



Wildlife Regulations and Programs

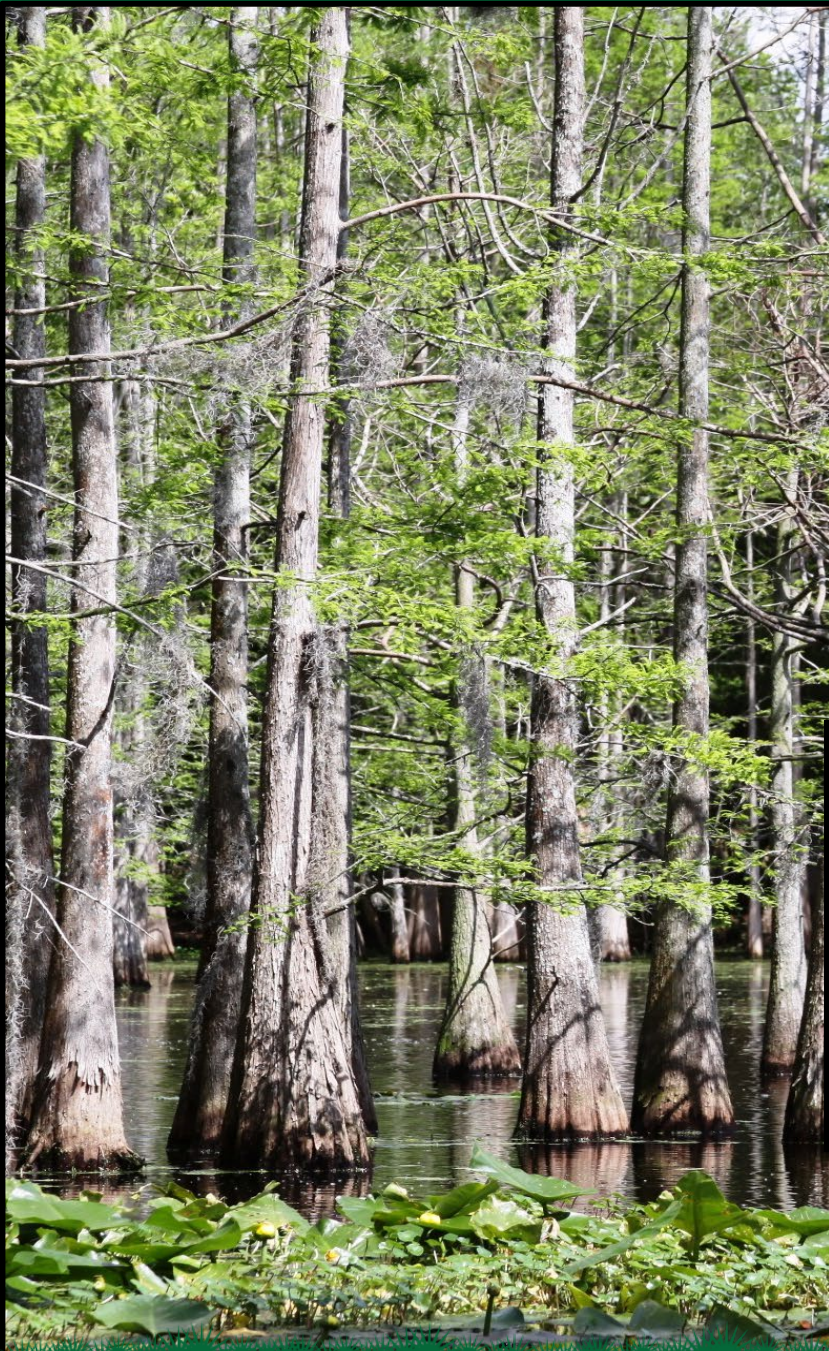
DeSoto County Workshop – July 26, 2022



Presentation Outline

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NAME	BUSINESS INFORMATION	PRESENTATION TITLE
Shannon Gonzalez	Senior Ecologist/Principal, Flatwoods Consulting Group, Inc.	Wildlife Specific Authorizations and Approvals
Raoul Boughton, PH. D	Ecologist, Lead	Wildlife Programs



