed to die through desiccation.

Mechanical manipulation provides only short-term control. Most equipment allows the plants to be cut only to depths up to 6 feet which leaves the roots and lower portions of the plants to remain intact to resume growth following harvesting. Aquatic vegetation like hydrilla can recover relatively quickly to pre-harvest levels within as short a time as 30 days during the warm summer months. Thus, this approach to aquatic plant control can require multiple harvests of an area during a typical growing season.

Aquatic plants like hydrilla have the capability to be spread through fragmentation of stems. Consequently, mechanical manipulation can actually contribute to the spread of undesirable vegetation in aquatic environments as not all plant material can be collected during operations. The resulting small stem fragments can be carried by flow and wind driven currents to other locations downstream to become established and expand the invasive plant footprint in the system. Lastly, mechanical manipulation devices would not be able to access 100% of the infested areas of Merritt's Mill Pond due to shallow water edges and the presence of stumps. Consequently, these areas that would be left unaffected would continue to grow and spread.

3. FACTORS CONSIDERED IN DETERMINING THAT NO ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED. Based on the Environmental Assessment, the Proposed Action will not significantly affect human health and the environment. The proposed project is in compliance with all applicable environmental laws and regulations.

4. CONCLUSIONS. The environmental analysis supports the conclusion that the proposed project will not significantly impact health and the human environment; consequently, an Environmental Impact Statement is not required.

DATE:_____ _____

Jeremy J. Chapman, P.E.
Colonel, U.S. Army
District Commander

# Draft Environmental Assessment

# Aquatic Plant Management
# Merritt's Mill Pond
# Florida

Table of Contents

## 1.0 Introduction

The Council on Environmental Quality (CEQ) published its Final Rule: Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) in the Federal Register July 16, 2020. The new CEQ NEPA Regulations went into effect September 14, 2020. Preparation of this Aquatic Plant Management Environmental Assessment (EA), Florida commenced after the enactment of the new NEPA regulations and are in accordance with the 2020 CEQ NEPA regulations, as well as relevant USACE regulations and guidance.

This EA was prepared utilizing a systematic, interdisciplinary approach. The Proposed action and its alternatives are evaluated in multiple contexts for short-term and long-term effects and for adverse and beneficial effects. This assessment indicates the effects on the human environment are well known and do not involve unique or unknown risk. It is not anticipated that this is a precedent-setting action, nor does it represent a decision in principle about any future consideration.

## 1.1 Location

Merritt's Mill Pond is located near the city limits of Marianna, Florida in Jackson County. Figure 1 illustrates the vicinity of the project area.

## 1.2 Proposed Action

The proposed action is to reduce the acreage of invasive aquatic plants predominantly hydrilla (*hydrilla verticillate*) within Merritt's Mill Pond. The proposed action consists of two components:

- Conduct water exchange studies utilizing Rhodamine WT tracer dye.
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The following describes the characteristics of each of the proposed action components:

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**Herbicide Treatment**. The second component of the proposed action consists of applying herbicides to areas in the system containing invasive aquatic plants that

interfere with system function and public use. This component of the plan would treat the entire system up to twice a year.

