

MEMO TO: Del Cobb
Florida Department of Environmental Protection

FROM: Jay Gable
Michael Baker International, Inc.

PROJECT: Wekiwa Springs State Park Erosion Control and Access Improvements

DATE: May 25, 2023

SUBJECT: Anticipated Environmental Permitting Summary

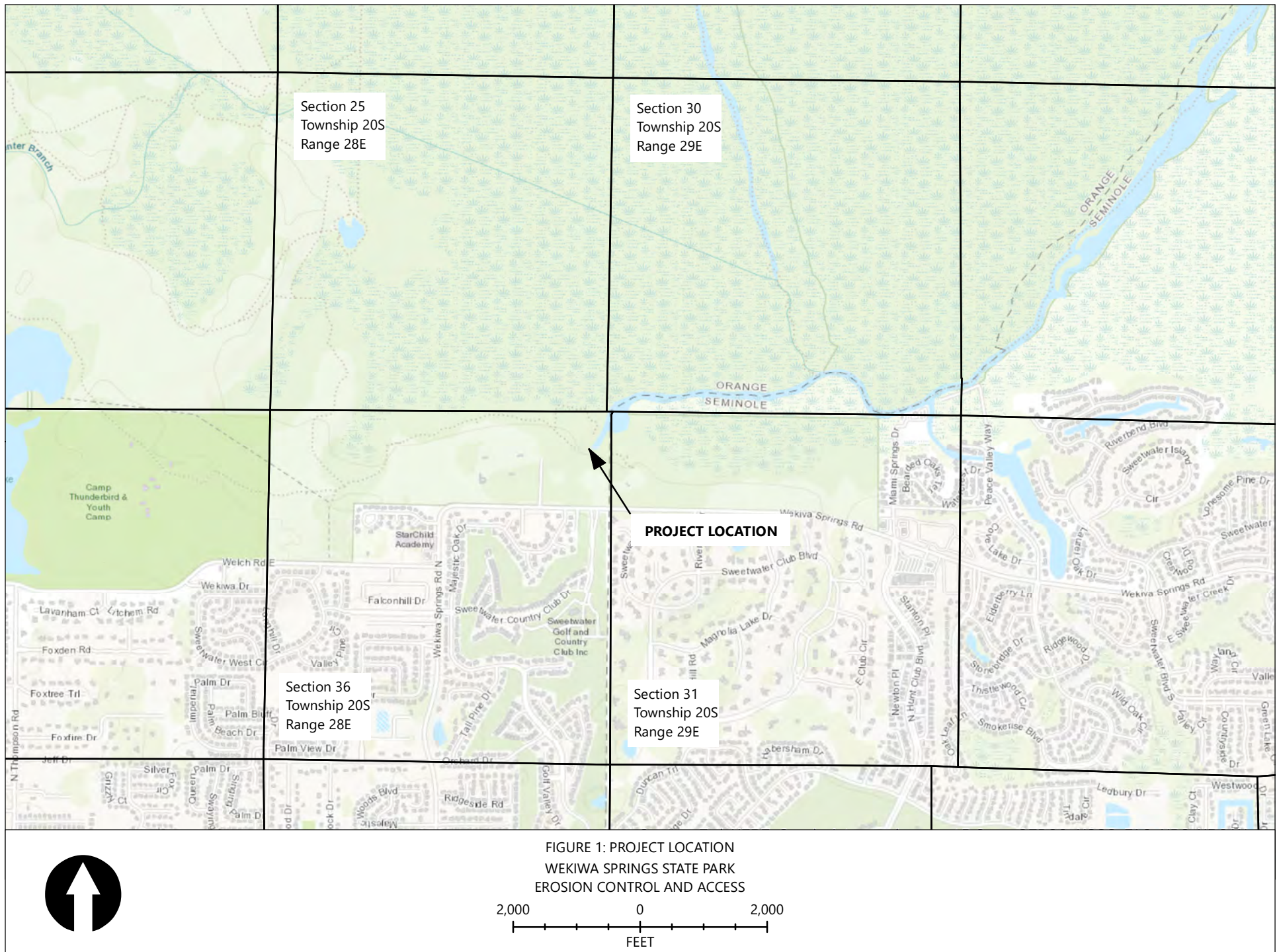
Introduction

This letter report is provided to summarize anticipated environmental permitting requirements for the Erosion Control and Access Improvements Project at Wekiwa Springs State Park, which is located in the City of Apopka in northern Orange County, Florida (**Figure 1**). The project proposes to regrade portions of three areas of the park and to install new erosion control measures to better control runoff from these areas that slope downward toward the springhead.