Wildlife-Specific Authorization and Approvals

Shannon Gonzalez
July 27, 2022



Experience and Expertise

- Senior Ecologist/Principal Flatwoods Consulting Group Inc.
- B.S. Biology, M.S. Zoology University of South Florida
- Senior Professional Wetland Scientist (Sr. PWS) Society of Wetland Scientists
- FFWCC Authorized Gopher Tortoise Agent
- FDEP Certified in Habitat Assessment and Stream Conditions Index
- 24 Years Experience in Wetland Delineation, Wetland Assessment, Wildlife Ecology and Permitting
- Wide Variety of Projects/Clients in Various Industries, such as Mining, Utilities and Transportation, Municipal Services, and Private Development



FLATWOODS
Consulting Group

Levels of Regulatory Oversight

- Federal Oversight
 - FWS review through Section 7 consultation process with the USACE or through State 404 Process with FWC and FWS. Concurrence that the avoidance, minimization, and mitigation measures for listed species follow accepted guidelines for those species
- State Oversight
 - FWC review in accordance with authorities under Chapter 379 Florida Statutes (F.S.)
- Local Oversight
 - Comprehensive Plan Requirements, as well as inclusion in state and federal review process

Federal Oversight

Potential effects of the Mine on species listed as Endangered or Threatened under the Endangered Species Act (ESA), or their designated Critical Habitat. Species may include, but not be limited to:

- Eastern indigo snake
- Audubon's crested caracara
- Florida grasshopper sparrow
- Florida scrub-jay
- Wood stork
- Florida bonneted bat



Compliance with Wildlife-Specific Federal Requirements

- Endangered Species Act
- Fish and Wildlife Coordination Act
- Migratory Bird Treaty Act and the Migratory Bird Conservation Act
- Bald and Golden Eagle Protection Act
- Magnuson-Stevens Fishery Conservation and Management Act/Fishery Conservation and Management Act of 1976

State Oversight

Potential effects of the Project on species listed as State-designated Threatened under Chapter 68A-27, Florida Administrative Code (F.A.C.), or otherwise protected by other state or federal regulations. Species may include, but not be limited to:

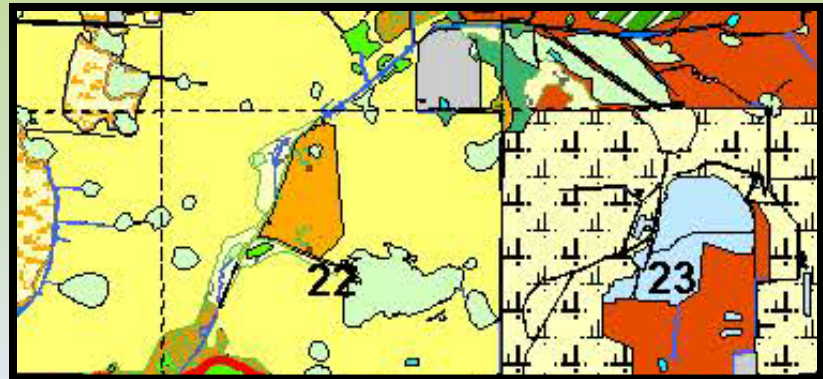
- Gopher tortoise
- Florida sandhill crane
- Communal nesting wading birds
- Southeastern American kestrel
- Florida burrowing owl



Local Oversight

Desoto County Comprehensive Plan Requires...

- “...an inventory of ...endangered species of wildlife and plants...” (Conservation Element - CE Policy 1.5.2 and 1.6.2)
- Identification of “...wildlife habitat, and endangered and threatened species...” (CE Policy 1.9.16)
- “...that an ecological survey be performed by a qualified environmental consultant prior to the approval of site clearing activities to determine if populations of endangered, threatened, or plant or animal species of special concern occur. (CE Policy 1.9.19)



Local Oversight

Desoto County Comprehensive Plan Requires...