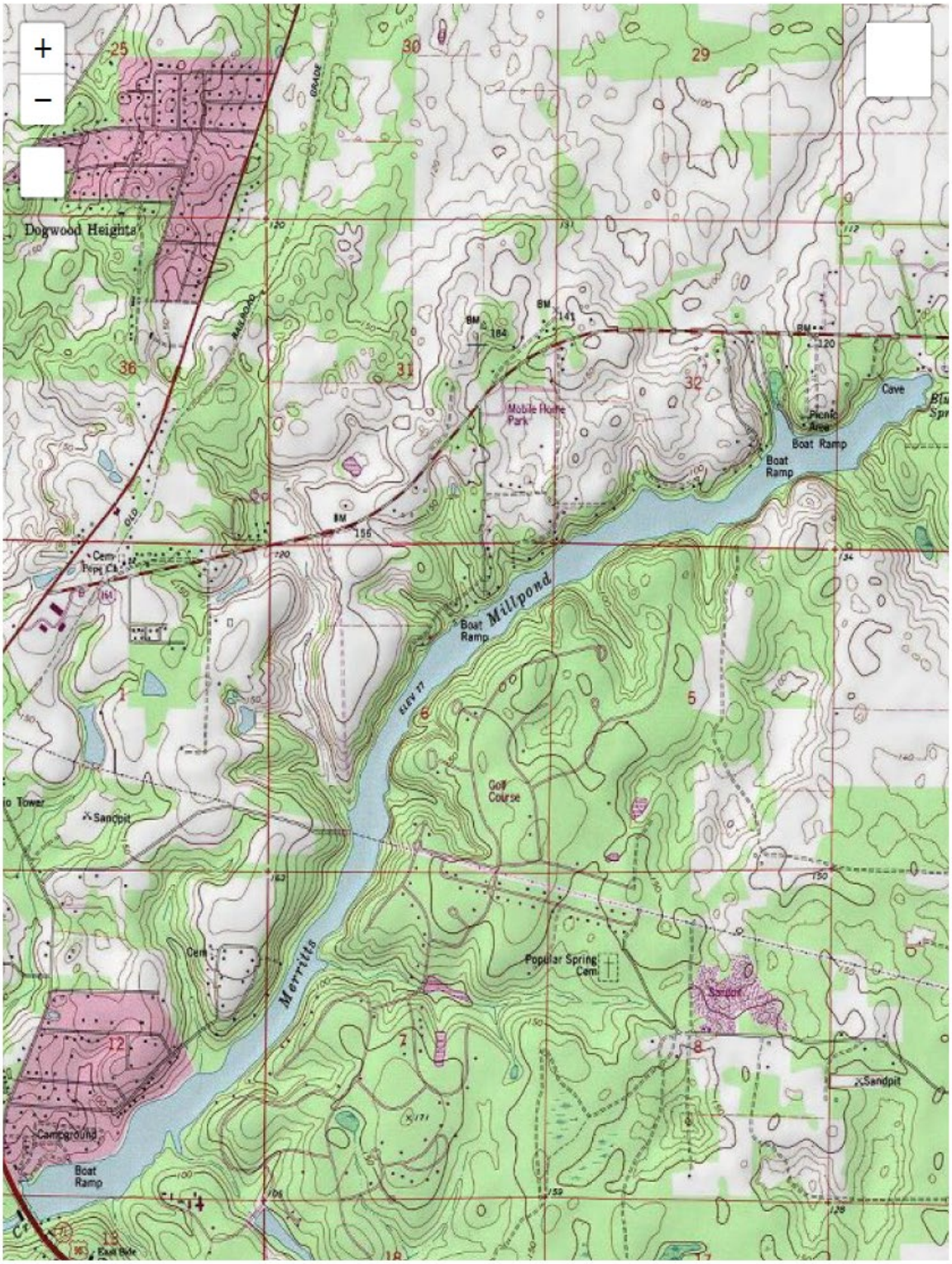


**Figure 1: Merritt's Mill Pond Vicinity Map**

## 1.3 Purpose and Need

The purpose of this EA is to evaluate the environmental effects that would result within Merritt's Mill Pond and contiguous waterbodies from the application of inert rhodamine WT tracer dye and aquatic herbicides to assist in the management of invasive submersed aquatic plants such as hydrilla (*Hydrilla verticillata*).

Currently, invasive plant management operations in Merritt's Mill Pond are primarily conducted by the Florida Fish and Wildlife Conservation Commission (FFWCC). However, in recent years the FFWCC has struggled to control submersed invasive aquatic plants in Merritt's Mill Pond likely due to the unique water exchange dynamics of the system. USACE has personnel with active research projects related to hydrilla control in flowing water systems and historical experience with controlling invasive aquatic plants in scenarios similar to those at Merritt's Mill Pond.

## 1.4 Authority

The Merritt's Mill Pond Aquatic Management Plan is being conducted under the authority of 33 U.S.C. 610(a)(1), "…development of the most effective and economic control measures for a specific noxious aquatic plant growth…". The Aquatic Plant Control program has been developing technology (research and demonstrations) over the past couple of years and Merritt's Mill Pond is an opportunity to apply the technology at the field level. This work will assist USACE in developing better techniques for hydrilla management through education of the effectiveness of the treatment.

# 2.0 Alternatives to the Proposed Action

## 2.1 No Action Alternative

Under the No Action Alternative, there would be no change to current conditions at Merritt's Mill Pond. Chemical treatment of the invasive aquatic vegetation would continue infrequently by state of Florida agencies only. This action would continue with current management which may be unable to keep up with current growth rates which would cut off access to boat traffic. There would also be a decline in fisheries habitat and recreational opportunities due to the growth rates of the invasive aquatic plants.

