

GOPHER TORTOISE

GUIDANCE FOR EACH PHASE OF FDOT PROJECT DELIVERY

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SECTION 1: INTRODUCTION

OVERVIEW

Gopher tortoises (*Gopherus polyphemus*) and their burrows are important to the terrestrial ecology of Florida. Gopher tortoise burrows provide refuge for over 350 species of wildlife (termed “commensal species”) including the Eastern indigo snake, Florida pine snake, gopher frog, Florida mouse, and the burrowing owl. Because these burrows are relied upon by such a variety of fauna, the gopher tortoise is often referred to as a “keystone” species (Ashton & Ashton 2008). The gopher tortoise is listed as “Threatened” by the Florida Fish and Wildlife Conservation Commission (FWC), and both the gopher tortoise and their burrows are protected under state law (Rule 68A-27.003, Florida Administrative Code (F.A.C.)). From a federal perspective, the gopher tortoise is a “Candidate” species in Florida for possible future listing under the Endangered Species Act (ESA). Candidate species receive no statutory protection under the ESA; however, the U.S. Fish and Wildlife Service (USFWS) requests cooperative conservation efforts as they may warrant future protection (USFWS Candidate Species, Section 4 of the ESA).

Florida Department of Transportation (FDOT) project areas are assessed for the presence of gopher tortoises and their burrows within and immediately adjacent to the footprint of construction. When construction is proposed over or within a 25-foot (ft.) radius of a gopher tortoise burrow, FDOT is required to obtain a permit from FWC that allow for the safe capture and relocation of those tortoises.

PURPOSE AND INTENDED AUDIENCE

The purpose of this document is to provide guidance for FDOT staff (project managers, permit coordinators, Environmental Management Office (EMO) staff, construction managers, utility coordinators, and maintenance managers), consultants, and contractors to follow during all phases of project development, ensuring that FDOT projects comply with gopher tortoise regulatory requirements. Less experienced FDOT staff can use the guidance for training purposes, while seasoned staff members can use the guidance as a resource. This document also addresses the relationship (both ecological and regulatory) between the gopher tortoise and the Eastern indigo snake, a federally “Threatened” species (see **Section 2**).

This document recognizes that the current contractual mechanisms in place to successfully complete activities related to, or potentially affecting, gopher tortoises vary depending on project needs. As such, these guidelines usually refer to “the designated District office” when discussing various responsibilities. These “designated District offices” are often times the Environmental Management Office or Environmental Permitting Office, but could also include Project Management, Construction, Utilities, or Maintenance offices. At times, these guidelines may note specific offices that usually fill a given role, but they are not intended to set forth a requirement of such office. In addition, where specific coordination between various offices is recommended, they are called out directly.

This document includes a *Gopher Tortoise Documentation Form (Attachment B)*, as well as guidance for using the form. The intent of this form is a best practice to facilitate communication regarding gopher tortoise involvement among the various district offices that have a role in the project development process. The use of this form is encouraged but not required.

SECTION 2: DESCRIPTION & REGULATORY DESIGNATIONS

LIFE HISTORY

The gopher tortoise is a terrestrial land tortoise found in every county in Florida (Ashton and Ashton 2008). The tortoise is most frequently associated with upland community types but can also be observed foraging close to or even within wetlands. Gopher tortoises dig burrows within the soil for shelter from fires, extreme temperature, and predators. These burrows often exceed lengths of 20-ft. and depths of 15-ft. or more. Burrows are typically found in well-drained sandy soils but can also be found (less frequently) in areas with a higher groundwater table as a result of the absence of suitable habitat. The subterranean end of a tortoise burrow consists of a larger terminal chamber that allows the tortoise to turn around. Additional side chambers created by tortoises or other inhabitants (such as mice, snakes, or insects, **Section 8, Commensal Species**) are also common. Tortoises typically occur in groups (called “pods”) of various sizes, with multiple burrows that are generally the size of the largest tortoise in the group (Ashton and Ashton 2008). Tortoises within a pod will typically have more than one burrow, generally resulting in more burrows than tortoises. Tortoises spend the majority of the time in their burrows, typically coming out once or several times a day for a few hours to bask in the sun and forage. Depending on the weather and temperature, tortoises may remain in the burrow for several months at a time during the winter months. Mature gopher tortoises (9-21 years old) breed from April to November and typically lay an average of six eggs during their May to June nesting season (FWC).



Burrows are typically found in well-drained sandy soils but can also be found in wetter areas as a result of the absence of suitable habitat.

IDENTIFICATION

THE TORTOISE

The length of the upper portion of an adult tortoise shell (carapace) ranges from 5 inches to over 12 inches. FWC considers hatchling tortoises to be less 2.5 inches in carapace length, and juvenile tortoise to be between 2.5 and 5 inches in carapace length. The coloration of hatchling tortoises is typically yellow to orange (see **Plate 4**) that darkens to brown and grey as they mature (see **Plates 1-3**). The coloration of adult tortoises is typically grey but can include varying shades from light tan and darker brown. The differences between sexes are evident on the bottom portion of the adult tortoise shell (plastron) as males have a concave plastron and females have a flat plastron.



Linda Soderquist, Illustration, [The Gopher Tortoise Activity Book](#), FWC, Feb. 2009

The gopher tortoise is not the only turtle observable out of water. The box turtle (*Terrapene* spp.) is also a terrestrial turtle (see **Plate 6**). Box turtles, as well as aquatic turtles (while on land), are frequently mistaken for gopher tortoises. Aquatic turtles can travel great distances on land, most often during the breeding seasons (typically spring and early summer). Although infrequent, exotic tortoises that have escaped from captivity (or have been deliberately released) can also be mistaken for a gopher tortoise. The following visual clues can be used to quickly identify a gopher tortoise from these other species:



Plate 1: Tortoise front legs are heavily scaled with large claws and resemble shovels.



Plate 2: Tortoise hind legs are short and stubby.



Plate 3: Tortoises lack webbed feet.



Plate 4: Tortoises have a carapace that has a relatively flattened appearance.



Plate 5: Tortoises walk with shells carried off the ground. Other turtle species typically scoot along the ground dragging their shells.



Plate 6: Florida box turtle

THE BURROW

The entrances or mouths of gopher tortoise burrows are identifiable by their half-moon shape and flat bottom (see **Plate 7**). The burrows of hatchling and juvenile tortoises are similar in appearance, but at a size to match the individual shell. It is important to note that hatchlings and juvenile burrows are typically much shorter in length than adult burrows.

The opening of the burrow may contain a mound or apron constructed from the excavated soil of the burrow (see **Plate 7**). Gopher tortoise burrow aprons are often the location of the gopher tortoise nest site and disturbances (stepping on or driving over) to the apron should be avoided. It is important to recognize that not all burrows contain aprons.

Burrows that are created by mammals (armadillos), exotic reptiles (iguanas, tegu), and sometimes birds (burrowing owls) are often misidentified as gopher tortoise burrows; though these burrows are typically circular and relatively shallow in length (i.e., 0.5 to 4-ft.) (see **Plate 8**). However, it is possible that hatchling and juvenile tortoises will use these burrows.



Plate 7: Half-moon tortoise burrow with apron.



Plate 8: Circular burrow excavated by an armadillo.

FWC classifies burrows as active, inactive, and abandoned in accordance with their appearance. “Active” burrows are defined as “in good repair with the classic half-moon shaped entrance (see **Plate 7**), and typically have tracks or shell “scoots” or scrapes from recent use by a tortoise” while “inactive” burrows are defined as “in good repair but does not show recent tortoise use.” “Abandoned” burrows are characterized as “lacking the classic half-moon shaped entrance and no longer consist of a tunnel with a cross-section that closely approximates the shape of a gopher tortoise” and “appears unused and dilapidated”, including situations where “the entrance is partially or completely collapsed, there is evidence of the tunnel collapsing and or the burrow is partially or completely filled with leaves or soil.” When conducting burrow surveys, this distinction is important as active and inactive burrows are combined and classified as “potentially occupied.” Gopher tortoises in these potentially occupied burrows must be relocated (burrows excavated, bucket trapped, or other authorized means). If the status of the burrow is uncertain, it is always good practice to be conservative and count the burrow as inactive rather than abandoned. It is also good practice to revisit abandoned burrows as a precautionary measure during the relocation event to ensure that the burrow does not show signs of activity.



If the status of the burrow is uncertain, it is always good practice to be conservative and count the burrow as inactive rather than abandoned.

REGULATORY DESIGNATIONS

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

As noted in **Section 1.1**, the gopher tortoise is protected under state law. FWC administers a permitting program that authorizes gopher tortoise agents, licensed through FWC, to permit projects with unavoidable impacts to gopher tortoises including, but not limited to, clearing, grading, paving, bulldozing, digging, building, construction, and site preparation for development. A relocation or conservation permit from FWC is required for any activity that causes a “take” (harassment, molestation, damage, or destruction) to gopher tortoises or their burrows. Activities such as: 1) killing or causing direct harm to gopher tortoise; 2) collapsing burrow entrances or other parts of tortoise burrows without a permit; 3) blocking, covering, or filling in tortoise burrow entrances without a permit; 4) placing harmful substances or devices inside burrows; 5) penning or restricting tortoises into small areas for more than 72 hours without a permit; 6) altering tortoise habitat to such an extent that resident tortoises are taken by such activities; 7) excluding a tortoise from entering a burrow; and, 8) relocating or possessing tortoises without a permit are considered violations of Rule 68A-27.003, F.A.C. FWC has developed “[Gopher Tortoise Permitting Guidelines](#),” which outlines the permissible activities. A permit is generally not required for FDOT highway right-of-way (ROW) vegetation maintenance activities, such as mowing and tree cutting.



A relocation or conservation permit from FWC is required for any activity that causes a take (harassment, molestation, damage, or destruction) to gopher tortoises or their burrows.

In general, construction activities that will occur within a 25-ft. radius of the mouth of a burrow require a permit. There are multiple types of gopher tortoise relocation permits available, depending on the number of potentially occupied burrows identified at the project (i.e., donor) site. As part of the FWC gopher tortoise permitting program, permits are issued to applicants (typically an authorized gopher tortoise agent acting on behalf of the FDOT), which authorize that individual to conduct those activities allowed by the permit, to include surveying, capturing, marking, transporting, and relocating tortoises and commensals (animals that benefit from gopher tortoise burrows, **Section 8, Commensal Species**). A person permitted through the program is referred to as a gopher tortoise “Authorized Agent” for the specific activities outlined on their individual permit. FWC also issues a permit to landowners that choose to accept relocated tortoises onto their property, referred to as “recipient sites” (**Section 8, Offsite Recipient Sites**). There are costs (i.e., mitigation contribution) for the permit based on the survey of potentially occupied burrows and fees charged directly by recipient sites, usually on a per tortoise basis. Review the [FDOT Mitigation Handbook](#) for guidance when paying these costs and fees and coordinate with the District Procurement Office. As permit fees may vary overtime, please go directly to the most recent version of FWC’s [Gopher Tortoise Permitting Guidelines](#).

For FDOT projects, permits from FWC are typically obtained for relocation activities as a “10 or fewer” burrows permit or a “Conservation” permit which is determined by the amount of potentially occupied burrows that are proposed to be impacted (within the footprint of construction or close enough to be threatened by construction activities). Relocation activities can occur in one event or multiple events throughout the life of a project,

depending on the schedule. Permit applications should be submitted a minimum of 90 days prior to construction. Relocation permit applications are submitted online and require the authorized agent to be FWC registered. To verify FWC registration, visit FWC's [Authorized Gopher Tortoise Agent webpage to view active permits](#). Relocation permits are issued electronically, usually within 90 days of submittal of a complete application including payment, and require the signature of the applicant (usually FDOT environmental or permit staff) to become valid.



Be sure to survey and mark underground utilities prior to any tortoise burrow excavation.

Relocation events begin after proper notification to FWC and after a review and marking of all underground utilities (using District Utilities Office and [Sunshine 811](#)). Gopher tortoise relocation activities associated with these permits can include on-site or off-site relocation. Temperatures must be within the allowable limits (above 50 degrees Fahrenheit) at the project site and within allowable limits for three days following the relocation event, including the day of release, at the recipient site. To determine the weather forecast, use the National Weather Service website (www.nws.noaa.gov). Keep in mind that the recipient site can be located as far as 100 miles away which may make a significant difference in temperatures between the project site and the recipient site. For FDOT districts in the northern counties this can prevent relocation activities between the months of December to March. Communication with the recipient site is encouraged if questions exist.

Within 45 days of the of capture, FWC requires that the permittee provide an “After Action Report” that documents the number of tortoise burrows excavated and number of tortoises recovered, as well as the statistics (length, weight, health, and sex) for each individual tortoise. The recipient site typically provides these statistics to the authorized agent. Sometimes relocation and permitting can be avoided by developing an exclusionary plan to protect burrows by providing proper measures (typically trenched silt fence) to ensure gopher tortoises do not migrate into the construction zone. FWC does not allow penning of tortoises so exclusionary plans typically occur along three sides of gopher tortoise habitat and must extend far enough along the project limits to prevent the tortoises from entering the work site.



Temperatures at the project site and the recipient site must be above 50 degrees Fahrenheit including on the day of release to the recipient site and forecasted for three days after release.

Rule 68A-25.002 F.A.C. which states that, “no person shall paint any turtle/tortoise or possess any turtle/tortoise on which paint has been applied to its shell or body parts”. Although marking individuals is allowed with a permit by an authorized agent, this action is considered a take when not permitted.