- Submission of “...mitigation measures as part of the County’s development review process.” (CE Policy 1.9.16)
- The use of Best Management Practices such as berms and monitoring wells ... in order to ensure that the direct tributaries and floodplains of Horse Creek and the Peace River, natural functions of soils, fisheries, wildlife habitat and listed species are protected and maintained [Future Land Use Element - FLUE Policy 1.12b.3 (9)]

Data Collection Efforts

- Begins years before mining
- Natural Resource Mapping and General Surveys
 - Conducted throughout the year
 - Designed to determine presence or likelihood of occurrence
- Species Specific Surveys
 - Habitat-based
 - Approved standard methods
 - Time of year/time of day requirements



Determining Survey Needs

Florida bonneted bat

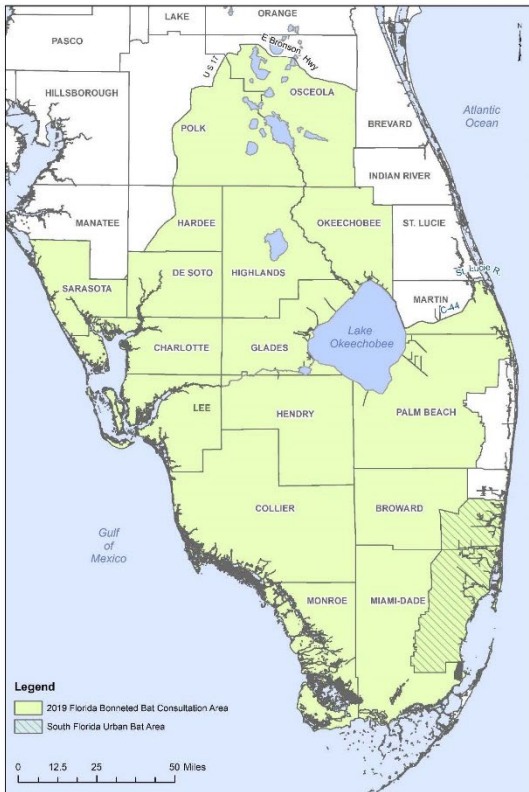


Figure 1. Florida Bonneted Bat Consultation Area. Hatched area (Figure 2) identifies the urban development boundary in Miami-Dade and Broward County. Applicants with projects in this area should contact the Service for specific guidance addressing this area and individual consultation. The Consultation Key should not be used for projects in this area.

South Florida Ecological Services Field Office - Publication Date: August 12, 2020
Species Survey Guidelines - Sand Skink

Peninsular Florida Species CCG for Skinks

July 31, 2020 13

Sand Skink

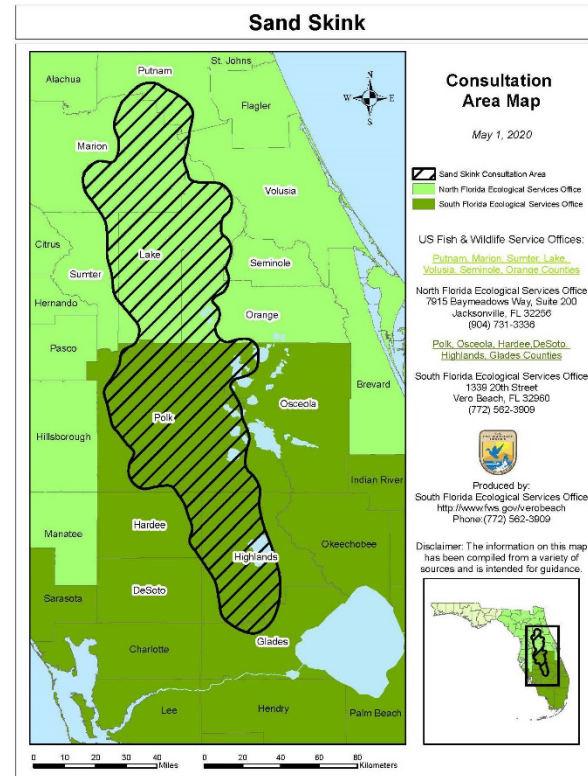


Figure 1. Sand skink consultation area. County names depicted in shadowed bold text indicate the counties where skinks are known to occur.