## 2.2 Insects As Biological Agents

Several insect species have been identified that feed on hydrilla. A number of these species have been investigated as potential control agents. Insects that have received the most attention include the tuber-feeding weevil (*Bagous affinis*), the Australian stem-boring weevil (*Bagous hydrillae*) and the leaf-mining fly (*Hydrellia pakistanae* and *Hydrellia balciunasi*).

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## 2.4 Mechanical Manipulation

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Mechanical manipulation provides only short-term control. Most equipment allows the plants to be cut only to depths up to 6 feet which leaves the roots and lower portions of the plants to remain intact to resume growth following harvesting. Aquatic vegetation like hydrilla can recover relatively quickly to pre-harvest levels within as short a time as 30 days during the warm summer months. Thus, this approach to aquatic plant control can require multiple harvests of an area during a typical growing season.

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driven currents to other locations downstream to become established and expand the invasive plant footprint in the system. Lastly, mechanical manipulation devices would not be able to access 100% of the infested areas of Merritt's Mill Pond due to shallow water edges and the presence of stumps. Consequently, these areas that would be left unaffected would continue to grow and spread.

## 3.0 Existing Environment and Potential Environmental Impacts

This section summarizes the general conditions of the physical and biological environment and the socioeconomic resources in the project area. The information is used to assess potential impacts resulting from implementation of the Proposed Action. The environmental impacts expected without project implementation (the No Action Alternative) are also summarized in this section.

## 3.1 Land Use

The primary spring and headwater of Merritt's Mill Pond has been leased to Jackson County for approximately forty years. It has been managed as a recreation area with swimming, picnicking, limited SCUBA training, and exploration. It has served as Jackson County's most popular fishing and boating area.

### 3.1.1 Potential Environmental Impacts to Land Use

**Proposed Action Alternative**
The proposed management of submersed invasive aquatic plants will positively impact land use related to recreation. The proposed action will reduce the amount of invasive aquatic plants in the project area allowing for the continual use of the mill pond for water-related activities.

**No Action Alternative**
Under the No Action Alternative, conditions will dimmish and there will be a decline in use of the recreational area and impede navigation. Land use as it relates to recreation will be negatively impacted by the No Action Alternative.

## 3.2 Air Quality

The U.S. Environmental Protection Agency's (USEPA) Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards (NAAQS) in accordance with the Clean Air Act (CAA) "for pollutants considered harmful to public health and the environment." The CAA identifies two types of NAAQS: primary and secondary. Primary standards provide public health protection and secondary standards provide public welfare protection. The OAQPS has set NAAQS for six principal pollutants called criteria pollutants. These pollutants are carbon monoxide, nitrogen dioxide, ozone, lead, fine particle particulate matter ($PM_{10}$ and $PM_{2.5}$), and sulfur dioxide. The State of Florida has adopted the NAAQS as the state's air quality criteria.

The General Conformity Rule published by the USEPA on 11/30/1993 designates and implements Section 176(c) of the CAA for geographic areas in CAA non-attainment areas for criteria pollutants and in those attainment areas subject to maintenance plans required by CAA Section 175(a). The CAA General conformity Rule applies to Federal actions.

The project area is in attainment for all criteria pollutants (USEPA, 2023).

### 3.2.1 Potential Environmental Impacts to Air Quality

**Proposed Action Alternative**
Applications of the water exchange studies and herbicide treatments at Merritt's Mill Pond will have short-term emission results, but the impacts will cease when complete. Significant impacts will be avoided through timing of activities to avoid any severe air quality alert days. Additional measures to minimize short-term impacts include properly maintaining equipment and reducing the amount of equipment involved to the extent possible, so that (where applicable) no equipment is left idling for prolonged periods of time.

**No Action Alternative**
Under the No Action Alternative, there would be no impacts to air quality.

## 3.3 Noise

Most noise generated at Merritt's Mill Pond is associated with recreational activities by the public. Other noise may be generated from nature (birds) and traffic in the area.