Area 1 is a roughly triangular open lawn area that slopes downward toward the spring that is used for lounging and sunbathing by visitors to the park. Concrete sidewalks and widely spaced concrete stairs lead down each side of the lawn area. Due to the existing slope and irrigation deficiencies on the lawn, the park has had ongoing issues with erosion caused by surface water runoff, particularly in areas where the lawn is not receiving adequate irrigation and the grass is less established. In this lawn area, the project proposes to regrade the lawn area, creating a terraced slope with alternating areas of maximum 4 to 1 slope between flatter areas with a maximum of 5 percent slope. In addition, new concrete stairs and sidewalks will be installed on each side of the lawn area and across the base of the slope where the lawn area meets the existing paved concrete deck area beside the spring (see **Plans**, sheet C-300).

Area 2 is a portion of an existing dirt drive (approximately 220 linear feet) and trail (approximately 210 linear feet) beginning at the south side of the concessions building and continuing roughly northward and down slope to the canoe and kayak launch. In this area the project proposes to remove the existing erosion control blanket from the trail to the canoe and kayak launch, strip the trail and strip the drive south of the concessions building, regrade the drive and the trail, and install new erosion control material on the regraded surface.

Area 3 is another dirt trail that begins in an area approximately 60 feet northwest of the southwest corner of Area 1 and meanders approximately 350 linear feet downslope to the northwest end of the paved concrete deck area beside the spring. At Area 3 FDEP is planning to strip and regrade the trail and install new erosion control material on the trail surface.