U.S. FISH AND WILDLIFE SERVICE

The gopher tortoise is currently federally listed as “Threatened” in Mississippi, Louisiana and in the counties west of the Mobile and Tombigbee Rivers in Alabama. In Florida, the gopher tortoise is a “Candidate” species for possible future listing under the ESA due to declining populations and reduction in suitable habitat availability.

In July 2011, the U.S. Fish and Wildlife Service (USFWS) issued a 12-month finding on a petition to list the gopher tortoise as threatened in the eastern portion of its range (including Florida) and as a result found that such listing is warranted. However, listing the species by USFWS was precluded and the species was designated as a “Candidate” species. Candidate species receive no protection under the ESA; however, the USFWS requests cooperative conservation efforts as they may warrant future protection.

Protection Linkages between the Gopher Tortoise and the Eastern Indigo Snake

The Eastern indigo snake (referred herein as the indigo snake) is considered a commensal of the gopher tortoise and is known to utilize burrows for refuge, breeding, feeding, and nesting. The decline of the gopher tortoise is a factor in the indigo snake being listed as a federally threatened species under the ESA. The indigo snake is one of the largest nonvenomous snakes in North America, reaching lengths in excess of eight feet. The indigo snake has a home range of thousands of acres and utilizes both wetland and upland habitat types (USFWS).

In northern Florida, this species is often found utilizing gopher tortoise burrows as refugia, particularly during the fall/winter breeding season (Hyslop 2009). In southern Florida, the indigo snake uses a wide variety of refugia types in addition to gopher tortoise burrows, including the burrows of land crabs, rats, and armadillos, as well as the bases of trees and litter piles (Layne and Steiner 1996). Indigo snakes have been found, in some cases quite abundantly, in citrus groves in south Florida due to the high amount of available refugia and prey.

For federally listed species like the indigo snake, a federal permit is required to capture, handle, or relocate individuals. If the indigo snake may be affected by habitat modifications, such as impacting gopher tortoise burrows, the *Standard Protection Measures for the Eastern Indigo Snake* should be implemented and FWC gopher tortoise excavation guidance followed.

In 2010, the U.S. Army Corps of Engineers (USACE) in consultation with the USFWS separated the existing programmatic key for the Eastern Indigo snake into the North Florida Key and the South Florida Key. The north Florida indigo snake range is defined as: Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Taylor, Union, and Volusia; and the south Florida range is: Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, and St. Lucie. **Attachment A** contains the original 2010 and 2013 addendum Indigo Snake North Florida Programmatic Effect Determination Key, as well as protection measures. Both the North and South programmatic keys are used in the support of effects determinations for the indigo snake. With FDOT’s assumption of the Federal Highway Administration’s responsibilities of the National Environmental Policy Act (NEPA), FDOT documented its use of programmatic effect determination keys between the USFWS and the U.S. Army Corps of Engineers (USACE) through a letter. The FDOT “Use of Effect Determinations” [Letter](#) outlines the appropriateness of using USFWS Programmatic Keys and is located in the Office of Environmental Management’s (OEM) [Protected Species and Habitat Resources website](#).



Districts in the northern counties should evaluate the USFWS North Florida Eastern Indigo Snake Programmatic Effect Determination Key which states that for impacts to “more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows” a “may affect” determination shall be made.

In accordance with the North Florida Key, indigo snake effect determinations are contingent on the number of gopher tortoise burrows or acreage of suitable gopher tortoise habitat anticipated to be impacted by the project. A “*may affect*” determination is made for projects that impact 25 acres or more of xeric habitat or 25 or more active and inactive gopher tortoise burrows. The South Florida Key does not have the 25 or more active and inactive gopher tortoise burrows requirement as indigo snake in south Florida are not dependent on gopher tortoise burrows because of the abundance of natural and artificial refugia available. It is important to understand this “linkage” between the number of gopher tortoise burrows/acreage of xeric habitat impacted within the project corridor with the North Florida programmatic key as this may play a role in determining how and when to conduct burrow surveys during the various phases of project development. Based on this level of coordination for the indigo snake, it is prudent to conduct a 100-percent gopher tortoise burrow survey in North Florida prior to the state and federal permits (i.e., Water Management District, Florida Department of Environmental Protection, and USACE) application submittal. If it appears that the project will not trigger the USFWS Eastern Indigo Snake North Florida Programmatic Key (see **FDOT “Use of Effect Determinations” [Letter](#)**) and the location of the gopher tortoise is not integral to the engineering of the project, the 100-percent gopher tortoise survey can occur at the end of design phase and prior to the start construction.

A “*may affect*” determination for the Eastern indigo snake prompts consultation with USFWS to decide what additional information is required to ascertain whether there will be an adverse effect on the indigo snake. USFWS may request documentation of wildlife surveys (including burrow surveys) that have occurred in the area and the closest documented occurrence data. Based on this data, the USFWS may request a species-specific survey for the indigo snake for a final effect determination. Consultation for a “*may effect*” determination is conducted through FDOT’s Office of Environmental Management (OEM) to the USFWS. If FDOT is not the lead agency, consultation would be completed by the lead agency after submittal of the environmental permit application package. If a USFWS Biological Opinion (BO) was issued during PD&E for another species, determine whether this document needs to be revised based on additional project area or data. For projects that do not have a federal nexus, FDOT will take the lead in initiating formal consultation in accordance with Section 10 of the ESA.

SECTION 3: ETDM PROJECTS

The Efficient Transportation Decision Making (ETDM) process comprises the first phase in FDOT project delivery (Planning) for qualifying projects. The process is a “first look” of potential project environmental impacts using the Environmental Screening Tool (EST), which provides Geographic Information System (GIS) data. It also offers an opportunity for resource agencies and other stakeholders to provide their comments and considerations. The EST incorporates a large digital database (maintained by the Florida Geographic Data Library) that includes information pertaining to natural, physical, cultural, and community resources. The database pulls information from a variety of sources including FDOT, FWC, USFWS, the Florida Department of Environmental Protection (FDEP), counties, and Water Management Districts.

In order to qualify for this screening process, a project must meet conditions described in the ETDM and Project Development & Environment (PD&E) Manuals, and include activities such as a new roadway, interchange, or bridge as well as additional access or capacity improvements. Please refer to the FDOT PD&E and ETDM

Manuals for a complete list of qualifying project types. Projects that do not qualify for ETDM screenings include Type 1 Categorical Exclusions (CE), some Type 2 Categorical Exclusions, and Non-Major State Actions (NMSA).

With regard to the gopher tortoise, the EST includes many resource layers including wildlife occurrence information, land use codes, soil types, habitat types, hydrology, and conservation land identification. These data resources provide the opportunity to make a preliminary determination of whether gopher tortoises may occur within the project site. Commenting agencies (primarily FWC and USFWS) may also provide firsthand or additional resource documentation of gopher tortoise populations within the vicinity of the project corridor. Please note that identification of existing gopher tortoise populations during this phase is infrequent, but when provided may be useful for scoping PD&E survey efforts or to determine whether future coordination or consultation will be required.



To determine the potential for tortoises on a project, review the Environmental Screening Tool resources by browsing data layers such as: wildlife occurrence, land use codes, hydrology, soils, and conservation lands. A field review will be necessary to confirm.

SECTION 4: PD&E STUDY

The PD&E Study is the next phase of FDOT project delivery and is conducted to comply with the National Environmental Policy Act (NEPA) for federally funded major projects. State funded projects follow the PD&E process to ensure compliance with state and federal regulations. As part of this phase, an in-depth analysis of the effects of the project on natural, physical, cultural, and community resources are undertaken with consideration of project alternatives. During the PD&E process, the presence of gopher tortoises (along with other protected species) is assessed as a part of the Natural Resources Evaluation (NRE) described in the *Protected Species and Habitat* of the PD&E Manual. When gopher tortoises are identified in the NRE, an implementation measure is typically made to have an authorized agent perform a field surveying during the design phase. If during design impacts are found to be unavoidable or within a 25-foot radius of a burrow, a FWC permit is required to relocate the tortoises prior to the construction phase. If tortoise burrows are to remain within the project area, FDOT can evaluate implementing Special Provision (SP) measures such as SP-0070104-3 (see **FDOT's Program Management Workbook**), which includes the use of silt fencing as a means of preventing ground disturbances within a 25-foot radius of a gopher tortoise burrow. The guidance outlined within this document is not intended to exceed the amount of assessment expected as outlined in FDOT's PD&E Manual, but rather to provide a template to document this species based on data collected as part of the Study.

COORDINATION AND SURVEY

In accordance with the PD&E Manual, *Protected Species and Habitat*, a resource assessment as well as a general wildlife survey are typically carried out early (sometimes concurrently) during the PD&E Study to determine and record the presence of protected species, identify evidence of listed species utilization, and quality of existing habitats. Prior to the general field and wildlife surveys, the project team should coordinate with USFWS and FWC in early project development to discuss the *ETDM Programming Screen Summary Report* and ensure that

potential protected species and habitat issues identified have not changed since the screening. During this coordination, it should be determined whether a 100-percent gopher tortoise burrow survey, as defined in the FWC *Gopher Tortoise Permitting Guidelines*, should be conducted during this phase to ascertain indigo snake effect determinations (in accordance with *the North Florida Indigo Snake Programmatic Effect Determination Key*, see **Section 2 - Protection Linkages between the Gopher Tortoise and the Eastern Indigo Snake**). Some northern FDOT Districts may not have large populations of gopher tortoises, and therefore projects within these Districts have not triggered the need to use the *North Florida Eastern Indigo Snake Programmatic Effect Determination Key*. For this reason, these Districts are also not requested (by USFWS) to conduct gopher tortoise surveys during PD&E. Consideration for conducting gopher tortoise surveys usually occurs where it is obvious that USFWS thresholds (burrows or habitat acres) will be exceeded and a “*may affect*” determination will be made for the indigo snake, resulting in USFWS consultation. If it is determined that a 100 percent survey for gopher tortoises will not be required during this phase, all observational data collected during general wildlife surveys should be included in the Natural Resource Evaluation (NRE), as well as the *Gopher Tortoise Documentation Form (Attachment B)*.

GOPHER TORTOISE DOCUMENTATION FORM

During the start of the PD&E phase, the designated District office should initiate use of the *Gopher Tortoise Documentation Form (Attachment B)*. For projects that do not qualify for a PD&E Study (i.e., Type 1 CE or NMSA), the *Gopher Tortoise Documentation Form (Attachment B, page 1)* should be initiated during the design phase as applicable.

The designated District office is responsible for ensuring that the *Gopher Tortoise Documentation Form* is updated and includes (as attachments) the results of all surveys, correspondence with regulatory agencies, and implementation measures to resurvey prior to being submitted to the designated District office in the design phase. The form should include any preliminary gopher tortoise information obtained from the ETDM screening (if applicable).

REEVALUATIONS

During PD&E reevaluations, if new ROW is proposed that was not previously evaluated (e.g., ponds, sidewalks, shifts in project alignment), the designated District office should consider the new area as it relates to the gopher tortoise and the indigo snake programmatic key as explained in **Section 2**. An additional *Gopher Tortoise Documentation Form (Attachment B, page 4)* is provided specifically for reevaluation(s).



As with all threatened and endangered species, all proposed ROW not previously evaluated during the PD&E phase must be evaluated for gopher tortoise.

PROCESS FOR STATE FUNDED PROJECTS

If a project is state funded, a State Environmental Impact Report (SEIR) or Non-major state action (NMSA) is prepared as the Environmental Document. During the SEIR analysis, the project team should document the presence or absence of gopher tortoises (evaluated as part of the general wildlife survey of the project corridor) in the NRE and in the *Gopher Tortoise Documentation Form*.

SECTION 5: DESIGN

The design of a project is the next phase of FDOT project delivery. For projects with a PD&E Study, this phase takes the preliminary PD&E concepts and develops the final engineering aspects of the project. Typically, ETDM screening and PD&E Studies are only done on complex projects. Projects that do not require these phases will generally begin in the design phase and typically have shorter delivery schedules so special attention may be required to ascertain and address potential gopher tortoise impacts. Although these projects may be smaller in scope, there remains the potential for involvement with gopher tortoises. Involvement may include activities that necessitate land clearing and grubbing such as, but not limited to, the installation of sidewalks, multi-use paths, trails, drainage, roadway shoulders, and bus bays. Therefore, it is important to determine whether suitable gopher tortoise habitat exists by reviewing available GIS, aerial, and desktop (EST) information, as well as to conduct field reviews.

The design phase may include several review periods as the engineering plans go through development. Speak with the Project Manager (PM) about the project delivery schedule and when these review periods will occur. The acquisition of ROW required to construct a project typically occurs between 60 and 100 percent plans. If not already reviewed during PD&E, all acquired ROW will also need be included in gopher tortoise reviews if suitable habitat exists.



Although federal and state environmental permits are typically applied for at 60-percent design plans, gopher tortoise permitting is tied to the date ground disturbances begin (utilities/construction) and when the 100 percent survey was last conducted.

SURVEY TIMING

Surveys for gopher tortoise burrows occur during the design phase and may reveal opportunities for impact avoidance. For example, a survey could be useful for design considerations such as the routing of sidewalks or opportunities to implement avoidance measures such as exclusionary fencing. Survey could also determine if utility relocation activities would be an issue in advance of typical construction activities.