Herbicide treatments will be accomplished twice a year using airboats while the water exchange studies will determine application methods and timings that will provide optimal invasive plant control. Airboats generate considerable noise when in operation. The noise produced by the airboats may be considered by most people to be offensive. Fortunately, herbicide applications will typically be conducted in the daylight hours from Monday through Friday when fewer members of residential areas, and the recreational public, are present, thus avoiding potential noise conflicts.

### 3.3.1 Potential Environmental Impacts to Noise

**Proposed Action Alternative**
There will be no permanent noise impacts associated with the proposed action. Noise impacts would be temporary, associated with the equipment used to treat the invasive aquatic plants, and cease upon completion of the action.

**No Action Alternative**
Under the No Action Alternative, there will be no impacts to noise.

## 3.4 Physiography, Geology, and Soils

### 3.4.1 Physiography

Merritt's Mill Pond is located within the Dougherty Karst Plain District Ecoregion. This District lies mainly in southern Georgia but also encompasses the northern portions of Bay and Calhoun Counties, all of Jackson County, and the majority of Washington and Holmes Counties in Florida, and portions of Houston County in Alabama. In this region, the Floridan aquifer is recharged through the overlying intermediate aquifer system (where present), and ground water from it discharges to springs and rivers. The rate of ground water recharge to the Floridan aquifer is estimated at 12 to 18 inches per year in the area that supplies water to Jackson Blue Spring. Given the near absence of surface drainage in this area, this amount is essentially the remainder of precipitation after accounting for evapotranspiration. The semiconfined condition of the Floridan aquifer in the Dougherty Karst Plain allows for large amounts of local recharge but also makes the Floridan aquifer especially vulnerable to contamination from activities on the land surface.

### 3.4.2 Geology

In Jackson County, the Floridan aquifer occurs in the Chattahoochee Formation, the undifferentiated Marianna/Suwannee Limestone, and the Ocala Limestone. The region is characterized by a thin intermediate system confining unit, generally less than 50 feet thick, that is often absent or breached by sinkholes. The Floridan aquifer itself is relatively thin, with a thickness of approximately 100 feet in northern Jackson County, where its occurrence is limited to the Ocala Limestone. Continuing south to the Jackson County–Calhoun County line, the Floridan aquifer thickens to approximately 500 feet with the occurrence of the younger limestone formations.

### 3.4.3 Soils

The Natural Resource Conservation Service (NCRS) soil survey maps show that soils of the Merritt's Mill Pond shoreline include Blanton coarse sand, Bonifay sand, Faceville loamy fine sand, Fuquay coarse sand, Oktibbeha variant-rock outcrop, and Troup sand.

### 3.4.4 Potential Environmental Impacts to Physiology, Geology, and Soils

**Proposed Action Alternative**
The proposed action will have no impact on physiography, geology, or soil.

**No Action Alternative**
Under the No Action Alternative, there will be no impacts to physiography, geology, or soil.

## 3.5 Aesthetics

Aesthetics is an approach to assign appreciation of natural environments. The primary aesthetics of the proposed project area is grass and trees along the shores of Merritt's Mill Pond. There are homes, park, recreation area and a RV resort bordering the mill pond.

### 3.5.1 Potential Environmental Impacts to Aesthetics

**Proposed Action Alternative**
The proposed action will have positive benefits to aesthetics associated with the proposed management of submersed invasive aquatic plants as it will control the spread of the species that individuals may find unattractive.

**No Action Alternative**
Under the No Action Alternative, there would be no changes to aesthetics.

## 3.6 Water Resources

### 3.6.1 Floodplains

Federal Emergency Management Agency (FEMA) flood maps shows that Merritt's Mill Pond falls entirely within the special flood hazard (Zone A) which has an annual 1% chance of flooding. Zone A is the without base flood elevation.

### 3.6.2 Wetlands

The National Wetlands Inventory (NWI) map identifies Merritt's Mill Pond as Lake with pockets of Freshwater Forested/Shrub wetlands. This area provides habitat for numerous species of fishes, mollusks, aquatic plants, reptiles, amphibians, birds, and mammals.

### 3.6.3 Potential Environmental Impacts to Water Resources

**Proposed Action Alternative**
**Floodplains**
There will be no impacts to floodplains from the proposed management of submersed invasive aquatic plants.

**Wetlands**
The proposed management of submersed invasive aquatic plants will have no effect on wetlands.

**No Action Alternative**
Under the No Alternative, there will be no direct impacts to water resources.

## 3.7 Biological Resources

Biological resources in the area include flora and fauna, and endangered and threatened species common to the area.