Desktop Evaluation of Potential Wetland Permitting Requirements

In order to evaluate the potential permit requirements of the project site the following information was collected and reviewed:

- National Resources Conservation Service (NRCS) soils data (**Figure 2**)
- St. Johns River Water Management District (SJRWMD) 2014 Land Use Cover and Forms Classification System (FLUCS) mapping (**Figure 3**)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Mapping (**Figure 4**)
- USFWS Information for Planning and Conservation (IPaC) Protected Species List for the project area (**Attachment 1**)
- Florida Natural Areas Inventory (FNAI) Biodiversity Matrix protected species records for the region containing the project area (**Attachment 2**)
- Documentation of previous Environmental Resource Permits in the vicinity of the project

Soils

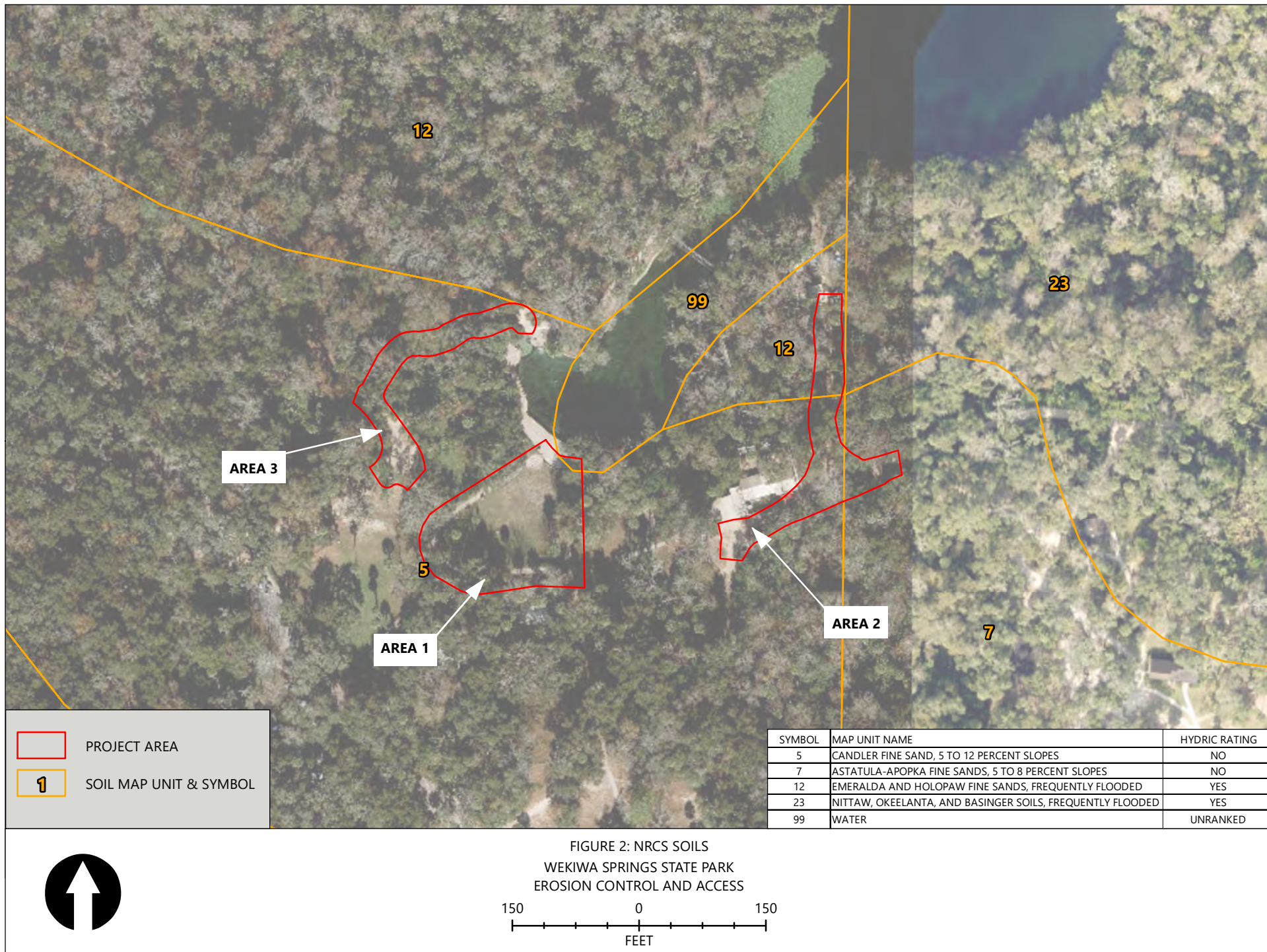
Based on review of NRCS soils mapping (**Figure 2**), two of the mapped soil types; Emerald and Holopaw fine sands frequently flooded and Nittaw, Okeelanta, and Basinger soils frequently flooded; are classified by the NRCS as hydric soils. According to the soils mapping, no hydric soils occur in Areas 1 and 3. Approximately 120 linear feet at the northern end of the trail to the canoe and kayak launch in Area 2 is mapped within an Emerald and Holopaw fine sands, frequently flooded map unit. Since a portion of Area 2 is mapped as hydric soil, there is increased likelihood that a portion of the trail is within wetlands.