At the beginning of the design phase, the designated District office should review the level of gopher tortoise survey and coordination that occurred during the PD&E Study (if applicable) and as detailed in the *Gopher Tortoise Documentation Form*. Based on previous efforts, the office should determine when the authorized agent (design consultant ecologist, FDOT staff, or District-wide consultant) should conduct additional gopher tortoise surveys. These surveys must take place no more than 90 days prior to applying for a permit.



A 100% survey must be conducted no more than 90 days prior to, and no fewer than 72 hours before (excluding weekends and holidays) commencing gopher tortoise capture and relocation activities.

GOPHER TORTOISE BURROW SURVEYS

Burrow surveys must, at a minimum, cover 15 percent of the gopher tortoise habitat proposed for impact in order to be used for the FWC Conservation permit application. It is recommended that a 100-percent survey be conducted for all tortoise habitats within or immediately adjacent to the project ROW, as all potentially occupied

tortoise burrows within 25-ft. of the proposed construction footprint should be documented to determine whether tortoises from those burrows need to be relocated, or if any burrows could be protected through an exclusionary fencing plan. This level of survey can also verify whether the project will qualify for the “10 or Fewer” permit. These surveys, carried out by an authorized agent, consist of pedestrian transects that systematically cover the survey area. FWC recommends pedestrian surveys but allows the use of ATVs for burrow surveys as long as they are notified in advance and survey maps/shapefiles are provided to FWC. Use of ATVs may be beneficial on expansive linear mowed ROW if permission is granted by FWC in advance. Spacing between transects is dependent on vegetation height and density but should allow for 100% detection of burrows. (i.e., pasture can have wider spacing versus dense saw palmetto flatwoods which would require much tighter transect spacing).

It is common for FDOT gopher tortoise surveys to identify tortoise burrows along fence lines that may be out of the FDOT ROW. In this instance, it is important to note the direction/heading of the burrow. If the burrow tunnel is heading toward the ROW and construction is within 25-ft., it may be prudent to gain permission from the adjacent property owner (see example letter- **Attachment D**), include the burrow in the permit application, and relocate the tortoise to avoid potential damage to the burrow or injury to the tortoise. However, if the burrow is heading/facing away from construction, relocation may not be necessary with the installation of exclusionary silt fencing. Silt fencing is typically composed of synthetic filter fabric, posts, and, depending upon the strength of the fabric used, wire backing for support. As there are many items to consider on a case-by-case basis, it is always advisable to review the options and discuss with FWC any unresolved issues or questions. Internal FDOT pre-Construction coordination will determine the timeframe for initiation of the 100-percent gopher tortoise burrow survey for the permit application.



Gopher burrow surveys are only valid for FWC permitting purposes for 90 days, so even if a 100% survey was conducted previously, it may need to be updated before submitting the permit application.

Below are considerations for determining the timing of project surveys. Note that “FDOT” below includes district-wide environmental, construction engineering & inspection, or other contracts that contain gopher tortoise services outside of a construction contract. “Contractor” below may include a design-build firm.

- Will FDOT or the Construction Contractor be responsible for the survey?
- Will FDOT, or the Construction Contractor, be responsible for gopher tortoise permitting including permit costs?
- Will FDOT, or the Construction Contractor, be responsible for capture, relocation, and recipient site selection and costs?
- Will FDOT, or the Construction Contractor, be responsible for exclusionary fencing plans, installation, maintenance, and removal? Note that each of these items listed should be considered individually. For example, FDOT may develop an exclusionary silt fence plan for the contractor to carry out. In this instance, FDOT would need to ensure the proper pay items and any special provisions are included in the contract for the contractor to carry out the installation, maintenance, and removal.
- If FDOT’s existing Special Provisions are not sufficient to call out to the construction contractor what their responsibilities are for gopher tortoise, a Modified Special Provision (MSP) can be requested.

Coordination with FDOT's Specifications Office will be required. A sample Modified Special Provision for exclusionary fencing is included as **Attachment E** for reference.

- Are the appropriate pay items and quantities in the plans, or will they require updating?
- What advanced utility relocation (prior to FDOT construction contractor work) work needs to be considered in conjunction with gopher tortoise permitting, relocation, and/or exclusionary fencing (see **Section 5, Utility and Right-of-Way Acquisition Coordination, pg. 13**)?
- What demolition activities need to be considered in conjunction with tortoise relocation?
- Are there cold weather conditions that need to be considered (see **Section 2, pg. 6**)?

Typically, when FDOT is responsible for addressing gopher tortoise impacts, the burrow survey and FWC permitting should occur three months prior to construction or the utility relocation, whichever comes sooner. This will provide a reasonable amount of time to include necessary information with the production package (plans, specification and permits) generated for the Construction Contractor to bid on. If the Construction Contractor is responsible for relocation under a permit obtained by FDOT, the FWC permit will have to be transferred to the authorized agent that will be performing the relocation activities once the construction contract is awarded. If a less than a 100-percent survey was conducted for gopher tortoise permitting (or if 90 days has lapsed since the last 100-percent survey), a survey covering 100-percent of gopher tortoise habitat must also occur no fewer than 72-hours (excluding weekends and holidays) before relocation activities by the responsible authorized agent. FWC staff must also be notified no more than 120-hours, and at least 24-hours (excluding weekends and holidays), prior to the start of the relocation effort. See **Section 6** for additional considerations during construction.

PRE-CONSTRUCTION COORDINATION

The designated District office responsible for coordinating the gopher tortoise efforts (i.e., permitting, relocation and exclusionary plan needs) during pre-construction should take the lead in coordinating with the various offices. Coordination with the Specifications Office, the Design Project Manager (PM), Procurement Office, Construction Project Administrator, and the District Utility Office is advised to ensure the proper timing of all pre-construction related gopher tortoise activities. Please refer to **Attachment C for a Flow-chart of design coordination**, as well as the sections below for areas of consideration.



There are activities that can occur in advance of construction that may drive the timing of the gopher tortoise surveying and permitting. Examples include geotechnical boring, utility work, and/or activities that require land clearing or grubbing. Determine whether these activities are a component of the project.

UTILITY AND RIGHT-OF-WAY ACQUISITION COORDINATION

When gopher tortoise burrows exist within the ROW for any FDOT project, the designated District office responsible for coordinating the gopher tortoise efforts should coordinate with the District Utility Office. Utility work may occur in advance of construction activities, so it is recommended that the schedule for any utility work be identified. This is one of the most challenging schedules to pin down; however, coordination should take place between 60 and 90 percent plans to address utility relocation (i.e., any earth disturbing utility work)

anticipated for the project and, if conflicts exist, organize relocation efforts in advance of these activities. Survey data collected earlier in the design process is useful for the purposes of this discussion.

During this coordination with the District Utility Office, there should be a discussion that includes the following:

- Acknowledgement of the potential presence of gopher tortoise
- The timing of the utility relocation and how any schedule changes will be addressed.
- Will the utility relocation be scheduled prior to the FDOT contractor's starting roadway construction?
- If so, how far in advance (i.e., some utility work could be up to one year in advance of FDOT construction, which could require the gopher tortoise permit to be obtained earlier than normal). Note the District Utility Office may not be able to provide an exact number of days prior to construction but should be able to provide some general expectations to help plan for gopher tortoise relocation activities. It may be necessary to check back with the designated District office numerous times as design progresses to ensure the most efficient timing of the 100-percent burrow survey.
- Will exclusionary fencing need to be installed at the same time as the utility relocation? If so, who will handle this task? How will the responsibility for fencing be transferred to the roadway contractor if applicable? Coordination may be needed with those responsible for the regular maintenance of the silt fencing to prevent tortoises from entering the construction site.
- What gopher tortoise removal technique is the most appropriate and safe? [Sunshine 811](#) clearance occurs approximately 5 days before construction and covers the area for 30 days.



Mechanical excavation of gopher tortoise borrows cannot occur in the proximity of utilities. Typically, in this case, bucket trapping is the preferred method. It should be noted that this method of trapping can require up to 28 days to satisfy FWC requirements.

A Utility Agency/Owner is not able to obtain a permit for gopher tortoise relocation from within the FDOT ROW (as they are not the property owner), so this coordination is critical. Advanced utility relocation will require early gopher tortoise permitting and relocation to clear the site for them, FDOT environmental staff should coordinate with the Project Manager, Utility office and Construction staff (Project Administrator, Utility Construction contact) to ensure the necessary oversight. An additional meeting is also recommended three-months prior to utility relocations to confirm that all tortoises are relocated or protected from proposed utility actions.

Preliminary coordination with the ROW acquisition staff is also recommended to ensure that any demolition activities do not occur within gopher tortoise habitat. This discussion should also include the ingress/egress locations for the demolition equipment and activities.

REQUEST FOR PROPOSAL DEVELOPMENT

If a project will be constructed through a Design-Build contracting mechanism (see **Section 6**) or other alternative contracting method, a Request for Proposal (RFP) or similar document is developed to outline the requirements of the project. For Design-Build projects, the gopher tortoise survey, permitting, and relocation activities can be conducted by FDOT prior to the Design-Build Firm's notice to proceed (NTP). Alternatively,

FDOT has standard language within Design-Build RFPs that can be used to assign gopher tortoise survey, permitting, and relocation activities to the Design-Build firm. If the FDOT is conducting any of these activities, the RFP verbiage should be revised to direct the Design-Build Firm accordingly. FDOT is responsible for overseeing any gopher tortoise relocation or protection efforts conducted by the Design-Build Firm including verification of the completeness and accuracy of the survey; proposed exclusionary fencing, the permit application package including all permit modifications; or subsequent permit applications. The oversight can be provided by the District Permits Coordinator, EMO staff, or Construction Engineering Inspector (CEI). In cases where the amount of gopher tortoise burrows triggers indigo snake consultation during a Design-Build project, FDOT is responsible for consulting with USFWS.

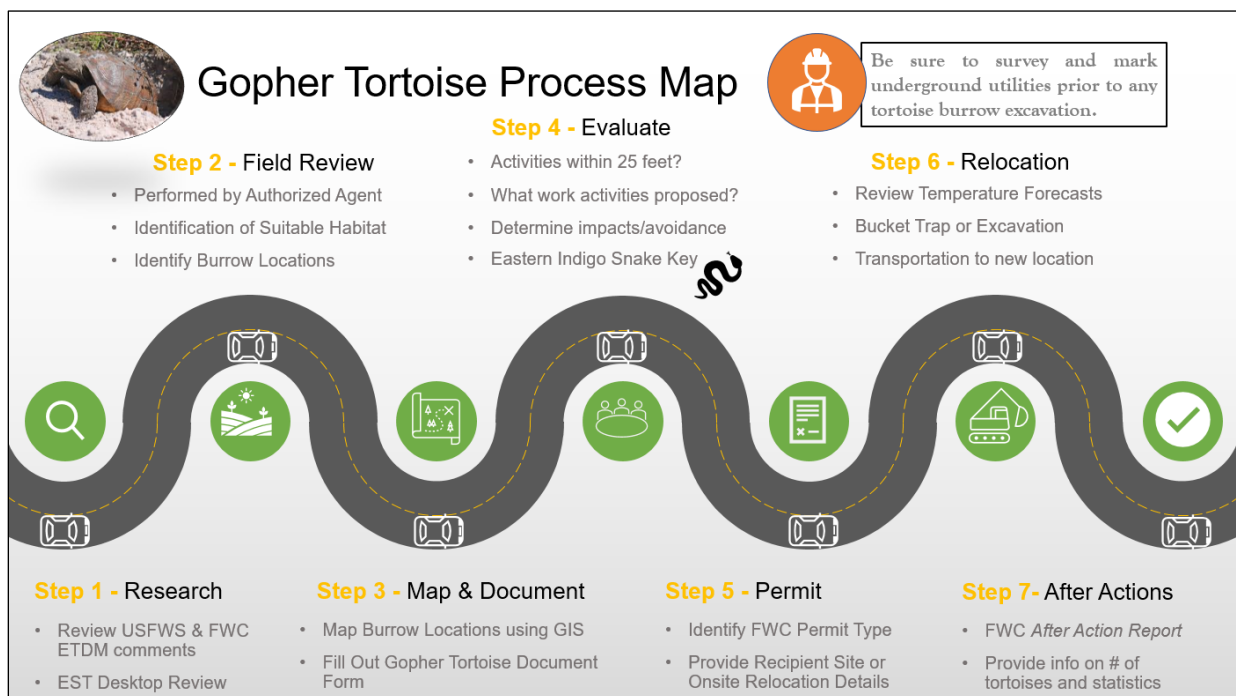


Permits for gopher tortoise relocation outside of FDOT-owned ROW (i.e., utility easements, license agreements) require the owner of the property to act as the “permittee” per FWC requirements. In these special cases, FDOT will perform the oversight of the process.

GOPHER TORTOISE DOCUMENTATION FORM

The pre-construction section of the *Gopher Tortoise Documentation Form* (**Attachment B**, page 2) provides a breakdown of the items to consider prior to the start of construction. This section of the form contemplates when the 100-percent preconstruction survey should occur in relation to production schedule, utility relocations, demolitions, and the start of construction. Should the design segment be a smaller section of the PD&E Study, each design segment should fill out pages 2 and 3, with a duplicated page 1, that documents the ETDM and PD&E Study results.