Survey Methods – Pedestrian Transects

- Year-round
- Species include gopher tortoise and Florida burrowing owl



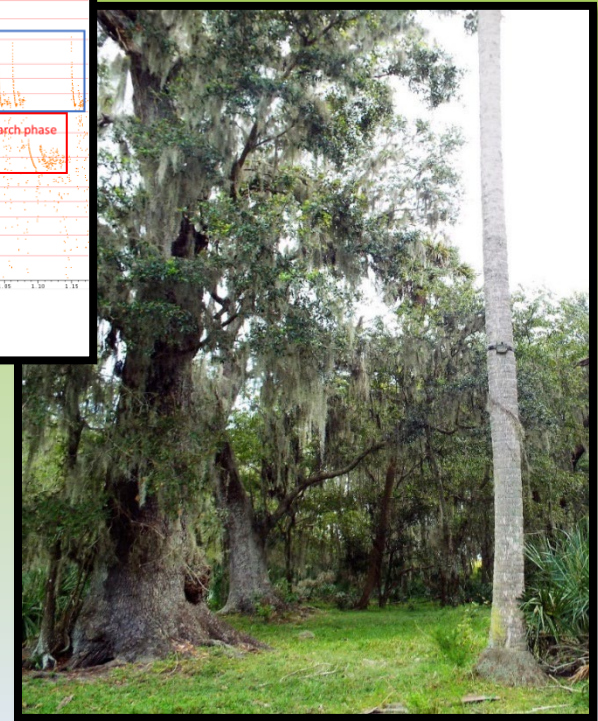
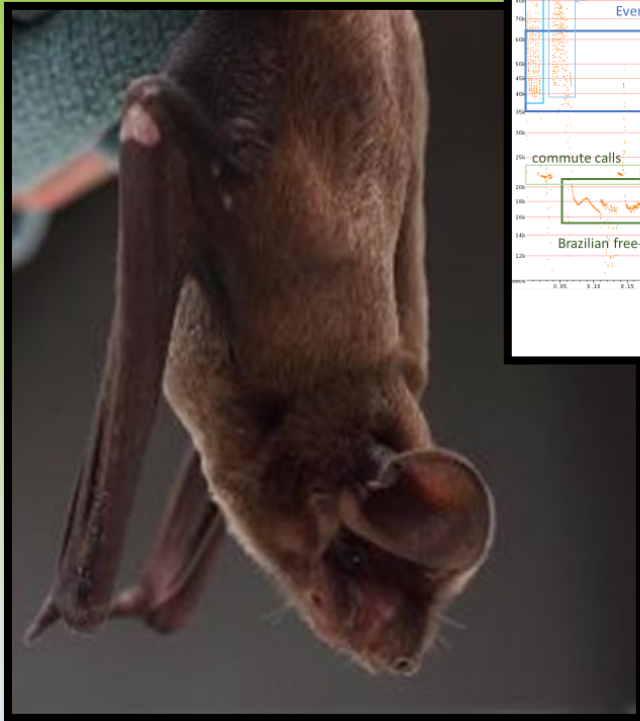
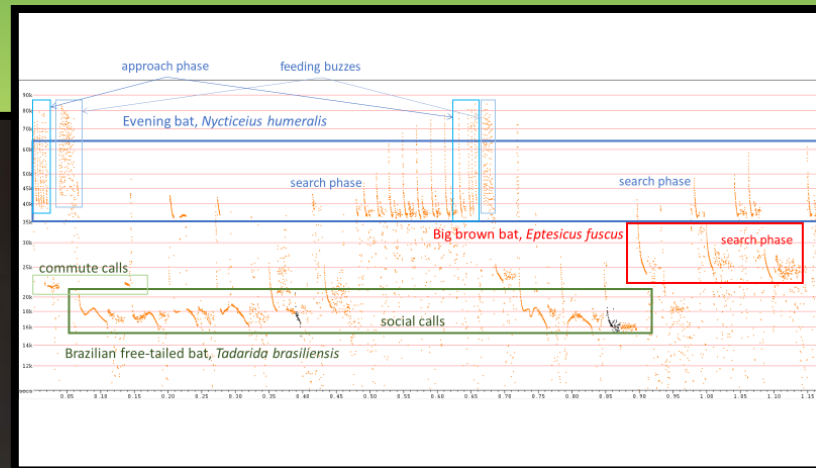
Survey Methods – Aerial Surveys

- Timing is restricted by time of year
- Species include Florida sandhill crane and bald eagle



Survey Methods – Acoustic Surveys

- Timing may be restricted by weather
- Species may include Florida bonneted bat



Survey Methods – Call-back Surveys

- Timing may be restricted by time of year, time of day, and weather
- Species may include Florida scrub-jay and Florida grasshopper sparrow