SJRWMD FLUCS

The SJRWMD FLUCS mapping data (**Figure 3**) was also reviewed to evaluate the potential for the occurrence of wetlands within the project area. According to this data, the majority of Areas 1 and 2 are within a landcover type identified as “parks and zoos.” A very small area on the northwest side of Area 1 is mapped as “wetland forested mixed.” Unfortunately, the parks and zoos classification does not provide any information about the habitat or land cover type and instead refers more to the land use. Looking back at older FLUCS data showed conflicting information. The 1999 FLUCS data shows a portion of Area 1 as “freshwater marshes” and a portion of Area 2 as “mixed wetland hardwoods” while the 1994 FLUCS data shows all of Areas 1 and 2 as “upland mixed coniferous hardwood.” For Area 3, for each year of FLUCS data reviewed, the area was shown as “wetland forested mixed.”

NWI

To further evaluate the potential occurrence of wetlands within the project area, the USFWS NWI data (**Figure 4**) was reviewed. According to the NWI data, a very small area on the northwest side of Area 1 is wetland but the remainder of Area 1 and all of Area 2 are upland. According to the NWI data, all of Area 3 is wetland.



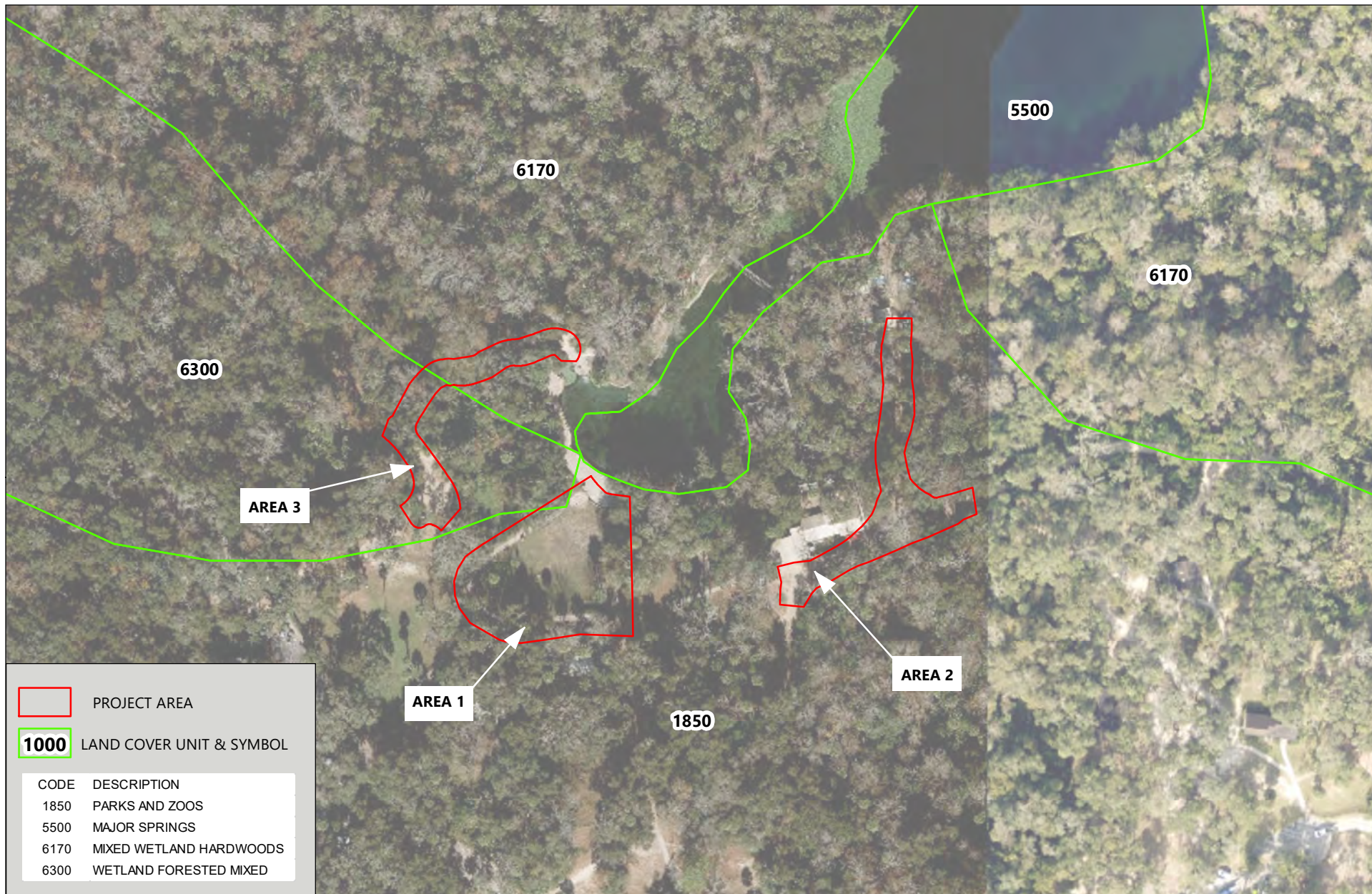
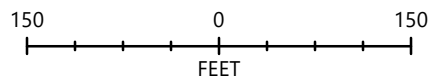