Figure 1 Gopher Tortoise Process Map



SECTION 6: CONSTRUCTION

The construction phase of project delivery is primarily accomplished through the Design-Bid-Build and Design-Build processes. The Design-Bid-Build (conventional) process is a form of project delivery whereby the FDOT either performs the design work in-house or negotiates with an engineering design firm to prepare drawings and specifications under a design services contract, and then separately contracts for construction services by engaging a contractor through competitive bidding. The Design-Build form of project delivery is a system of contracting whereby one entity performs both engineering design and construction under one contract. For either contracting process, the designated District office should coordinate with the Construction Project Administrator and the Utility office to ensure that gopher tortoise surveys, permitting, and relocation are being conducted ahead of the start of work (clearing and grubbing).

ROAD CONSTRUCTION

DESIGN-BID-BUILD PROJECTS

For conventional construction projects, the gopher tortoise survey, permitting, and relocation is typically conducted by FDOT prior to the roadway contractor's notice to proceed (NTP). Alternatively, all or part of these efforts may be included in the contractor's bid package. Once a contractor has been selected, it is good practice for the designated District office to attend the pre-construction meeting to specifically discuss the following:

- The GIS locations of documented gopher tortoise populations and burrows
- The status of the FWC permits and relocation
- The installation/maintenance/removal of exclusionary silt fence
- The responsible party and current status of each of these activities
- What to do and who to contact if additional tortoises enter the corridor during construction
- Pass on any project specific commitments made to the regulatory agencies

Please refer to **Section 8.2** of the Construction Project Administration Manual <http://www.dot.state.fl.us/construction/manuals/cpam/CPAMManual.shtml> & Standard Spec 7.1.4 <http://www.dot.state.fl.us/programmanagement/Implemented/SpecBooks/default.shtml> for additional guidance. If the FDOT will be responsible for exclusionary silt fence installation, it is good practice to have the installer meet with the CEI and roadway contractor on-site to review the locations, schedules, and type of contractor work activities. The roadway contractor may request adjustments of the fencing (either previously installed or proposed for installation) in order to better accommodate specific means and methods, which should be addressed as long as requirements of FWC to protect tortoises and their burrows are adhered to. If the roadway contractor will be responsible for tortoise relocation but FDOT has obtained the FWC permit, the contractor's authorized agent should also attend the preconstruction meeting and coordinate the permit transfer prior to relocation activities.



If FDOT is responsible for exclusionary silt fence installation, it is good practice to have the installer meet with the CEI and roadway contractor on-site to review the locations, schedules, and type of contractor work activities.

DESIGN-BUILD PROJECTS

As the contractor's design team may propose changes as part of an alternative technical concept (ATC), it is important that the FDOT Construction Project Administrator and Design PM coordinate proposed changes with the designated District office responsible for gopher tortoise efforts to ensure these changes do not cause listed species issues. As with Design-Bid-Build projects, if the Design-Build Firm is responsible for tortoise relocation, it is recommended that the Design-Build Firm's authorized agent attend the preconstruction meeting so that the designated District office can specifically discuss the project as it relates to gopher tortoises.

CONSTRUCTION GOPHER TORTOISE PERMITTING CONSIDERATIONS

If a project is within close proximity of other populations of gopher tortoises, a strong exclusionary plan is warranted to keep these additional tortoises out of the construction zone. Please see **Section 7** for additional exclusionary plan details. Tortoises are naturally drawn to recently cleared areas with exposed sand. While it is always good practice to keep them outside of the construction zone, some tortoises may find their way past the exclusionary silt fence. Therefore, it may be prudent to request authorization to relocate additional tortoises beyond that of identified burrows in the FWC application, to account for tortoises that may inadvertently enter the construction zone. It is also advisable to keep the FWC gopher tortoise permit open for the life of construction, thus preventing delays and allowing the flexibility to relocate additional tortoises. These circumstances may also dictate that the corridor is surveyed multiple times and with phased relocation events during project construction. Please note that the majority of tortoises that enter the corridor are typically found within burrows along the exclusionary silt fencing at the edge of construction area.



Tortoises will try to find ways into construction sites; avoid issues by keeping the gopher tortoise permit open during the full length of the construction period, as well as consider adding additional tortoises to the total relocation permit count as a precaution thereby avoiding having to stop work to apply for a permit modification.

GOPHER TORTOISE DOCUMENTATION FORM

The construction section (**Attachment B**, page 3) of the *Gopher Tortoise Documentation Form* provides a breakdown of the items to consider prior to the start of clearing and grubbing/construction. This section of the form considers the survey, permitting, and relocation activities. The responsibility of completing this form can be determined in accordance with the normal function of each District. The designated District office should ensure that the data is documented. The permit and After-Action Report should be included as an attachment. After the construction is completed, the entire *Gopher Tortoise Documentation Form* should be added to the project file.

SECTION 7: MAINTENANCE

MAINTENANCE

The final phase of project delivery is the maintenance of transportation facilities within the ROW. Maintenance includes additional considerations and best practices for long-term preservation of transportation facilities. As part of corridor maintenance, burrows are frequently mowed over, which does not typically require a permit. Mowing does not normally cause injury to the tortoise and the tortoise typically corrects any effects to the

burrows; however, mowing may cause damage or impacts to the sand apron used by tortoise for nesting. Actions to avoid the collapsing of burrows and aprons should be encouraged by FDOT managers of the maintenance contracts. Should these burrows create an issue with maintenance procedures, the FDOT Maintenance Engineer should contact the designated District office regarding relocation or avoidance options. Marking the locations of burrows or clusters of burrows may provide a solution to inadvertent collapsing of the burrows. Other FDOT maintenance activities, projects, or contracts (i.e., push button, asset maintenance, safety) that could potentially require a relocation permit or burrow protection should be discussed by the responsible District maintenance office with the District environmental staff (EMO or Permits Coordinator). An example would be the construction of new buildings or parking facilities within gopher tortoise habitat.

SECTION 8: ADDITIONAL CONSIDERATIONS/BEST PRACTICES

NON-STANDARD PROJECTS

Some smaller projects such as landscaping, turn lanes, shoulder widening, sidewalks, and trails do not always go through the standard phases of project delivery and therefore populations of tortoises can be unintentionally overlooked. Potential tortoise injury can occur from equipment, or directly from the auguring equipment used to install planting material. It is good practice for FDOT staff to inspect these corridors for tortoise populations 90 days prior to letting the project to evaluate whether tortoises or their burrows are present, determine whether avoidance is possible, and/or whether relocations or exclusionary fencing will be required in advance of issuing the Notice To Proceed.

OFFSITE RECIPIENT SITES

An FWC-permitted recipient site is any property where gopher tortoises are released when they are relocated from a project site. Recipient sites contain suitable tortoise habitat and have a recipient site permit from FWC. FDOT pays a recipient site for the management of the gopher tortoises and to maintain suitable habitat. Not all recipient sites afford relocated gopher tortoises with the same level of protection (long-term recipient site with perpetual easement vs. short-term recipient site with no perpetual easement). To find a recipient site go to [FWC Gopher Tortoise Permit Map](#) and click on “Recipient Site” and identify the project region. A pop-up box will provide the name, recipient site permit #, address, location, and contact information. Work with an authorized agent to find a suitable recipient site. FDOT, or the authorized agent, should contact the recipient site to determine whether they have availability to take tortoises. If they have space available, the recipient site will provide a draft contract for a specific number of tortoises at a set price. The contract should specify the location of the project area; type of relocation permit anticipated (Conservation, 10 or Fewer, etc.); how the tortoises will be delivered to the recipient site; payment details; any additional fees; and permit conditions/extensions/expiration. Note that recipient site contracts have restrictions on timeframes, and they can refuse taking additional tortoises if the project should exceed the contracted number of tortoises. Review the contract with the authorized agent and determine how to ensure the project is covered for all the possible scenarios that may occur. Coordinate with the district procurement office regarding payment options. Once the recipient site contract is signed, the recipient site will provide a “reservation letter” which is included within FDOT’s gopher tortoise relocation permit application to demonstrate to FWC that the tortoises are being relocated to a suitable location.



Finding a suitable gopher tortoise recipient with availability can take time. Start this activity early in the relocation permit application process.

STATE LANDS AS RECIPIENT SITES

FWC offers a type of Conservation permit for relocating gopher tortoises from public projects to contiguous public conservation lands. The intent of this permitting option is to authorize relocations to adjacent public lands that the tortoises could reasonably access naturally. In order for FDOT projects to qualify for this permit, the project site must be contiguous to public lands

FDOT has executed a Memorandum of Understanding (MOU) with the Florida Department of Agriculture and Consumer Services (FDACS), Florida Forest Service (FFS) to relocate up to 600 tortoises within public conservation lands impacted by transportation projects to contiguous public conservation lands. This MOU allows tortoises to be relocated to adjacent FFS property if certain criteria (guiding principles) are met. A copy of this MOU is included as **Attachment F**. Coordination with OEM and FDOT Office of General Counsel is necessary for use of this MOU.

Also note that if a FDOT's right-of-way is contiguous with a state or regional public land and the gopher tortoises can be demonstrated as having originated from that public land, FDOT can request relocation of those tortoises back into the public land. This will require FDOT to provide to FWC a signed letter of acceptance from that public landowner/manager. If the linear right-of-way of the project does not meet the definition of contiguous, or the donor site tortoise burrow(s) is located more than one mile from the designated public conservation land, a Conservation permit for off-site relocation must be obtained. FDOT must demonstrate to FWC that the tortoises are part of the contiguous natural habitat of the public lands. Public land managers may make additional requests of FDOT to get this approval including such things as the removal of exotic canopy, exclusionary fencing, signage, or a monetary amount.



Coordinate with public land managers and FWC's regional representative if tortoises and commensals within the project area may have originated from adjacent contiguous public conservation land.

PROTECTION MEASURES

Silt fencing is the most common way gopher tortoises are excluded from a project corridor during construction. In order for the exclusionary silt fence to function correctly, the silt fence must be installed according to FDOT Standard Specification 104-6.4.6 (trenched and taut) and buried at least 8-inches into the ground (see **Plate 9 and 10**). Repeated and diligent inspections and repairs are important to maintain functionality of the exclusionary silt fence. Exclusionary silt fence installations can occur in conjunction with gopher tortoise relocation or immediately afterwards. Waiting for installation after relocation allows tortoise to reenter the area and may require additional surveying. It is important to note that gopher tortoises are attracted to recently cleared property and can enter a construction zone and dig a new burrow in as little as one day. Each District has different contractual mechanisms in place to install, maintain, and ensure that the exclusionary silt fences are functioning correctly if this responsibility does not fall directly on the contractor. If it is not the contractor's responsibility,

it is good practice to keep the lines of communication open regarding the location of the exclusionary silt fence installation and how it relates to the construction schedule as well as specific contractor work activities to avoid confusion and misunderstanding.



Plate 9: Correctly installed exclusionary silt fence.



Plate 10: Incorrectly installed exclusionary silt fence with open gap.

EXCLUSIONARY FENCING

When gopher tortoise burrows remain within FDOT ROW or just beyond the ROW but are over 25-ft. away from construction, exclusionary silt fencing may be an option in lieu of relocation. In special circumstances (especially when burrows are outside of the ROW), FWC may allow construction to occur closer than 25-ft.; however, this is determined on a case-by-case basis, typically by the FWC regional gopher tortoise biologist during a site visit to the project site. It is important that the exclusionary silt fencing does not “pen” tortoises, nor trap tortoises between silt fence and adjacent permanent ROW fencing. It should allow the opportunity for tortoise movement, but prevent tortoises from entering the construction zone. Exclusionary silt fencing plans should be field reviewed by an authorized agent to ensure compliance with state rules.

GOPHER TORTOISE CAPTURE METHODS

Tortoises are typically captured through either mechanical excavation, shovel excavation, or bucket trapping. Mechanical excavation with a backhoe is the most commonly used method as it is typically the fastest and the least expensive means to capture tortoises. However, it is the riskiest method to the tortoises, authorized agent, and any persons assisting. A backhoe excavation must be conducted by at least two people; the backhoe operator and an authorized agent. To prevent injury to the tortoises, the backhoe bucket must have a smooth edge that lacks teeth (long prongs). This is accomplished by welding or bolting a flat blade across the digging surface of the bucket. It is recommended that the backhoe operator have experience with gopher tortoise excavation as the capture operation requires precision and skill. In addition, the authorized agent must also have a FWC permit that authorizes them to conduct mechanical excavation activities. The authorized agent places a flexible pipe into the burrow which is used to follow the tunnel during excavation. Burrow excavation is not complete until the burrow terminus is reached. The excavation area is back filled for safety once the burrow terminus is reached,

and all tortoises and commensal species are removed. This method cannot be used when tortoise burrows go under hardscape structures that cannot be removed, utilities, roads, or if the grade is too steep to safely operate a backhoe.

The second most common capture method is bucket trapping. This is done by an authorized agent, or a delegate, digging a hole at the mouth of the burrow, placing a bucket, and covering the bucket with paper, foil or similar material, and disguised it with sand. Drainage holes are placed in the bucket to prevent rainwater accumulating in the bucket that could drown a trapped tortoise. Traps must be shaded and checked at least once per day (preferably twice per day—once in the morning and once in the late afternoon), and they must remain in place for at least 28 consecutive days or until the resident tortoise is captured, whichever occurs first. All traps must be closed if at any time during the 28 consecutive days trapping period if temperatures are forecasted to be 50° Fahrenheit or lower. The 28 consecutive day trapping period shall restart at day 1 when a trap is closed for any reason. This capture method is often used when gopher tortoise burrows are known to go under a road, utility, trees, or other structures that cannot be excavated with a backhoe. It requires consistent and dedicated oversight during the 28 days to prevent injury to the tortoise and other commensal species that may be captured. This method can be labor intensive, and low winter and high summer temperatures must be considered for the health of the tortoise.