### 3.7.1 Flora and Fauna

**Flora**
Vegetation consists of hardwood swamps, freshwater marshes, mixed hardwood pine forests, hardwood hammocks, forests and aquatic plants can be seen along the shore of Merritt's Mill Pond.

**Fauna**
Wildlife resources such as the Suwanee Cooter, loggerhead musk turtle, rainbow snakes, brown water snakes and red-bellied water snakes can be found in Merritt's Mill Pond. Fishery resources that may be found in Merritt's Mill Pond include largemouth bass, redear sunfish, bluegill, and spotted sunfish. A population of apple snail may also be found in the project area.

### 3.7.2 Endangered and Threatened Species

According to the U.S. Fish and Wildlife Service (USFWS), Information for Planning and Consultation there are 11 threatened, endangered, or candidate species listed that may occur in the proposed project areas the Gray Bat (*Myotis grisescens*), Whooping Crane (*Grus americana*), Alligator Snapping Turtle (*Macrochelys temminckii*), Eastern Indigo Snake (*Drymarchon couperi*), Reticulated Flatwoods Salamander (*Ambystoma bishopi*), Chipola Slabshell (*Elliptio chipolaensis*), Gulf Moccasinshell (*Medionidus penicillatus*), Oval Pigtoe (*Pleurobema pyriforme*), Shinyrayed Pocketbook (*Hamiota subangulata*), Monarch Butterfly (*Danaus plexippus*), and Gentian Pinkroot (*Spigelia gentianoides*) (USFWS, 2023). There are no critical habitats within the project area with compatible habitat requirements were found within the project area.

**Gray Bat (Endangered**): Gray bats occupy caves or cave-like structures year-round. While gray bats prefer caves, summer colonies have been documented using dams, mines, quarries, concrete box culverts and the undersides of bridges. Summer caves must be warm or have restricted rooms that can trap the body heat of clustered bats.

**Whooping Crane (Experimental Population, Non-Esssential)**: The chwhooping crane breeds, migrates, winters and forages in a variety of habitats, including coastal marshes and estuaries, inland marshes, lakes, open ponds, shallow bays, salt marsh and sand or tidal flats, upland swales, wet meadows and rivers, pastures and agricultural fields.

**Alligator Snapping Turtle (Proposed Threatened)**: Generally found in deeper water of large rivers and their major tributaries; however, they are also found in a wide variety of habitats, including small streams, bayous, canals, swamps, lakes, reservoirs, ponds,

and oxbows (a lake that forms when a meander of a river is cut off). Alligator snapping turtles more often select structure (e.g., tree root masses, stumps, submerged trees, etc.) than open water and may select sites with a high percentage of canopy cover. No critical habitat has been designated for this species.

**Eastern Indigo Snake (Threatened)**: The eastern indigo snake occurs in xeric habits, closely associated with gopher tortoise where the burrows provide shelter from winter cold and desiccation. This dependence is especially pronounced in Georgia, Alabama, and the panhandle area of Florida, where eastern indigo snakes are largely restricted to the vicinity of sandhill habitats occupied by gopher tortoises.

**Reticulated Flatwoods Salamander (Endangered)**: The reticulated flatwoods salamander occupies longleaf pine-wiregrass flatwoods and savannas in the southeastern coastal plain. The salamanders spent most of their lives underground, in crayfish burrows, root channels, or burrows of their own making. They emerge in the early winter rains to breed in small, isolated seasonal wetlands.

**Chipola Slabshell (Threatened)**: The Chipola slabshell inhabits slow to medium current rivers with a sand and silt floor. This species is found only in the Chipola River in northwest Florida.

**Gulf Moccasinshell (Endangered)**: The Gulf moccasinshell inhabits creeks and large rivers with moderate currents that have a sandy or gravel floor. This species is known to be found in Ecofina Creek and the Chipola River in northwest Florida, and the Flint River in southwest Georgia.

**Oval pigtoe (Endangered)**: Preferring a variety of softer habitat substrate from silty sand to gravel, this mussel species can be found in medium sized creeks to small rivers with flows generally slow to moderate velocities. More recent finds within the Apalachicola, Chattahoochee and Flint River basin shows an even wider range of habitat types, such as those with a mixture of sand and detritus, sand and cobble, as well as sand and clay or sand and silt more commonly occurring in the current prone mid-channel areas.