FIGURE 3: LAND COVER
WEKIWA SPRINGS STATE PARK
EROSION CONTROL AND ACCESS



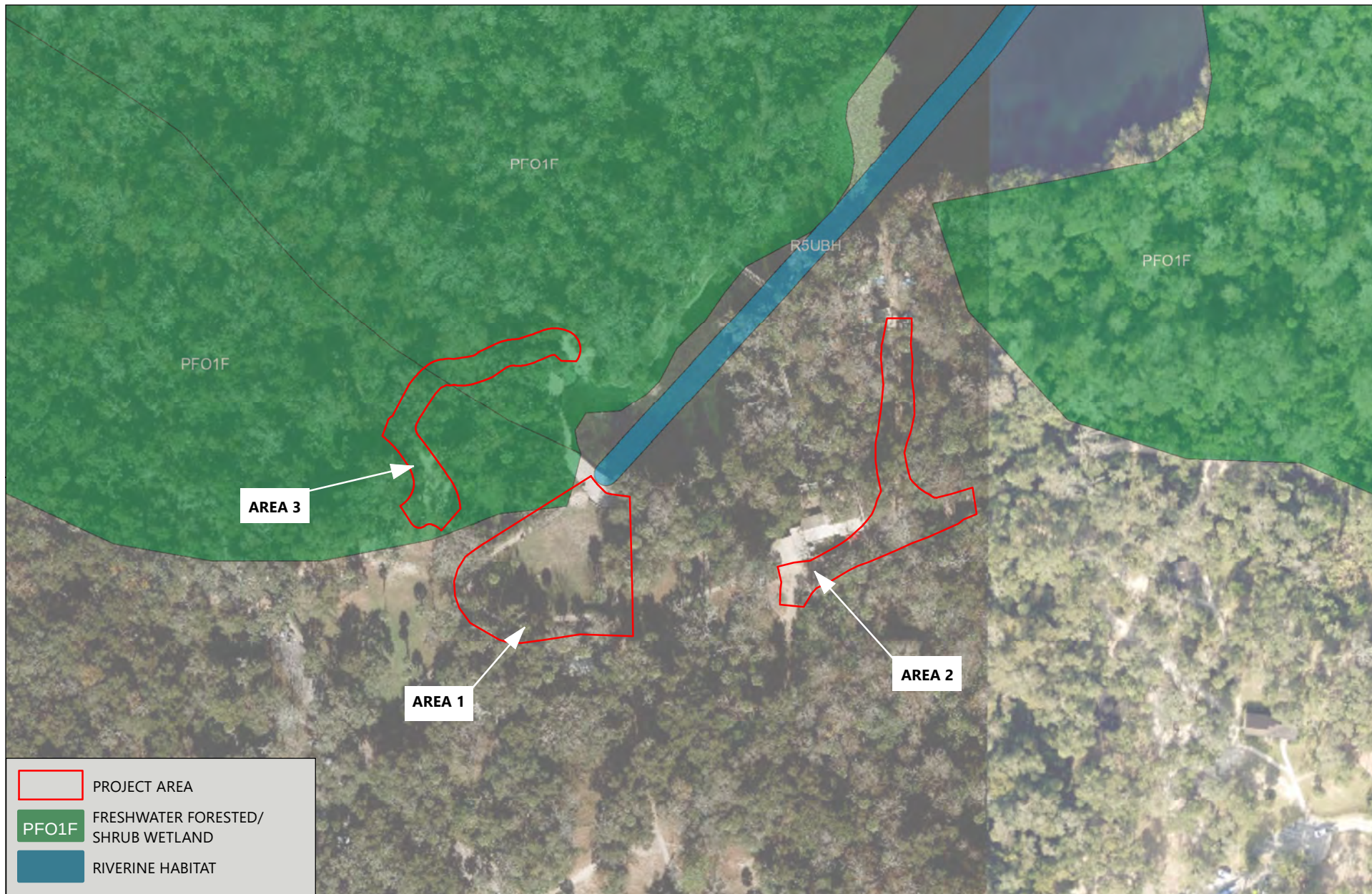


FIGURE 4: USFWS NATIONAL WETLANDS INVENTORY WETLANDS
WEKIWA SPRINGS STATE PARK
EROSION CONTROL AND ACCESS



Site Photo Review

Photos of the project site that were taken by others during a scoping meeting were also reviewed. Although it is difficult to know for sure without a site visit to evaluate evidence of wetland hydrology and wetland soil characteristics, based on review of the photos Area 1 appears to be primarily, and possibly entirely, upland. Areas 2 and 3 appear more likely to contain at least some wetland habitat.

Potential Permits

Based on this desktop evaluation, it is likely that at least portions of the project area contain wetlands. This would need to be determined by conducting a field wetland delineation. If it is determined by the environmental scientist that portions of the project area contain wetlands, the project would require an Environmental Resource Permit from the SJRWMD and a U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 Permit (404 Permit). After the permit application is submitted to the SJRWMD, a field visit would be scheduled with an SJRWMD regulatory scientist to verify the delineated wetland boundary. Depending on the area of wetland impacted, wetland mitigation may be required.

If the environmental scientist conducting the wetland delineation does not find wetlands within the project area, it is recommended that a pre-application meeting be scheduled with the SJRWMD to determine what type of permit, if any, would be required for the project. Based on the feedback from the preapplication meeting the permit application or exemption verification request would be submitted to the SJRWMD. Again, the SJRWMD regulatory scientist would visit the site and, in this case, confirm that no wetlands are present. Once the SJRWMD verifies that no wetlands are present it can be concluded that no USACE Section 404 Permit would be required. However, other factors besides wetlands are involved in determining whether an ERP is required. Based on review of the 60 percent plans, there do not appear to be components of a surface water management system, such as ditches, stormwater ponds, or swales included in the project. Such a project that does not impact wetlands and does not include a surface water management system could potentially be exempt from ERP permitting. However, the project would have to be reviewed with respect to the following criteria. A project with characteristics meeting one or more of the below conditions would require an ERP:

- A) More than 4,000 square feet of impervious or semi-impervious surface subject to vehicle traffic
- B) More than 9,000 square feet of impervious or semi-impervious surface not subject to vehicle traffic
- C) A total project area of more than five acres
- D) Capability to impound more than 40 acre-feet of water
- E) Modification to a previously permitted project

Items A and B will require consideration for the work in Areas 2 and 3. If the erosion control material selected to be used on the road/trails is considered to be semi-pervious, this may trigger the need for an ERP. Assuming a road/trail width of 12 feet and based on preliminary measurements of the lengths of the road/trails in Areas 2 and 3 it appears that the area of road/trails improvement is very close to, if not more than, 9,000 square feet.