Shovel excavation is typically used for juvenile tortoise with small and shallow burrows, or in areas with only one or two tortoise burrows and a high water table. Tortoise burrows can be long and deep so this task should not be taken lightly. It also requires precisions and sensitivity to avoid injury to the tortoise. Once excavation has started it must be carried out until completion.

An authorized agent, or their delegates, can also capture a tortoise if caught unaware outside of its burrow. However, it should be noted that hand capturing a tortoise outside of a burrow is not sufficient reason to assume the burrow is vacant. More than one tortoise can occur within a burrow.

It is prudent to assume a combination of these methods for a project based on project site conditions, weather, and specific situations, but guidance should be given by an authorized agent or FWC gopher tortoise regional staff.

EDUCATION

UNANTICIPATED INTERACTION WITH PROTECTED SPECIES – CONSTRUCTION STAFF

FDOT has standard requirements for unanticipated interaction with protected species that include the gopher tortoise:

<http://www.dot.state.fl.us/programmanagement/Implemented/URLinSpecs/files/endangeredwildlifeguidelines.pdf>

If a gopher tortoise is observed within the active work area, follow the precautions below:

- If a tortoise burrow is observed within a 25-foot radius of the active work area, cease all work and contact the CPA who will coordinate with District environmental staff. If a burrow is confirmed, the Department will consult with FWC and inform the Contractor of any changes to the project.

- If a gopher tortoise(s) is observed in the active work area, do not disturb it, cease work in the area, and allow it to leave on its own. Report sighting immediately to the CPA who will coordinate with the District environmental staff to determine if a burrow is within 25-feet of the active work area.

SUGGESTED EDUCATION – CONSTRUCTION STAFF

Prior to a contractor starting clearing and grubbing activities, a simple in-field education plan of what to look for concerning gopher tortoises and burrows can prevent injuries and misidentification of burrows. Visual aids such as posters, signs or key chains that reiterate basic identification principles can also be very helpful (see **Plate 11** and **12**). The visual aids can be provided by FDOT, the contractor’s environmental consultant or be obtained from the FWC website http://myfwc.com/media/2358553/GT_FactSheet_Laws.pdf. An education presentation can also be provided by Environmental Management Office (EMO) to other FDOT departments that can inform staff of measures to protect this species and who to contact within FDOT if they have questions. A sample presentation is provided in **Attachment G**. It may also be prudent to pair this information with a discussion of the USFWS *Eastern Indigo Snake Standard Protection Measures*.



Plate 11: Examples of educational visual aids.

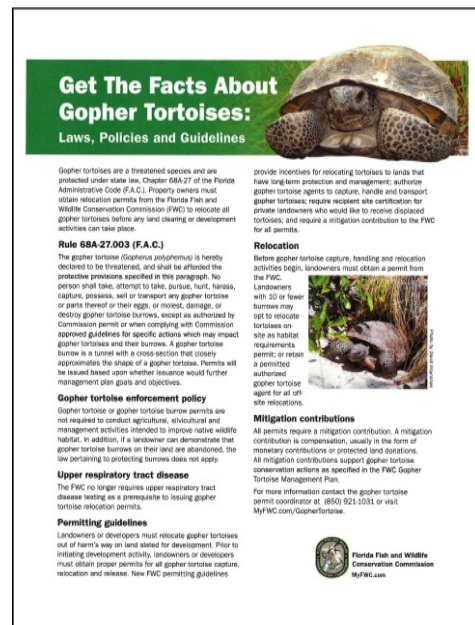



Plate 12: [FWC visual aid and fact sheet.](http://myfwc.com/media/2358553/GT_FactSheet_Laws.pdf)



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, logs, 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. "Take" 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.

Plate 13: [USFWS Eastern Indigo Snake Construction Awareness Poster](#)

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



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.

Plate 14: [USFWS Eastern Indigo Snake Construction Brochure](#)

BECOMING A FWC AUTHORIZED GOPHER TORTOISE AGENT

The FWC issues gopher tortoise agent permits to individuals who meet the qualifications and experience level necessary to perform surveys or tortoise relocate activities (see **FWC Authorized Gopher Tortoise Agent Permit Application Checklist**). There are two main routes to becoming an authorized agent. They can occur separately or in combination, and include:

- Demonstrate adequate experience working under an authorized gopher tortoise agent after April 2009 in accordance with the FWC gopher tortoise permitting guidelines. Authorized agent permits allow assistants to work under the agent's supervision if these assistants are registered with the FWC. The agent is responsible for any such activities performed by an assistant to the same extent as if they had themselves carried out those activities under the designated permit. The hours accrued will be accepted for the purposes of meeting the requirements for the Authorized Agent permit.
- Complete an FWC-approved authorized agent training course in lieu of, or in combination with experience. FWC does not teach training courses but does certify courses offered by different firms that can be registered for. Successful completion of any of these training courses will be accepted (for up to 2 years following course completion) for purposes of meeting the requirements for the Authorized Agent permit. Note that on some occasions, environmental conferences and symposiums will offer training as part of the event.

Although FWC does not offer specific training, check with the regional FWC representative to see what activities and opportunities they may be aware of to gain field experience and training. The authorized agent permit does have a one-time mitigation contribution fee.

Note that becoming an authorized agent still requires that a relocation permit from FWC be obtained for each specified project and authorization must be received by FWC to capture and possess gopher tortoises from or within that project. The agent certification needs to be renewed on a regular basis through a FWC online permit renewal quiz.

COMMENSALS

Gopher tortoise burrows provide refuge for over 350 species of wildlife termed “commensal species” including the Eastern indigo snake (*Drymarchon couperi*), federally-listed as threatened (see **Protection Linkages between the Gopher Tortoise and Eastern Indigo Snake, Section 2**); Florida pine snake (*Pituophis melanoleucus mugitus*), state-designated threatened; Eastern diamondback rattlesnake (*Crotalus adamanteus*), a priority vertebrate commensal in the State’s *Gopher Tortoise Management Plan*; gopher frog (*Lithobates capito*), protected under Rule 68A-29 Florida Administrative Code (F.A.C.) and on the State Imperiled Species Management Plan; Florida mouse (*Podomys floridanus*), protected under Rule 68A-29 F.A.C. and on the State Imperiled Species Management Plan; and the burrowing owl (*Athene cunicularia*), state threatened.



A Keystone Species

More than 350 species benefit from the gopher tortoises’ extensive burrows that average 15 feet long and 6.5 feet deep. Because gopher tortoises alter their environment in a way that helps other species, they are recognized as a keystone species. The animals obtaining food, refuge and other benefits from its burrows are known as gopher tortoise commensal species. A healthy, widespread gopher tortoise population is necessary for commensal species populations to thrive.

Vertebrate Commensals

There are currently four vertebrate priority commensals listed as Endangered, Threatened, or Of Special Concern at the state or federal level. These include the gopher frog, Florida mouse, Florida pine snake, and eastern indigo snake. The eastern diamondback rattlesnake is also a priority commensal, although it is not presently listed.

- The gopher frog is a stout-bodied frog whose presence is closely linked to that of gopher tortoises. This species relies extensively on gopher tortoise burrows for shelter and, to some degree, food. The survival of newly metamorphosed gopher frogs is dependent on their ability to locate and use gopher tortoise burrows and other underground refuges.
- The Florida mouse is a rodent that depends on gopher tortoise burrows as sites for excavation of their own burrows. Florida mice typically construct their burrows as small, U-shaped tunnels off the sides of the main tortoise burrow. The burrow provides shelter and protection during dispersal and from fire and adverse weather conditions.
- The Florida pine snake is a large, nonvenomous snake that uses gopher tortoise burrows to forage, nest, and escape adverse weather conditions or fire. It is estimated that they spend up to 80% of their time underground.

- The eastern indigo snake is a large, nonvenomous snake that depends on gopher tortoise burrows as refuge from extreme temperatures and to prevent desiccation. They also have been known to prey on juvenile gopher tortoises and other commensals.
- The eastern diamondback rattlesnake is the largest venomous snake in North America. In addition to stump holes and other underground shelter sites, they use gopher tortoise burrows as seasonal refuge.

Invertebrate Commensals

Over 300 invertebrate species have been observed in gopher tortoise burrows. These include moths, beetles, crickets, flies and other species. Many of those included in the Gopher Tortoise Management Plan are obligate commensals which depend on the gopher tortoise burrow for survival (e.g., Gopher Tortoise Burrow Fly), and some may have a mutualistic relationship with the tortoise by providing sanitation or pest control services to the tortoise while benefiting from food and shelter provided by the gopher tortoise and its burrow (e.g., Gopher Tortoise Rove Beetle).



For more information on the gopher tortoise and commensals, contact the gopher tortoise management plan office at 850-921-1030 or visit MyFWC.com/GopherTortoise.



Florida Fish and Wildlife Conservation Commission
MyFWC.com

Plate 15: [FWC Fact Sheet on Commensal Species](#)

Priority commensal species being relocated may require a permit from FWC, depending on their current legal status, if the species is expected to be handled during work, and/or if any take is expected to occur. For example, handling of Eastern indigo snakes is strictly prohibited due to their federal protected status and special permits are required if the need to move one arises. Limited relocation helps remove captured commensals from harms' way while minimizing the threats to individuals and populations, by lessening potential impacts of competition with resident populations, crossing genetic boundaries, and possible spread of disease. To accommodate various project types and permit scenarios, the FWC 2020 table below (see **Table 1**) was included as general guidance for limited relocation of commensals based on post-development site characteristics and species identity.

Table 1 Commensal Relocation Table

Post-development site characteristics	<i>If a gopher tortoise burrow will be impacted from development activities and some habitat will remain on-site</i>	<i>If a gopher tortoise burrow will be impacted from development activities and adjacent habitat is available off-site</i>	<i>If a gopher tortoise burrow will be impacted/destroyed from development activities and no habitat will remain</i>
Florida Mouse	Any captured Florida mouse may be released on-site, outside of the area to be developed and within the property boundary or allowed to escape unharmed if some habitat will remain post-development activities.	Any captured Florida mouse may be released on-site as close to original habitat as possible. If possible, mice should be released at the mouth of an abandoned gopher tortoise burrow.	Any captured Florida mouse may be allowed to escape unharmed or relocated offsite within the same geologic ridge or ridge system with the same habitat type as the site where the mice were captured.
Gopher Frog	Any captured gopher frog may be released on-site within the property boundary, provided that the frog is released outside of a physical barrier (i.e., silt fencing) to the area to be developed. Captured frogs should be released near the mouth of a gopher tortoise burrow, other suitable refugia, or in adjacent suitable habitat. Alternatively, frogs may be allowed to escape unharmed.	Any captured gopher frog may be released at the periphery of the area to be developed, provided that the frog is released outside of a physical barrier (i.e., silt fencing). Captured frogs should be released near the mouth of a gopher tortoise burrow or other suitable refugia. Alternatively, frogs may be allowed to escape unharmed.	Any captured gopher frog should be released and allowed to escape unharmed or, upon request of FWC, authorized persons may collect the gopher frog consistent with permit conditions.
Florida Pine Snake	Any captured pine snake may be released on-site, outside of the area to be developed and within the property boundary, provided that the snake is released outside of a physical barrier (i.e., silt fencing). Alternatively, snakes may be allowed to escape unharmed.	Any captured pine snake may be released at the periphery of the area to be developed, provided that the snake is released outside of a physical barrier (i.e., silt fencing). Alternatively, snakes may be allowed to escape unharmed.	Any captured pine snake should be allowed to escape unharmed or, upon request of FWC, authorized persons may collect the pine snake consistent with permit conditions.
Other commensals, invertebrates, and other common animals encountered	All animals should be released on-site or allowed to escape unharmed. When possible, animals may be released over a physical barrier (i.e., silt-fencing).	All animals should be released on-site or allowed to escape unharmed. When possible, animals may be released over a physical barrier (i.e., silt-fencing).	All animals should be released on-site or allowed to escape unharmed. Captured invertebrates can also be donated to a facility for educational or research purposes.

LOCAL AGENCY PROGRAM PROJECTS

The Local Agency Program (LAP) provides municipalities the opportunity to receive federal funds for local transportation projects. FDOT is responsible for the oversight of funded projects on behalf of the FHWA and funds are only available to local agencies that go through the required certification process. The local agency typically obtains the permits required including those for wildlife. FDOT should verify that the presence of gopher tortoises is properly documented as part of the protected species evaluation of the project. Assurances that gopher tortoise permitting, and relocation is occurring in accordance with FWC requirements should be part of the FDOT's supervisory role.

SECTION 9: REFERENCES

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Florida Administrative Code. Chapter 68A-27 Rules Relating to Endangered or Threatened Species

ATTACHMENT A
Eastern Indigo Snake Programmatic Effect Determination Keys
& Standard Protection Measures



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

August 1, 2017

Donnie Kinard
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Subject: Consultation Key for the Eastern Indigo Snake – Revised

Dear Mr. Kinard:

This letter revises and replaces the January 25, 2010, and August 13, 2013, letters to the U.S. Army Corps of Engineers (Corps) regarding the use of the eastern indigo snake programmatic effect determination key (Key) for projects occurring within the South Florida Ecological Service's Office (SFESO) jurisdiction. This revision supersedes all prior versions of the Key in the SFESO area. The purpose of this revision is to clarify portions of the previous keys based on questions we have been asked, specifically related to habitat and refugia used by eastern indigo snakes (*Drymarchon corais couperi*), in the southern portion of their range and within the jurisdiction of the SFESO. This Key is provided pursuant to the Service's authorities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*). This Key revision has been assigned Service Consultation Code: 41420-2009-I-0467-R001.