Survey Methods – Coverboard Surveys

- Timing is restricted by time of year
- Species include sand skink and blue-tailed mole skink



Survey Methods – Nest Surveys

- Timing may be restricted by time of year and time of day
- Species include bald eagle, Audobon's crested caracara, and southeastern American kestrel



Survey Methods – Nest Surveys (continued)



Survey Methods – Nest Surveys (continued)



Permit Application/Approvals

- General
 - Listed Species Report or Sections of Environmental Narrative
- Species Specific
 - Gopher Tortoise Conservation Permit
 - Nest Relocation Permits
 - Biological Assessment/Biological Opinion
- Reports/Applications and Approvals from state and federal agencies are provided to the County and demonstrate compliance with the DeSoto County Comprehensive Plan

Permit Application/Approvals

Species	Habitat of Occurrence	Preferred Survey Window ¹	Likelihood of Occurrence on Project	Status ²	
				FWS ³	FWC ⁴
BIRDS					
<i>Ammodramus savannarum floridanus</i> Florida grasshopper sparrow	Requires large areas of frequently burned dry prairie habitat, with patchy open areas sufficient for foraging. May persist in pasture lands that have not been intensively managed so as to remove all vegetation clumps.	S – April-June B – April-June	Low: Little suitable habitat present	E	FE
<i>Antigone canadensis pratensis</i> Florida sandhill crane	Open wetland habitats surrounded by shrubs or trees. Commonly found foraging in irrigated croplands, pastures, grasslands, or wetlands.	S - Year round B - January-June	High: Observed	---	ST
<i>Aphelocoma coerulescens</i> Florida scrub-jay	Inhabits fire dominated, low-growing, oak scrub habitat found on well-drained sandy soils. May persist in areas with sparser oaks or scrub areas that are overgrown.	S - March-October B - March-July	Low: No suitable habitat present	T	FT
<i>Athene cunicularia floridana</i> Florida burrowing owl	Open prairies with little understory vegetation, including pastures, agriculture fields, and vacant lots.	S - Year round B - February-July	Moderate: Some suitable habitat present	---	ST
<i>Caracara cheriway</i> Audubon's crested caracara	Dry or wet prairie areas with scattered cabbage palms. Also found in lightly wooded areas or improved pastures.	S - Year round B - September-April	High: Observed	T	FT
REPTILES					
<i>Drymarchon corais couperi</i> Eastern indigo snake	Broad range of habitats from scrub and sandhill to wet prairies, forested wetlands, and mangrove swamps. Often seeks refuge in gopher tortoise burrows in sandy uplands, but also forages in mesic and hydric habitats.	S - Year round B - November-April	Moderate: Some suitable habitat present but no gopher tortoise burrows observed	T	FT
<i>Gopherus polyphemus</i> Gopher tortoise	Found in dry upland habitats, including sandhills, scrub, xeric oak hammock, and dry prairie flatwoods; also commonly uses disturbed habitats such as pastures, old fields, abandoned citrus groves, and road shoulders.	S - Year round B - March-October	High: Observed	---	ST

1 - S - Survey Window, B - Breeding Season, F - Flowering Season

2 - E = Endangered, T = Threatened, FE = Federally Endangered, FT=Federally Threatened, ST=State Threatened, SA = Similarity of Appearance

3 - U.S. Fish and Wildlife Service

4 - Florida Fish and Wildlife Conservation Commission

Table Source: Florida Wildlife Conservation Guide, Florida's Breeding Bird Atlas, FWS Listed Species by County, and Florida Natural Areas Inventory

Selected DeSoto County Mine Permit Conditions



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road MS 3577
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

ENVIRONMENTAL RESOURCE PERMIT

APPLICANT

Mosaic Fertilizer, LLC
c/o Mr. Russell Schweiss
Director of Land and Resource Strategies
13830 Circa Crossing Drive
Lithia, Florida 33547

PROJECT NAME

Permit/Authorization No. MMR_331292-001
Date of Issue: April 7, 2017
Expiration Date of Construction Phase:
April 7, 2062
County: DeSoto
Project: DeSoto Mine

- Specific Condition 8.d – “Annual Status Reports during mining must include the results of any pre-mining wildlife and Endangered/Threatened species surveys conducted during the year. Copies of any permits obtained and a description of activities taken to avoid or relocate these species during the reporting year shall also be provided.”