For item C, based on the limits of the project areas depicted in the 60 percent plans, total project size is less than 5 acres.

With respect to item D, the improvements depicted in the plans will not be designed to impound water.

For item E, the Florida's Water Permitting Portal website was accessed to determine whether there are any previously permitted projects in the vicinity of this proposed project. Based on this review, there have been two projects permitted near the proposed project. One of these was a project to repair the bulkhead at the spring, which is near Area 3, but does not appear to overlap Area 3. The second project was the Wekiwa Springs State Park Serenity Gardens. Based the depiction of that project's limits on the water permitting portal website, it is near to, but does not overlap, Area 1. Therefore, it does not appear that the proposed project would be considered a modification of either of these two previous permits.

If the improvements are determined to be located entirely within uplands but a permit is required due to the amount of new semi-impervious surface proposed, the project may be eligible for an ERP general permit. Guidance concerning this would likely be provided during a pre-application meeting with SJRWMD.

If it is determined that the project would impact wetlands and a USACE Section 404 Permit is required, it is likely that the trail/road improvements at Areas 2 and 3 would be eligible for authorization under a Section 404 Nationwide permit 14, which is for linear transportation projects including trails and driveways. It is possible that if there are minor wetland impacts at Area 1 it would be eligible for authorization under Nationwide Permit 18, which is for minor discharges.

Federal and State Protected Species

In order to evaluate potential for federally protected species requirements for the project, an official list of federally protected species that may occur in the proposed project location or that may be affected by the proposed project was obtained from the USFWS' IPaC website (**Attachment 1**). This list contained 16 species, including both plants and animals. For each of these species, habitat characteristics were reviewed and compared with the photographs of the project area from the scoping meeting. Based on this review, the project only contains suitable habitat for one of these federally listed species, the eastern indigo snake. Therefore, it is recommended that the construction contractor be required to implement the Standard Protection Measures for the Eastern Indigo Snake throughout the construction of the project.

To review the potential presence of state protected species, the FNAI Biodiversity Matrix (**Attachment 2**) was reviewed. The Biodiversity Matrix divides the state into a grid of one square mile matrix units which can be queried to determine if there have been known occurrences of protected species documented for the matrix unit. Two state-listed species have been documented within the matrix unit that contains the project, star anise (*Illicium parviflorum*) which is a plant that is classified as endangered by the state, and the pine snake (*Pituophis melanoleucus*), which is classified as threatened.

Based on review of the photos from the project areas, the site does not appear to be ideal for pine snakes, which are typically found in large areas of sandhill, scrub, or xeric pine savanna with high densities of pocket gophers and gopher tortoises.

Star anise inhabits areas such as bottomland forest, hydric hammock, and banks of spring runs. Suitable habitat for this species occurs along Area 2 and Area 3. It is recommended that an environmental survey for this species be conducted prior to construction. If the species is found, plants could be relocated to other areas of the state park prior to construction.

It is possible that other protected species besides those listed in the IPaC species list or those listed as “documented” on Biodiversity Matrix query could occur at the project site. Additional species that are characterized as “likely” or “potential” on the query could occur within the project area, or other species not appearing on either of the list could occur. For this reason it is recommended that a general purpose protected species field survey be conducted in the project limits prior to construction.

Attachment 1

IPaC Protected Species List for the Project Area



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Florida Ecological Services Field Office

FL

Email Address: fw4flesregs@fws.gov



In Reply Refer To:

November 14, 2022

Project Code: 2023-0015408

Project Name: Wekiva Springs State Park Erosion Control and Access

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
, FL

Project Summary

Project Code: 2023-0015408

Project Name: Wekiwa Springs State Park Erosion Control and Access

Project Type: Recreation - Maintenance / Modification

Project Description: Install erosion control material on portions of four existing roads/trails. Terrace sloped grassed recreation/lounging area at spring. Replace concrete stairs and install new segments of sidewalk.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@28.71195455,-81.45960490928641,14z>



Counties: Orange and Seminole counties, Florida

Endangered Species Act Species

There is a total of 16 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 Fisheries¹, 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.