**Shinyrayed Pocketbook (Endangered)**: The shinyrayed pocketbook inhabits stable sandy and gravelly substrates in medium-sized streams to large rivers, often in areas swept free of silt by the current.

**Monarch Butterfly (Candidate)**: Whether it's field, roadside area, open area, wet area or urban garden, milkweed and flowering plants are needed for monarch habitat. Adult monarchs feed on the nectar of many flowers during breeding and migrations, but they can only lay eggs on milkweed plants.

For overwintering monarchs, habitat with a specific microclimate is needed for protection from the elements, as well as moderate temperatures to avoid freezing. These conditions vary between populations. For the eastern North American population,

most monarchs overwinter in oyamel fir tree roosts located in mountainous regions in central Mexico at an elevation of 2,400 to 3,600 meters. Monarchs living west of the Rocky Mountain range in North American primarily overwinter in California at sites along the Pacific Coast, roosting in eucalyptus, Monterey pines and Monterey cypress trees. No critical habitat has been designated for this species.

**Gentian Pinkroot (Endangered)**: Upland mixed pine-oak forest and sandhills.

### 3.7.3 Potential Environmental Impacts to Biological Resources

**Proposed Action Alternative**
**Flora and Fauna**
The proposed action will not adversely affect submersed aquatic vegetation and will be beneficial to native submersed aquatic vegetation over time as they work to reduce the acreage of the invasive aquatic plant species predominately hydrilla. The proposed action will be beneficial to fishery resources as the two components of the proposed action will work to control the expansion of hydrilla and other invasive aquatic plant species. Wildlife resources are not expected to be impacted by the proposed action.

**Threatened and Endangered Species**
Federally listed species with potential habitat to occur in the proposed project area are the Gray Bat, Whooping Crane, Alligator Snapping Turtle, Eastern Indigo Snake, Reticulated Flatwoods Salamander, Chipola Slabshell, Gulf Moccasinshell, Oval Pigtoe, Shinyrayed Pocketbook, Monarch Butterfly, and Gentian Pinkroot. Habitats for these species will not be affected by the proposed action.

The USACE, Mobile District has determined the proposed management of submersed invasive aquatic plants will have no effect on threatened and endangered species or designated critical habitat.

**No Action Alternative**
Under the No Action Alternative, no changes will occur to biological resources in Merritt's Mill Pond.

## 3.8 Cultural Resources

There are no known historic sites located along Merritt's Mill Pond.

### 3.8.1 Potential Environmental Impacts to Cultural Resources

**Proposed Action Alternative**
The proposed water exchange studies utilizing Rhodamine WT tracer dye and herbicide treatments will result in no impacts to cultural resources if there were any sites in the project area as there is no potential to disturb soils or structures.

**No Action Alternative**
Under the No Action Alternative, there will no impacts to cultural resources if there were any cultural resources in the project area.

## 3.9 Socioeconomics

This section addresses the socioeconomics of the project area. The socioeconomic indicators used include economy, wages, demographic characteristics, and housing costs. Environmental justice and protection of children are also described in this section. The socioeconomic statistics provided describe the City of Marianna as a whole.

### 3.9.1 Economy

According to 2020 U.S. Census, the total civilian labor force with a population age of 16 years+ (2017-2021) is 47.0% while the female civilian labor force with a population age of 16 years+ is 52.1%. The largest industry in the City of Marianna is retail sales with revenues of $207,723. The remaining industries are split amongst, health care and social assistance receipts/revenue of $109,626, transportation and warehousing receipts/revenue of $24,924, and accommodation and food services sales revenue of $22,216.

### 3.9.2 Wages

In 2021, the City of Marianna median per capita income was $19,654. The median household income was $27,427. The poverty rate in the City of Marianna is 28.7% for its citizens.

### 3.9.3 Demographics and Housing

The U.S. Census estimates the City of Marianna to have a total population of 6,237 as of July 1, 2021, with 50.8% identifying as female. A strong majority of the City of Marianna population (50.7%) identify as Black or African American, 47.0% identifying as White, 2.1% identifying as Hispanic or Latino, and 2.0% identifying as two or more races. Owner-occupied housing unit rate (2017-2021) was 55.6% with a median value of $86,200. Median gross rent (2017-2021) was $706.