The purpose of this Key is to assist the Corps (or other Federal action agency) in making appropriate effects determinations for the eastern indigo snake under section 7 of the Act, and streamline informal consultation with the SFESO for the eastern indigo snake when the proposed action can be walked through the Key. The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

This Key uses project size and home ranges of eastern indigo snakes as the basis for making determinations of "may affect, but is not likely to adversely affect" (NLAA) and "may affect, and is likely to adversely affect" (may affect). Suitable habitat for the eastern indigo snake consists of a mosaic of habitats types, most of which occur throughout South Florida. Information on home ranges for individuals is not available in specific habitats in South Florida. Therefore, the SFESO uses the information from a 26-year study conducted by Layne and Steiner (1996) at Archbold Biological Station, Lake Placid, Florida, as the best available

information. Layne and Steiner (1996) determined the average home range size for a female eastern indigo snake was 46 acres and 184 acres for a male.

Projects that would remove/destroy less than 25 acres of eastern indigo snake habitat are expected to result in the loss of a portion of an eastern indigo snakes home range that would not impair the ability of the individual to feed, breed, and shelter. Therefore, the Service finds that take would not be reasonably certain to occur due to habitat loss. However, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take. Consequently, projects less than 25 acres that include the Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and a commitment to excavate underground refugia as part of the proposed action would be expected to avoid take and thus, may affect, but are not likely to adversely affect the species.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range.

Projects that would remove 25 acres or more of eastern indigo snake habitat could remove more than half of a female eastern indigo snakes home range. This loss of habitat within a home range would be expected to significantly impair the ability of that individual to feed, breed, and shelter. Therefore, the Service finds take through habitat loss would be reasonably certain to occur and formal consultation is appropriate. Furthermore, these projects have the potential to injure or kill an eastern indigo snake if the individual is crushed by equipment during site preparation or other project aspects. The Service's *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013 or most current version) and the excavation of underground refugia (where a snake could be buried, trapped and/or injured), when implemented, are designed to avoid these forms of take.

Eastern indigo snakes use a variety of habitat and are difficult to detect. Therefore, site specific information on the land use, observations of eastern indigo snakes within the vicinity, as well as other factors, as appropriate, will all be considered by the Service when making a final recommendation on the appropriate effects determination and whether it is appropriate to conclude consultation with the Corps (or other Federal action agency) formally or informally for projects that will impact 25 acres or more of habitat. Accordingly, when the use of the Key results in a determination of "may affect," the Corps (or other Federal action agency) is advised that consultation may be concluded informally or formally, depending on the project specific effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps (or other Federal action agency) desires to proceed with a consultation request prior to receiving

additional technical assistance from the Service, we recommend the agency documents the biological rationale for their determination and proceed with a request accordingly.

If the use of the Key results in a determination of “no effect,” no further consultation is necessary with the SFESO. If the use of the Key results in a determination of “NLAA,” the SFESO concurs with this determination based on the rationale provide above, and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake. For “no effect” or “NLAA” determinations, the Service recommends that the Corps (or other Federal action agency) documents the pathway used to reach your no effect or NLAA determination in the project record and proceed with other species analysis as warranted.

Eastern Indigo Snake Programmatic Effect Determination Key
Revised July 2017
South Florida Ecological Service Office

Scope of the Key

This Key should be used only in the review of permit applications for effects determinations for the eastern indigo snake (*Drymarchon corais couperi*) within the South Florida Ecological Service’s Office (SFESO) area (Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, and St. Lucie Counties). There is no designated critical habitat for the eastern indigo snake.

This Key is subject to revision as the Corps (or other Federal action agency) and Service deem necessary and in particular whenever there is new information on eastern indigo snake biology and effects of proposed projects.

The Key is a tool available to the Corps (or other Federal action agency) for the purposes of expediting section 7 consultations. There is no requirement to use the Key. There will be cases when the use of the Key is not appropriate. These include, but are not limited to: where project specific information is outside of the scope of the Key or instances where there is new biological information about the species. In these cases, we recommend the Corps (or other Federal action agency) initiates traditional consultation pursuant to section 7 of the Act, and identify that consultation is being requested outside of the Key.

Habitat

Habitat use varies seasonally between upland and wetland areas, especially in the more northern parts of the species’ range. In southern parts of their range eastern indigo snakes are habitat generalists which use most available habitat types. Movements between habitat types in northern areas of their range may relate to the need for thermal refugia (protection from cold and/or heat).

In northern areas of their range eastern indigo snakes prefer an interspersed of tortoise-inhabited sandhills and wetlands (Landers and Speake 1980). In these northern regions eastern indigo

snakes most often use forested areas rich with gopher tortoise burrows, hollowed root channels, hollow logs, or the burrows of rodents, armadillos, or land crabs as thermal refugia during cooler seasons (Lawler 1977; Moler 1985a; Layne and Steiner 1996). The eastern indigo snake in the northern region is typically classified as a longleaf pine savanna specialist because here, in the northern four-fifths of its range, the eastern indigo snake is typically only found in vicinity of xeric longleaf pine–turkey oak sandhills inhabited by the gopher tortoise (Means 2006).

In the milder climates of central and southern Florida, comprising the remaining one fifth of its range, thermal refugia such as those provided by gopher tortoise burrows may not be as critical to survival of indigo snakes. Consequently, eastern indigo snakes in these regions use a more diverse assemblage of habitats such as pine flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, edges of freshwater marshes, muckland fields, coastal dunes, and xeric sandhill communities; with highest population concentrations of eastern indigo snakes occurring in the sandhill and pineland regions of northern and central Florida (Service 1999). Eastern indigo snakes have also been found on agricultural lands with close proximity to wetlands (Zeigler 2006).

In south Florida, agricultural sites (*e.g.*, sugar cane fields and citrus groves) are occupied by eastern indigo snakes. The use of sugarcane fields by eastern indigo snakes was first documented by Layne and Steiner in 1996. In these areas there is typically an abundance of wetland and upland ecotones (due to the presence of many ditches and canals), which support a diverse prey base for foraging. In fact, some speculate agricultural areas may actually have a higher density of eastern indigo snakes than natural communities due to the increased availability of prey. Gopher tortoise burrows are absent at these locations but there is an abundance of both natural and artificial refugia. Enge and Endries (2009) reporting on the status of the eastern indigo snake included sugarcane fields and citrus groves in a Global Information Systems (GIS)-base map of potential eastern indigo snake habitat. Numerous sightings of eastern indigo snakes within sugarcane fields have been reported within south Florida (Florida Fish and Wildlife Conservation Commission Indigo Snake Database [Enge 2017]). A recent study associated with the Comprehensive Everglades Restoration Plan (CERP) (A-1 FEB Project formerly A-1 Reservoir; Service code: 41420-2006-F-0477) documented eastern indigo snakes within sugarcane fields. The snakes used artificial habitats such as piles of limerock, construction debris, and pump stations. Recent studies also associated with the CERP at the C-44 Project (Service code: 41420-2009-FA-0314), and C-43 Project (Service code: 41420-2007-F-0589) documented eastern indigo snakes within citrus groves. The snakes used artificial habitats such as boards, sheets of tin, construction debris, pipes, drain pipes in abandoned buildings and septic tanks.

In extreme south Florida (*i.e.*, the Everglades and Florida Keys), eastern indigo snakes also utilize tropical hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats. Though eastern indigo snakes have been found in all available habitats of south Florida it is thought they prefer hammocks and pine forests since most observations occur there and use of these areas is disproportionate compared to the relatively small total area of these habitats (Steiner *et al.* 1983).

Even though thermal stress may not be a limiting factor throughout the year in south Florida, eastern indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigo snakes use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasyurus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumi*) burrows in coastal areas (Layne and Steiner 1996; Wilson and Porras 1983). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges.

Minimization Measures

The Service developed protection measures for the eastern indigo snake “Standard Protection Measures for the Eastern Indigo Snake” (Service 2013) located at: https://www.fws.gov/verobeach/ReptilesPDFs/20130812_EIS%20Standard%20Protection%20Measures_final.pdf. These protection measures (or the most updated version) are considered a minimization measure for projects proposed within eastern indigo snake habitat.

Determinations

If the use of this Key results in a determination of “**no effect**,” no further consultation is necessary with the SFESO.

If the use of this Key results in a determination of “**NLAA**,” the SFESO concurs with this determination and no further consultation is necessary for the effects of the proposed action on the eastern indigo snake.

For no effect or NLAA determinations, the Corps (or other Federal action agency) should make a note in the project file indicating the pathway used to reach your no effect or NLAA determination.

If a proposed project would impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site, the subsequent Key should not be used. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual’s home range.

If the use of this Key results in a determination of “**may affect**,” consultation may be concluded informally or formally depending on project effects to eastern indigo snakes. Technical assistance from the Service can assist you in making a determination prior to submitting a request for consultation. In circumstances where the Corps desires to proceed with a consultation request prior to receiving additional technical assistance from the Service, we recommend the Corps document the biological rationale for their determination and proceed with a request accordingly.

- A. Project is not located in open water or salt marsh.....go to B
- Project is located solely in open water or salt marsh.....**no effect**

- B. Permit will be conditioned for use of the Service's most current guidance for Standard Protection Measures For The Eastern Indigo Snake (currently 2013) during site preparation and project construction.....go to C
- Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested.....**may affect**

- C. The project will impact less than 25 acres of eastern indigo snake habitat (e.g., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes).....go to D
- The project will impact 25 acres or more of eastern indigo snake habitat (e.g., sandhill, scrub, pine flatwoods, pine rocklands, scrubby flatwoods, high pine, dry prairie, coastal prairie, mangrove swamps, tropical hardwood hammocks, hydric hammocks, edges of freshwater marshes, agricultural fields [including sugar cane fields and active, inactive, or abandoned citrus groves], and coastal dunes).....**may affect**

- D. The project has no known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and/or injured during project activities.....NLAA
- The project has known holes, cavities, active or inactive gopher tortoise burrows, or other underground refugia where a snake could be buried, trapped and /or injured.....go to E

- E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be excavated prior to site manipulation in the vicinity of the burrow¹. If an eastern indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.....NLAA²
- Permit will not be conditioned as outlined above.....**may affect**

End Key

¹ If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a Florida Fish and Wildlife Conservation Commission Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at <http://myfwc.com/gophertortoise>.

² Please note, if the proposed project will impact less than 25 acres of vegetated eastern indigo snake habitat (not urban/ human-altered) completely surrounded by urban development, and an eastern indigo snake has been observed on site. NLAA is not the appropriate conclusion. The Service recommends formal consultation for this situation because of the expected increased value of the vegetated habitat within the individual's home range

Working with the Fish and Wildlife Foundation of Florida, the Service has established a fund to support conservation and recovery for the eastern indigo snake. Any project that has the potential to affect the eastern indigo snake and/or its habitat is encouraged to make a voluntary contribution to this fund. If you would like additional information about how to make a contribution and how these monies are used to support eastern indigo snake recovery please contact Ashleigh Blackford, Connie Cassler, or José Rivera at 772-562-3559.

This revised Key is effective immediately upon receipt by the Corps. Should circumstances change or new information become available regarding the eastern indigo snake and/or implementation of the Key, the determinations herein may be reconsidered and this Key further revised or amended.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. If you have any questions or comments regarding this Key, please contact the SFESO at 772-562-3909.

Sincerely,



Roxanna Hinzman
Field Supervisor
South Florida Ecological Services

Cc:

Corps, Jacksonville, Florida (Dale Beter, Muriel Blaisdell, Ingrid Gilbert, Angela Ryan,
Irene Sadowski, Victoria White, Alisa Zarbo)
Service, Athens, Georgia (Michelle Elmore)
Service, Jacksonville, Florida (Annie Dziergowski)
Service, Panama City, Florida (Sean Blomquist)

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United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:

August 13, 2013

Colonel Alan M. Dodd, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
P.O Box 4970
Jacksonville, Florida 32232-0019
(Attn: Mr. David S. Hobbie)

RE: Update Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers
Regarding Use of the Attached Eastern Indigo Snake Programmatic Effect Determination Key

Dear Colonel Dodd:

This letter is to amend the January 25, 2010, letter to the U.S. Army Corps of Engineers regarding the use of the attached eastern indigo snake programmatic effect determination key (key). It supersedes the update addendum issued January 5, 2012.

We have evaluated the original programmatic concurrence and find it suitable and appropriate to extend its use to the remainder of Florida covered by the Panama City Ecological Services Office.

On Page 2

The following replaces the last paragraph above the signatures:

“Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to Annie Dziergowski (North Florida ESO) at 904-731-3089, Harold Mitchell (Panama City ESO) at 850-769-0552, or Victoria Foster (South Florida ESO) at 772-469-4269.”

On Page 3

The following replaces both paragraphs under “Scope of the key”:

“This key should be used only in the review of permit applications for effects determinations for the eastern indigo snake within the State of Florida, and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH).”