Birds

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite <i>Rostrhamus sociabilis plumbeus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7713	Endangered
Florida Scrub-jay <i>Aphelocoma coerulescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6174	Threatened
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477 General project design guidelines: https://ipac.ecosphere.fws.gov/project/42SYXUDST5DHBEQ4KNJVQKV27Q/documents/generated/6954.pdf	Threatened

Reptiles

NAME	STATUS
Eastern Indigo Snake <i>Drymarchon couperi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	Threatened
Sand Skink <i>Neoseps reynoldsi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4094	Threatened

Insects

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

Flowering Plants

NAME	STATUS
Beautiful Pawpaw <i>Deeringothamnus pulchellus</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4069	Endangered
Britton's Beargrass <i>Nolina brittoniana</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4460	Endangered
Florida Bonamia <i>Bonamia grandiflora</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2230	Threatened
Papery Whitlow-wort <i>Paronychia chartacea</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1465	Threatened
Pigeon Wings <i>Clitoria fragrans</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/991	Threatened
Pygmy Fringe-tree <i>Chionanthus pygmaeus</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1084	Endangered
Sandlace <i>Polygonella myriophylla</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5745	Endangered
Scrub Buckwheat <i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5940	Threatened
Scrub Plum <i>Prunus geniculata</i> Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2238	Endangered

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bachman's Sparrow <i>Aimophila aestivalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6177	Breeds May 1 to Sep 30

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Black Skimmer <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Great Blue Heron <i>Ardea herodias occidentalis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Jan 1 to Dec 31
King Rail <i>Rallus elegans</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Painted Bunting <i>Passerina ciris</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 15
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the

FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point

within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no

data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- [Riverine](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [Palustrine](#)
-

IPaC User Contact Information

Agency: Florida Department of Environmental Protection
Name: Joseph Gable
Address: 4211 West Boy Scout Blvd
Address Line 2: Suite 500
City: Tampa
State: FL
Zip: 33607
Email: jaygable2000@yahoo.com
Phone: 8132838197

Lead Agency Contact Information

Lead Agency: Army Corps of Engineers

Attachment 2

FNAI Biodiversity Matrix Query Results



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

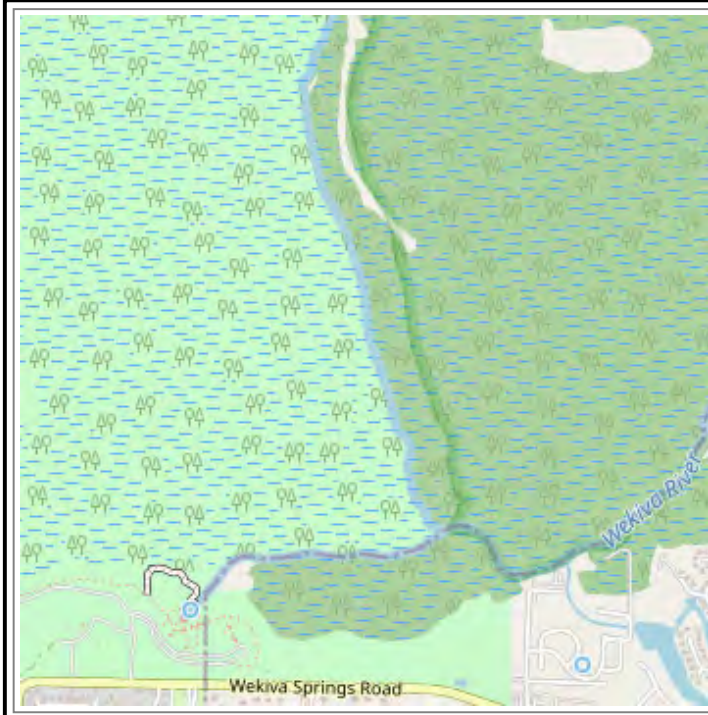
UNOFFICIAL REPORT

Created 5/25/2023

(Contact the FNAI Data Services Coordinator at 850.224.8207 or
kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 45173



Descriptions

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

LIKELY - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Matrix Unit ID: 45173

5 Documented Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Crotalus adamanteus Eastern Diamondback Rattlesnake	G3	S3	N	N
Floridobia wekiwae Wekiwa Siltsnail	G1	S1	N	N
Graptemys ernsti Escambia Map Turtle	G2	S2	N	N
Illicium parviflorum star anise	G2	S2	N	E
Pituophis melanoleucus Pine Snake	G4	S3	N	ST