The project would not result in the movement of people into or out of the region or impact housing costs. There would be no change in regional demographics or housing demand.

### 3.9.4 Protection of Children

Executive Order 13045, The Protection of Children from Environmental Health Risks and Safety Risks, was issued April 23, 1997. Executive Order 13045 applies to significant regulatory actions that concern an environmental health or safety risk that

could disproportionately adversely affect children. Environmental health risks or safety risks refer to risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest.

The proposed action will not increase risk to the health and safety of children. Appropriate safety measures (i.e., signage, electronic notification, etc.) will be utilized to avoid adversely impacting public safety, including children.

### 3.9.5 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations dated February 11, 1994 directs all Federal agencies to determine whether a "proposed action" would have a disproportionately high and adverse impact on minority and/or low-income populations.

The proposed action will not adversely impact minority and/or low-income populations. The proposed action will be beneficial to fishery resources that minority and/or low-income populations may consume.

### 3.9.6 Potential Environmental Impacts to Socioeconomics

**Proposed Action Alternative**
The proposed action could provide some economic benefits to the area. Benefits could be realized through support of local businesses for the purchase of chemical herbicides and purchase or rental of equipment as well as bring in additional visitors for boating, fishing and other open water activities.

**No Action Alternative**
There will be no change in current socioeconomic conditions under the No Action Alternative. There will be no associated increase in local sales of chemical herbicides and/or purchase or rental of equipment. There would be no changes to demographics, housing costs, children, minorities, or low-income populations.

## 3.10 Hazardous, Toxic and Radiological Waste

Herbicides will be used twice a year to control invasive aquatic plants. Herbicides that could be used to control submersed aquatic vegetation include fluridone, dipotassium endothall, mono salt of endothall, diquat, a diquat/copper mix, penoxsulam, flumioxazin, imazamox, topramezone, flopyrauxifen-benyzl, triclopyr, 2,4-D amine, and bispyribac-sodium.

While there is always a risk to human safety and for environmental contamination whenever herbicides are applied, the risk is greatly minimized when the chemicals are stored, handled, and applied in accordance with label directions that have been approved by the U.S. Environmental Protection Agency, the federal agency responsible for registration of pesticides.

### 3.10.1 Potential Environmental Impacts to Hazardous, Toxic and Radiological Waste

**Proposed Action Alternative**
The chemical herbicides to be utilized as part of the proposed action are not anticipated to pose any risk to the environment or humans. The herbicides will be transported, handled, and applied in accordance with the U.S. Environmental Protection Agency's approved label instructions. All individuals conducting the herbicide treatments will be certified in the application and knowledgeable of appropriate actions to take should a spill occurs or accidental exposure to the herbicides.

**No Action Alternative**
Implementation of the No Action Alternative will maintain current conditions of the proposed project area. There would be no impact to hazardous or toxic waste.

## 4.0 Other NEPA Considerations

### 4.1 Any Irreversible or Irretrievable Commitments of Resources Which Would Be Involved Should the Recommended Plan Be Implemented
The two components of the proposed action cannot be removed and restored to current if future conditions are warranted. Therefore, any irreversible or irretrievable commitments of resources involved in the proposed action have been considered and are either unanticipated at this time or have been considered and determined to present minor impacts.

### 4.2 Adverse Environmental Effects Which Cannot Be Avoided
The two components of the proposed action represent impacts that cannot be avoided should the action be implemented. The impacts, as previously discussed is expected to be minor individually and cumulatively.

### 4.3 The Relationship Between Local Short-Term Uses of the Human Environment and Maintenance and Enhancement of Long-Term Productivity
The proposed action constitutes a short-term use of man's environment and is not anticipated to affect long-term productivity. The proposed action will reduce the acreage of invasive aquatic plant species predominately hydrilla in Merritt's Mill Pond.

## 5.0 Coordination
As required by the National Environmental Policy Act, the USACE, Mobile District coordinated this project with various local, state, and Federal agencies. During the early stages of development, the USFWS was consulted.

Coordination with the general public will be accomplished by making the Draft Findings of No Significant Impact and EA available through means of a 15-day notice of availability being placed on the USACE, Mobile District website and emailing to

interested parties. Comments received from the public and agencies on the proposed action will be reviewed and those of substantive incorporated into the EA.

## 6.0 List of Preparers

Table 1 identifies personnel that provided information for preparation of the EA.