Selected Desoto County Mine Permit Conditions

- Specific Condition 26.c – In forested wetlands, “The permittee shall construct hummocks, leave some areas roughly graded and install stumps, logs, and/or woody debris piles several inches above the seasonal high-water line to provide habitat heterogeneity. Snags shall also be placed within the forested wetlands as appropriate to encourage wildlife usage...”
- Specific Condition 8.g – “Marshes and wet prairies shall be designed to maintain the diversity of community types that existed prior to mining operations in order to support a wide range of wildlife species including birds, reptiles, and amphibians...”



Selected DeSoto County Mine Permit Conditions

- Specific Condition 19: WILDLIFE MANAGEMENT: The permittee shall follow the DeSoto Mine Wildlife and Habitat Management Plan (Appendix 2-6-B) for all preclearing wildlife surveys, timing of habitat disturbance, and relocation activities or as required by Florida Fish and Wildlife Conservation Commission/US Fish and Wildlife Service (FFWCC/USFWS) permits or management plans. The appropriate FFWCC/USFWS coordination shall be initiated prior to the disturbance of habitat if it is being utilized/occupied by listed species, or relocation of any listed wildlife species. Copies of all correspondence, permits, authorizations and reports to or from these agencies shall be provided to the Department with the Annual Status Reports required in Specific Condition 8 (Annual Status Reports).



Pre-Clearing Surveys

- As there is the potential for extended periods of time to elapse between initial protected species surveying efforts conducted in support of permitting efforts and when an area is mined, updated protected species surveys are performed before individual areas are mined.
- Ecologists conduct surveys for each area prior to any mining related disturbance. This may include additional species-specific surveys as dictated by state and federal guidelines and/or general pre-clearing wildlife surveys. Survey results and actions taken will be reported to the appropriate regulatory agencies, as required.
- Should it be required, the relocation of protected species may be accomplished several ways. When necessary, relocation of protected species will not occur until all required state and/or federal approvals and/or permits have been obtained.



Pre-Clearing Surveys

- Publicly-available data search
- 100 percent survey of all suitable gopher tortoise habitat
- Updated species-specific surveys
- Nest Surveys
- Staff Training for identification and protocol



ATTENTION:
THREATENED EASTERN INDIGO
SNAKES MAY BE PRESENT ON
THIS SITE!!!

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site without interference.
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, and the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, and the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336
Panama City Field Office – (850) 769-0552
South Florida Field Office – (772) 562-3909

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

- DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.
- SIMILAR SNAKES:** The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.
- LIFE HISTORY:** The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.
- PROTECTION:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

Wildlife Displacement During Mining

- Rolling process of mining and reclamation
- Directional clearing
- Translocation of some non-mobile species
 - Gopher tortoise
 - Florida scrub-jay
 - Florida burrowing owl



Reclamation and Long-Term Management

- “The practices implemented by the phosphate industry to conserve and protect wildlife and listed species have evolved over time in concert with the advancements the industry has made in wetland mitigation and upland reclamation. The large-scale watershed-based mitigation/reclamation approaches implemented today by the industry are intended to result in greater direct and indirect benefits to wildlife and listed species than earlier approaches.”

-USACE FAEIS Section 5.9



Indigo Snake – Reclaimed Habitat

Reclamation and Long-Term Management

- 2008 FIPR Study found a total of 299 vertebrate species (36 fishes, 20 amphibians, 28 reptiles, 186 birds, and 29 mammals) on 62 reclaimed mine sites.



Wood Storks Foraging – Reclaimed Marsh



Florida Sandhill Crane-Reclaimed Marsh

Reclamation and Long-Term Management

- Recommendations from 2008 FIPR Study
 - Landscape-level connectivity between reclaimed habitat and reclaimed corridors
 - Plan for habitat heterogeneity
 - Use the best soils available
 - Plant and maintain diverse vegetation
 - Develop and implement an adaptive management plan
 - Standardize monitoring to allow for consistent data collection and use in adaptive management plan



Final Thoughts

“Based on the findings of past studies, wildlife use of reclaimed areas is expected to be comparable to wildlife use of unmined areas (see Section 3.3.6.1).”

-USACE FAEIS Section 4.5.3.2 (Desoto Mine)