On Page 4

The following replaces the first paragraph under Conservation Measures:

“The Service routinely concurs with the Corps’ “not likely to adversely affect” (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that

our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013) located at: <http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes.htm> will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.”

On Page 4 and Page 5 (Couplet D)

The following replaces D. under Conservation Measures:

D. The project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or less than 25 active and inactive gopher tortoise burrows.....go to E

The project will impact more than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested²..... ”may affect”

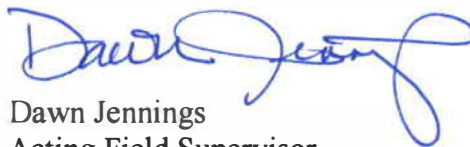
On Page 5

The following replaces footnote #3:

“³If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a FWC Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at <http://myfwc.com/gophertortoise> .”

Thank you for making these amendments concerning the Eastern Indigo Snake Key. If you have any questions, please contact Jodie Smithem of my staff at the address on the letterhead, by email at jodie_smithem@fws.gov, or by calling (904)731-3134.

Sincerely,


Dawn Jennings
Acting Field Supervisor

cc:

Panama City Ecological Services Field Office, Panama City, FL
South Florida Ecological Services Field Office, Vero Beach, FL



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

January 25, 2010

David S. Hobbie
Chief, Regulatory Division
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2009-FA-0642

Service Consultation Code: 41420-2009-I-0467

41910-2010-I-0045

Subject: North and South Florida
Ecological Services Field Offices
Programmatic Concurrence for Use
of Original Eastern Indigo Snake
Key(s) Until Further Notice

Dear Mr. Hobbie:

The U.S. Fish and Wildlife Service's (Service) South and North Florida Ecological Services Field Offices (FO), through consultation with the U.S. Army Corps of Engineers Jacksonville District (Corps), propose revision to both Programmatic concurrence letters/keys for the federally threatened Eastern Indigo Snake (*Drymarchon corais couperi*), (indigo snake), and now provide one key for both FO's. The original programmatic key was issued by the South Florida FO on November 9, 2007. The North Florida FO issued a revised version of the original key on September 18, 2008. Both keys were similar in content, but reflected differences in geographic work areas between the two Field Offices. The enclosed key satisfies each office's responsibilities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*).

Footnote number 3 in the original keys indicated "A member of the excavation team should be authorized for Incidental Take during excavation through either a section 10(a)(1)(A) permit issued by the Service or an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission (FWC)." We have removed this reference to a Service issued Section 10(a)(1)(A) permit, as one is not necessary for this activity. We also referenced the FWC's revised April 2009 Gopher Tortoise Permitting Guidelines with a link to their website for updated excavation guidance, and have provided a website link to our Standard Protection Measures. All other conditions and criteria apply.

We believe the implementation of the attached key achieves our mutual goal for all users to make consistent effect determinations regarding this species. The use of this key for review of projects

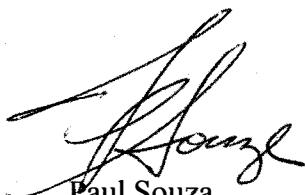
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IN AMERICA 

located in all referenced counties in our respective geographic work areas leads the Service to concur with the Corps' determination of "may affect, not likely to adversely affect" (MANLAA) for the Eastern indigo snake. The biological rationale for the determinations is contained within the referenced documents and is submitted in accordance with section 7 of the Act.

Should circumstances change or new information become available regarding the eastern indigo snake or implementation of the key, the determinations may be reconsidered as deemed necessary.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to either Allen Webb (Vero Beach) at 772-562-3909, extension 246, or Jay Herrington (Jacksonville) at 904-731-3326.

Sincerely,



Paul Souza
Field Supervisor
South Florida Ecological Services Office



David L. Hankla
Field Supervisor
North Florida Ecological Services Office

Enclosure

cc: electronic only
FWC, Tallahassee, Florida (Dr. Elsa Haubold)
Service, Jacksonville, Florida (Jay Herrington)
Service, Vero Beach, Florida (Sandra Sneckenberger)

Eastern Indigo Snake Programmatic Effect Determination Key

Scope of the key

This key should be used only in the review of permit applications for effects determinations within the North and South Florida Ecological Services Field Offices Geographic Areas of Responsibility (GAR), and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH). Counties within the **North** Florida GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

Counties in the **South** Florida GAR include Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, St. Lucie.

Habitat

Over most of its range, the eastern indigo snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (Service 1999). Eastern indigo snakes appear to need a mosaic of habitats to complete their life cycle. Wherever the eastern indigo snake occurs in xeric habitats, it is closely associated with the gopher tortoise (*Gopherus polyphemus*), the burrows of which provide shelter from winter cold and summer desiccation (Speake et al. 1978; Layne and Steiner 1996). Interspersion of tortoise-inhabited uplands and wetlands improves habitat quality for this species (Landers and Speake 1980; Auffenberg and Franz 1982).

In south Florida, agricultural sites, such as sugar cane fields, created in former wetland areas are occupied by eastern indigo snakes (Enge pers. comm. 2007). Formerly, indigo snakes would have only occupied higher elevation sites within the wetlands. The introduction of agriculture and its associated canal systems has resulted in an increase in rodents and other species of snakes that are prey for eastern indigo snakes. The result is that indigos occur at higher densities in these areas than they did historically.

Even though thermal stress may not be a limiting factor throughout the year in south Florida, indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigos use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumii*) burrows in coastal areas (Service 2006). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges. In extreme south Florida (the Everglades and Florida Keys), indigo snakes are found in tropical

hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats (Steiner et al. 1983). It is suspected that they prefer hammocks and pine forests, because most observations occur in these habitats disproportionately to their presence in the landscape (Steiner et al. 1983). Hammocks may be important breeding areas as juveniles are typically found there. The eastern indigo snake is a snake-eater so the presence of other snake species may be a good indicator of habitat quality.

Conservation Measures

The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004) located at: <http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes> will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing an Eastern Indigo Snake Effect Determination Key, similar in utility to the West Indian Manatee Effect Determination Key and the Wood Stork Effect Determination Keys presently being utilized by the Corps. If the use of this key results in a Corps' determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination and no additional correspondence will be necessary¹. This key is subject to revisitation as the Corps and Service deem necessary.

- A. Project is not located in open water or salt marsh.....go to B
 Project is located solely in open water or salt marsh..... "no effect"
- B. Permit will be conditioned for use of the Service's *Standard Protection Measures For The Eastern Indigo Snake* during site preparation and project construction.....go to C
 Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested² "may affect"
- C. There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activitiesgo to D
 There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities "NLAA"
- D. The project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows.....go to E

The project will impact more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested² “may affect”

- E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow³. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work..... “NLAA”

Permit will not be conditioned as outlined above and consultation with the Service is requested² ”may affect”

¹With an outcome of “no effect” or “NLAA” as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

²Consultation may be concluded informally or formally depending on project impacts.

³ If burrow excavation is utilized, it should be performed by experienced personnel. The method used should minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the Florida Fish and Wildlife Conservation Commission’s revised April 2009 Gopher Tortoise Permitting Guidelines located at http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise. A member of the excavation team should be authorized for Incidental Take during excavation through an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission.

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service
August 12, 2013

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: panamacity@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or “approval” from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

POSTER INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11” x 17” or larger paper and laminated, is attached):

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 UNDER FEDERAL AND STATE LAW: 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.

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

- Cease clearing activities and allow the live 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 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.

Telephone numbers of 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

PRE-CONSTRUCTION ACTIVITIES

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.

ATTACHMENT B
Gopher Tortoise Documentation Form

FDOT GOPHER TORTOISE DOCUMENTATION FORM

PROJECT NAME:
FM NO.:
COUNTY:
FDOT DISTRICT:

ETDM PROCESS EST SCREENING RESULTS: Agency Comments/Screening Summary/Assumptions:	PM or designee		
	Documented Habitat Types:	Y/N	~Acres
	<i>xeric</i>		
	<i>non urban native uplands</i>		
	<i>adjacent to abundant native uplands or conservation lands</i>		
	<i>GTs documented within the corridor or Occurrence Data</i>		

PD&E PHASE		PM or designee		
<i>General Field/Wildlife Survey Results</i>		Project impacting ≥ 25 burrows?	Y/N	
GTs Documented In Corridor?		Project impacting ≥ 25 acres of xeric habitat?	Y/N	
GIS Estimate of Acres of Suitable Habitat		Is formal Section 7(or 10) consultation required for the indigo snake?	Y/N	
Date(s) of Survey		Was the BO issued for the indigo snake?	Y/N	
Date of USFWS Coordination		Is the BO attached?	Y/N	
Meeting Minutes Attached?	Y/N	Adjacent Public Lands		
Is a 100% burrow survey Required?	Y/N	Is the project adjacent to state-owned lands?	Y/N	
100 % GT Burrow Survey-Results (if required)		Is there an existing MOU to keep tortoises on state lands?	Y/N	
Date(s) of the 100% Survey		Have the land managers been contacted to see if this is an option?	Y/N	
Notes:				
AGENCY COORDINATION and PD&E SUMMARY:				
PM or DESIGNEE SIGNOFF: _____ DATE: _____ ATTACHMENTS _____				

FDOT GOPHER TORTOISE DOCUMENTATION FORM

PROJECT NAME:
FM NO.:
COUNTY:
FDOT DISTRICT:

DESIGN PHASE	PM or designee
---------------------	----------------

Preliminary phase other than ETDM (Type 1/ Type 2/ NMSA)
--

SURVEY TIMING

Will the project likely trip the E. indigo snake key "may affect" threshold?

Will the GT burrow survey occur prior to permitting or at the end of design?

Pre-Permitting Gopher Tortoise Burrow Survey Results *Agency Coordination Summary:*

Burrow Count within the R/W:		
GIS Estimate of Acres of Suitable Habitat		
Date(s) of Survey		
Percent of GT habitat surveyed		

PRE-CONSTRUCTION

Production Date:		<i>Preconstruction 100% Gopher Tortoise Burrow Survey Results</i>	
Letting Date:		Burrow Count within the R/W:	
Appropriate non-standard specification included in specs package		GIS Estimate of Acres of Xeric Habitat	
<i>Anticipated Construction Start Date:</i>		Date(s) of Survey	
<i>Anticipated Utility Relocation Start Date:</i>		Date of FWC permit submittal	
		Date of permit issuance	

MISCELLANEOUS ACTIVITIES (UTILITY COORDINATION AND DEMOLITION)

UTILITIES

Are GT burrows in the vicinity of the proposed utility relocation?

When is the utility relocation scheduled and is this prior to FDOT's contractor?

Is burrow excavation of bucket trapping needed prior to the relocation event?

Who is handling the gopher tortoise relocation activities?

Who is handling the utility relocation activities?

Will exclusionary fencing be needed?

Who is handling the exclusionary fencing?

DEMOLITION ACTIVITIES

Are demolition activities in or adjacent to tortoise habitat?

Have these areas been surveyed and cleared to demolition?

Is exclusionary fencing warranted for the demo or the ingress/egress areas?

RFP, Production Package, and Specifications

Does the RFP or Production Package specify who is responsible for the GT survey, permitting, and relocations?

Are MSPs required?

If a MSP is required, has this MSP been previously approved?

Does the production package include information the contractor needs to include the GT relocation as part of their bid?

Do the plans reflect exclusionary fencing properly (i.e. pay items included and quantities updated)?

DESIGN BID BUILD OR DESIGN-BUILD (circle one) y/n

Is GT burrow excavation or other relocation needed?		Is a burrow protection plan needed?	
---	--	-------------------------------------	--

Is the relocation being conducted by FDOT or the contractor?		Utility Relocation Prior To Construction	
--	--	--	--

If Design-Build, does the RFP specify the contractor responsibilities?		Number of days of utility work prior to construction?	
--	--	---	--

LIST OF ATTACHMENTS:

PM or DESIGNEE SIGNOFF: _____ DATE: _____

FDOT GOPHER TORTOISE DOCUMENTATION FORM

PROJECT NAME:
FM NO.:
COUNTY:
FDOT DISTRICT:

CONSTRUCTION PHASE	PM:	CEI:
Date of last GT Burrow Survey?		
Are all of the GT burrows within the ROW being excavated?		
Do the GT burrows that are being avoided have protection measures?		
Is the corridor protected from re-entry from adjacent GT populations? If using exclusionary fencing, who is providing regular maintenance?		
Will the corridor be periodically resurveyed? (If significant GT populations or xeric habitat exists.) Are the <i>Standard Protection Measures for the Eastern Indigo Snake</i> being followed?		
Is the FWC Permit, After-Action Report, and Recipient Site Contract attached?		
ADDITIONAL COMMENTS/NOTES:		
PM or DESIGNEE SIGNOFF:		DATE

FDOT GOPHER TORTOISE DOCUMENTATION FORM

PROJECT NAME:
FM NO.:
COUNTY:
FDOT DISTRICT:

REEVALUATION		PM:	
Reason for reevaluation?		Were GT burrows identified in earlier surveys?	Y/N
<i>General Field/Wildlife Survey</i>		Reason for reevaluation?	Y/N
Burrow Count within the R/W:		Project impacting ≥ 25 burrows?	Y/N
GIS Estimate of Acres of Xeric Habitat		Project impacting ≥ 25 acres of xeric habitat?	Y/N
Date(s) of Survey		Is Section 7 required for the indigo snake?	Y/N
Date of USFWS Coordination meeting(s)		Was the BO issued for the indigo snake?	Y/N
Meeting Minutes Attached?	Y/N	Is the BO attached?	Y/N
Is a 100% survey Required?	Y/N	AGENCY COORDINATION SUMMARY:	
100 % GT Burrow Survey-Burrow Count (if required)			
Date(s) of the 100% Survey			
PM or DESIGNEE SIGNOFF:	DATE:	ATTACHMENTS	