1 Documented-Historic Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Geological feature	GNR	SNR	N	N

9 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Aphaestracon monas</i> Wekiwa Hydrobe Snail	G1	S1	N	N
<i>Centrosema arenicola</i> sand butterfly pea	G2Q	S2	N	E
<i>Drymarchon couperi</i> Eastern Indigo Snake	G3	S2?	T	FT
<i>Hydric hammock</i>	G4	S4	N	N
<i>Lampropeltis extenuata</i> Short-tailed Snake	G3	S3	N	ST
<i>Mesic flatwoods</i>	G4	S4	N	N
<i>Mycteria americana</i> Wood Stork	G4	S2	T	FT
<i>Sandhill</i>	G3	S2	N	N
<i>Ursus americanus floridanus</i> Florida Black Bear	G5T4	S4	N	N

Matrix Unit ID: 45173

39 Potential Elements for Matrix Unit 45173

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Antigone canadensis pratensis</i> Florida Sandhill Crane	G5T2	S2	N	ST
<i>Asplenium x heteroresiliens</i> Morzenti's spleenwort	G2	S1	N	N
<i>Athene cunicularia floridana</i> Florida Burrowing Owl	G4T3	S3	N	ST
<i>Bonamia grandiflora</i> Florida bonamia	G3	S3	T	E
<i>Buteo brachyurus</i> Short-tailed Hawk	G4G5	S1	N	N
<i>Calamintia ashei</i> Ashe's savory	G3	S3	N	T
<i>Calopogon multiflorus</i> many-flowered grass-pink	G2G3	S2S3	N	T
<i>Carex chapmannii</i> Chapman's sedge	G3	S3	N	T
<i>Coelorachis tuberculosa</i> Piedmont jointgrass	G3	S3	N	T
<i>Coleataenia abscissa</i> cutthroatgrass	G3	S3	N	E
<i>Corynorhinus rafinesquii</i> Rafinesque's Big-eared Bat	G3G4	S1	N	N
<i>Crangonyx sulphurium</i> Sulphurous Cave Amphipod	G1	S1	N	N
<i>Cucurbita okeechobeensis</i> Okeechobee gourd	G1	S1	E	E
<i>Deeringothamnus pulchellus</i> beautiful pawpaw	G1	S1	E	E
<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i> scrub buckwheat	G4T3	S3	T	E
<i>Gopherus polyphemus</i> Gopher Tortoise	G3	S3	C	ST
<i>Gymnopogon chapmanianus</i> Chapman's skeletongrass	G3	S3	N	N
<i>Hartwrightia floridana</i> hartwrightia	G2	S2	N	T
<i>Heterodon simus</i> Southern Hognose Snake	G2	S2S3	N	N

<u>Lechea cernua</u> nodding pinweed	G3	S3	N	T
<u>Lithobates capito</u> Gopher Frog	G2G3	S3	N	N
<u>Lupinus aridorum</u> scrub lupine	G3T1	S1	E	E
<u>Matelea floridana</u> Florida spiny-pod	G2	S2	N	E
<u>Melanoplus forcipatus</u> Broad Cercus Scrub Grasshopper	G2	S2	N	N
<u>Mustela frenata peninsulae</u> Florida Long-tailed Weasel	G5T3?	S3?	N	N
<u>Nemastylis floridana</u> celestial lily	G2	S2	N	E
<u>Neofiber alleni</u> Round-tailed Muskrat	G2	S2	N	N
<u>Nolina atopocarpa</u> Florida beargrass	G3	S3	N	T
<u>Notophthalmus perstriatus</u> Striped Newt	G2G3	S2	N	C
<u>Podomys floridanus</u> Florida Mouse	G3	S3	N	N
<u>Polygala lewtonii</u> Lewton's polygala	G2	S2	E	E
<u>Procambarus acherontis</u> Orlando Cave Crayfish	G1	S1	N	N
<u>Pteroglossaspis ecristata</u> giant orchid	G2G3	S2	N	T
<u>Pteronotropis welaka</u> Bluenose Shiner	G3G4	S3S4	N	ST
<u>Salix floridana</u> Florida willow	G2G3	S2S3	N	E
<u>Sciurus niger niger</u> Southeastern Fox Squirrel	G5T5	S3	N	N
<u>Trichechus manatus latirostris</u> Florida Manatee	G2G3T2	S2S3	T	N
<u>Warea amplexifolia</u> clasping warea	G1	S1	E	E
<u>Warea carteri</u> Carter's warea	G1	S1	E	E

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.