***Table 1: List of Preparers***

| Personnel | Discipline |
|---|---|
| Diaz, Velma | Environmental |

## 7.0 References


City of Marianna. 2021. Chipola River Greenway Land Management Plan.

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U.S. Department of Agriculture. Web Soil Survey. Retrieved February 28, 2023, from https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

U.S. Environmental Protection Agency. EnviroMapper. Retrieved January 31, 2023, from https://geopub.epa.gov/myem/efmap/index.html?ve=17,30.765786,-85.191723&pText=Merritts%20Mill%20Rd,%20Marianna,%20Florida,%2032446.

U.S. Fish and Wildlife Service. Information for Planning and Consultation. Retrieved April 14, 2023, from https://ecos.fws.gov/ipac/.

U.S. Fish and Wildlife Service. National Wetland Mapper. Retrieved March 1, 2023, from https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/.

# Appendix A:  Coordination

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Florida Ecological Services Field Office
1339 20th Street
Vero Beach, FL 32960-3559
Phone: (772) 562-3909 Fax: (772) 562-4288
Email Address: fw4flesregs@fws.gov
https://www.fws.gov/office/florida-ecological-services

In Reply Refer To: April 14, 2023
Project Code: 2023-0069485
Project Name: Aquatic Management Plan Merritt Mill Pond Florida

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. **Please include your Project Code, listed at the top of this letter, in all subsequent correspondence regarding this project.** Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Florida Ecological Services Field Office**
1339 20th Street
Vero Beach, FL 32960-3559
(772) 562-3909

## PROJECT SUMMARY

Project Code: 2023-0069485
Project Name: Aquatic Management Plan Merritt Mill Pond Florida
Project Type: Invasive Plant Control
Project Description: The proposed action is to reduce the acreage of invasive aquatic plants predominantly hydrilla (hydrilla verticillate) within Merritt's Mill Pond. The proposed action consists of two components:

- Conduct water exchange studies utilizing Rhodamine WT tracer dye.
- Conduct herbicide treatments to control invasive aquatic plants.

The following describes the characteristics of each of the proposed action components.

Conduct Water Exchange Studies Utilizing Rhodamine WT Tracer Dye. The first component of the proposed action is to conduct water exchange studies utilizing Rhodamine WT tracer dye.

To assess water exchange dynamics and simulated dissipation rates, the inert florescent tracer dye will be applied to the system at up to 10 parts per billion (ppb) and quantified using hand-held fluorometers. Rhodamine WT has been used extensively in aquatic sites throughout the United States to simulate aquatic herbicide movement for decades. The goal of this component is to determine application methods and timings that will provide optimal invasive plant control in component two.

Herbicide Treatment. The second component of the proposed action consists of applying herbicides to areas in the system containing invasive aquatic plants that interfere with system function and public use. This component of the plan would treat the entire system up to twice a year.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@30.77218715,-85.17249564768396,14z


Counties: Jackson County, Florida

## ENDANGERED SPECIES ACT SPECIES

There is a total of 11 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### MAMMALS

| NAME | STATUS |
|---|---|
| Gray Bat *Myotis grisescens*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6329 | Endangered |

### BIRDS

| NAME | STATUS |
|---|---|
| Whooping Crane *Grus americana*<br>Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY)<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/758 | Experimental Population, Non-Essential |

### REPTILES

| NAME | STATUS |
|---|---|
| Alligator Snapping Turtle *Macrochelys temminckii*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/4658 | Proposed Threatened |
| Eastern Indigo Snake *Drymarchon couperi*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/646 | Threatened |

## AMPHIBIANS

| NAME | STATUS |
|---|---|
| Reticulated Flatwoods Salamander *Ambystoma bishopi*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/8939 | Endangered |

## CLAMS

| NAME | STATUS |
|---|---|
| Chipola Slabshell *Elliptio chipolaensis*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/1775 | Threatened |
| Gulf Moccasinshell *Medionidus penicillatus*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/7663 | Endangered |
| Oval Pigtoe *Pleurobema pyriforme*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/4132 | Endangered |
| Shinyrayed Pocketbook *Hamiota subangulata*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/6517 | Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

## FLOWERING PLANTS

| NAME | STATUS |
|---|---|
| Gentian Pinkroot *Spigelia gentianoides*<br>Population:<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/4583 | Endangered |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.