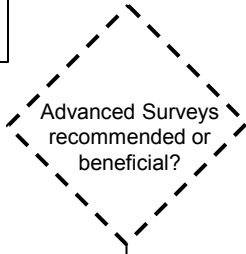
REEVALUATION		PM:	
Reason for reevaluation?		Were GT burrows identified in earlier surveys?	Y/N
<i>General Field/Wildlife Survey</i>		Reason for reevaluation?	Y/N
Burrow Count within the R/W:		Project impacting ≥ 25 burrows?	Y/N
GIS Estimate of Acres of Xeric Habitat		Project impacting ≥ 25 acres of xeric habitat?	Y/N
Date(s) of Survey		Is Section 7 required for the indigo snake?	Y/N
Date of USFWS Coordination meeting(s)		Was the BO issued for the indigo snake?	Y/N
Meeting Minutes Attached?	Y/N	Is the BO attached?	Y/N
Is a 100% survey Required?	Y/N	AGENCY COORDINATION SUMMARY:	
100 % GT Burrow Survey-Burrow Count (if required)			
Date(s) of the 100% Survey			
PM or DESIGNEE SIGNOFF:	DATE:	ATTACHMENTS	

REEVALUATION		PM:	
Reason for reevaluation?		Were GT burrows identified in earlier surveys?	Y/N
<i>General Field/Wildlife Survey</i>		Reason for reevaluation?	Y/N
Burrow Count within the R/W:		Project impacting ≥ 25 burrows?	Y/N
GIS Estimate of Acres of Xeric Habitat		Project impacting ≥ 25 acres of xeric habitat?	Y/N
Date(s) of Survey		Is Section 7 required for the indigo snake?	Y/N
Date of USFWS Coordination meeting(s)		Was the BO issued for the indigo snake?	Y/N
Meeting Minutes Attached?	Y/N	Is the BO attached?	Y/N
Is a 100% survey Required?	Y/N	AGENCY COORDINATION SUMMARY:	
100 % GT Burrow Survey-Burrow Count (if required)			
Date(s) of the 100% Survey			
PM or DESIGNEE SIGNOFF:	DATE:	ATTACHMENTS	

ATTACHMENT C
Design Coordination Flow-Chart

DESIGN COORDINATION FLOWCHART

Review GT Documentation Form and establish if GT surveys need to occur early in the process. Reasons would include whether it appears that the project could trigger the "may affect" determination for the E. indigo snake, requested by USFWS, advanced utility relocation, or for planning purposes



Advanced Surveys recommended or beneficial?

YES

Conduct GT burrow surveys prior to WMD ERP and / or USACE / FDEP 404 permitting

NO

Schedule 100% survey near the end of design

NO

Is the E. indigo snake threshold tripped?

YES

Initiate informal consultation with USFWS

Approximately one year prior to production, initiate preconstruction coordination between the District Permit Coordinator and the Design PM the below offices

District Utility Office

Specifications Office

Construction Project Administrator

Determine whether advanced relocation or exclusionary fencing is necessary

Determine whether MSPs or line items are required for the Design-Bid-Build or Design-Build Process

Ensure that the line items are included in the Production Package

Determine the anticipated construction start date

Ensure that the line items are included in the Production Package

Ensure that demolition areas are cleared

YES

Is GT relocation required?

NO

Conduct 100% survey and submit permit application to FWC

Cleared for Construction

ATTACHMENT D
Adjacent Property Owner Example Letter

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

PERMISSION TO PERFORM MISCELLANEOUS CONSTRUCTION

RE: ROAD PROJECT NAME, Financial Project No.: XXXXX-X-XX-XX

John Smith
1234 Apple Street
Fruit City, Florida XXXX

I, _____ Owner of the property located on the xx side at 1234 Apple Street, Fruit City, Florida (Parcel No. x-xx-xx-xx-xxx-xxxxxx-xxxx.x), agree to allow XXXX Corporation and its sub-contractors onto my property for the purpose of excavation and relocation of gopher tortoises adjacent to the ROAD PROJECT NAME. I understand these activities will be consistent with the guidelines and permit conditions issued by Florida Fish and Wildlife Conservation Commission (FWC).

It is understood that I will not be held liable for any damages or costs incurred by this construction and that all grades will be returned to pre-existing condition.

It is further understood and agreed that this work will be done on my property, and with my full consent; and is necessitated to protect gopher tortoises during construction of the above project.

Property Owner:

Print Name

Signature

Date

ATTACHMENT E
Sample Modified Special Provision

MODIFIED SPECIAL PROVISION APPROVAL REQUEST
(REV 8-21-18)

Date: 4/12/2021 **District:** TP **Type:** Project Specific

Letting Month: 4/13/2022 **FPID Number:** 435786-1

Requested by: Tiffany Crosby **Office/Phone:** 407.376.3790

Specification being modified: 7-1.4 Gopher Tortoises

Affected Pay Items: 201-01

Expected Cost Impact to this project: \$45,000

Project Description: Turnpike Mainline widening (SR 91) from Minneola to US 27 North in Lake County, Florida. Design includes demolition of existing toll site at US 27/Leesburg South, as well as new SR 91 mainline toll facility.

Background Data: This modified special provision will modify Subarticle 7-1.4.1 to include certain activities related gopher tortoise relocation. This MSP is proposed to prevent using plan notes to inform the Contractor of these responsibilities.

***Name and PE Number of PE signing and sealing the Modified Special Provision:**

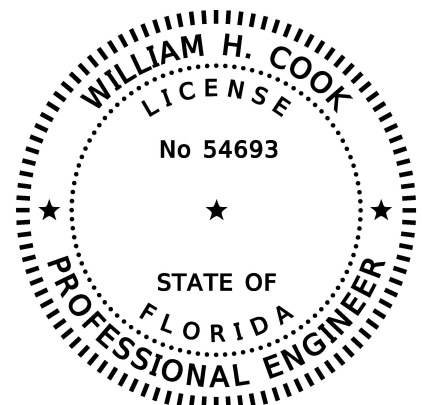
** Project Specific Modifications to the Standard Specifications or Workbook Specifications must be signed and sealed by the Professional Engineer responsible for this Special Provision under the following statement and kept in the Project Files maintained in the District.*

PE Name: William Cook **PE Number:** 54693

I hereby certify that this Specification was prepared under my responsible charge, and that it has been reviewed in accordance with procedures adopted and implemented by the Florida Department of Transportation.

This item has been signed and sealed by William H. Cook on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Date: May 3, 2021 _____
Firm Name: Stantec Consulting _____
Firm Address: 11315 Corporate Blvd Suite 105 _____
City, State, Zipcode: Orlando, Fl 32817 _____
Certificate of Authorization: 112-167-170 _____
Pages: 2 _____



LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – LAWS TO BE OBSERVED - COMPLIANCE WITH FEDERAL ENDANGERED SPECIES ACT AND OTHER WILDLIFE REGULATIONS (GOPHER TORTOISE).

(REV 04-21-21)

SUBARTICLE 7-1.4 is expanded by the following:

Provide an Authorized Gopher Tortoise Agent (AA) with a valid Florida Fish and Wildlife Conservation Commission (FWC) Permit allowing the AA to perform at a minimum the following activities as defined by the current FWC Gopher Tortoise Permitting Guidelines:

Gopher Tortoise Surveys; Capture Gopher Tortoises by Bucket Trap, Hand Shovel, and Backhoe Excavation; Supervision of Gopher Tortoise burrow excavation using mechanical equipment, and transportation and marking of recovered tortoises.

Prior to any gopher tortoise relocation, coordinate with the Engineer and Florida's Turnpike Enterprise Environmental Management Office to modify the issued FWC Gopher Tortoise Conservation Permit to reflect the Contractor's AA as the one to carry out the permitted activities.

Capture and coordinate the transport and marking (if required) of recovered gopher tortoises from the project site to the designated recipient site as required by the FWC Gopher Tortoise Conservation Permit. Provide a minimum of 48 hours notification to the designated recipient site to accept the recovered gopher tortoises from the project site. Recipient Site Contact will be provided in the FWC Gopher Tortoise Conservation Permit.

Install and maintain silt fence adjacent to and within the limits of gopher tortoise relocation activities to exclude tortoises from entering the areas that have been cleared of gopher tortoises. Install silt fence within 24 hours of any relocation activities. No clearing or ground disturbing work shall begin in gopher tortoise habitat until all tortoises have been properly removed and/or protected.

Obtain all required gopher tortoise data from the recipient site and submit the After Action Report to FWC as required by permit once approved in writing by the Engineer.

Follow the gopher tortoise species requirements posted in the URL address in 7-1.4 when gopher tortoises are observed or previously unidentified burrows are discovered.

Florida Turnpike Enterprise (FTE) is responsible for permit fees and recipient site fees for recovered tortoises within the limits of the original FWC Gopher Tortoise Conservation Permit and additional gopher tortoise burrows within the FWC Gopher Tortoise Conservation Permit limits. FTE has contracted with the designated recipient site to address recipient site fees for gopher tortoises impacted within the limits of the original FWC Gopher Tortoise Conservation Permit. All fees associated with gopher tortoises (surveys, permitting, relocation activities, recipient site fees, etc.) outside of the limits of the original FWC Gopher Tortoise Conservation Permit and construction plans or that have entered the right-of-way due to lack of compliance with the 24 hour silt fence installation requirement will be the responsibility of the Contractor.

ATTACHMENT F
FDOT and FFS MOU

FLORIDA FOREST SERVICE
(850) 681-5800



THE CONNER BUILDING
3125 CONNER BOULEVARD
TALLAHASSEE, FLORIDA 32399-1650

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER ADAM H. PUTNAM

August 13, 2015

Ms. Nona Schaffner
Assistant General Counsel
Florida Department of Transportation
Office of the General Counsel
605 Suwannee Street, MS 58
Tallahassee, Florida 32399-0458

RE: Gopher Tortoise Memorandum of Understanding

Dear Ms. Schaffner:

Enclosed is the Florida Department of Transportation's fully executed original copy of the Gopher Tortoise Memorandum of Understanding (FDACS Contract #022431). The Florida Department of Agriculture and Consumer Services, Division of Administration has retained the other fully executed original copy. If there are any additional questions or concerns, please do not hesitate to call or email at (850) 681-5890 or Brian.Camposano@FreshFromFlorida.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Camposano", written over a horizontal line.

Brian Camposano
Forest Ecologist
Florida Forest Service

Enclosures

001 GENERAL COUNSEL
REC'D LEGAL
15 AUG 20 PM 1:58

AGREEMENT NO. _____

022431

**MEMORANDUM OF UNDERSTANDING BETWEEN THE FLORIDA DEPARTMENT
OF TRANSPORTATION AND THE FLORIDA FOREST SERVICE FOR GOPHER
TORTOISE RELOCATION**

This Memorandum of Understanding (MOU) is made by and between the Florida Department of Transportation (FDOT) and the Florida Department of Agriculture and Consumer Services, Florida Forest Service (FFS).

Recitals

WHEREAS, FDOT anticipates that transportation projects currently planned throughout the state will result in impacts to populations of the gopher tortoise (*Gopherus polyphemus*), a state imperiled species; and

WHEREAS, FDOT is responsible for developing projects which, through interagency coordination, provide conservation measures for imperiled species in cases where avoidance and minimization actions related to transportation projects cannot avoid impacts to these species; and

WHEREAS, FDOT has an interest in identifying ecologically suitable lands in order to relocate gopher tortoises located within the footprint of public transportation projects on public conservation lands throughout the state; and

WHEREAS, FFS has over 1.06 million acres of public conservation lands in the state forest system which may be impacted by public transportation projects; and

WHEREAS, FFS has no fewer than 30 state forests with documented populations of gopher tortoises which may be impacted by public transportation projects requiring mitigation and which may contain other areas of habitat suitable for receiving gopher tortoises affected by these projects; and

WHEREAS, FFS believes that cooperation with FDOT in relocating gopher tortoises from public conservation lands impacted by public transportation projects to contiguous public conservation lands would be beneficial to gopher tortoise conservation and mutually beneficial to the goals and objectives of both agencies.

NOW, THEREFORE, in consideration of the foregoing, FDOT and FFS agree to the following:

I. GUIDING PRINCIPLES

- A. The FDOT and FFS hereby agree that the purpose of FFS's state forest management is to fulfill the land acquisition and management goals and objectives described or referenced in the approved resource management plan for each state forest.

1. The FFS's purpose in cooperating in this MOU is primarily to benefit conservation and management of gopher tortoise populations on state forests through improvements to gopher tortoise habitat and through gopher tortoise relocation where these efforts result in biologically sound gopher tortoise habitat and population management.
2. The FFS recognizes that the timely relocation of gopher tortoises and, where appropriate, their burrow commensals from within the footprint of public transportation projects also contributes to gopher tortoise conservation and to the accomplishment of the FDOT mission. Thus, designated areas of a state forest impacted by a public transportation project may be used as recipient areas for gopher tortoises and, where appropriate, their commensals displaced by such a project.
3. For the purposes of this MOU, relocation is defined as the deliberate moving of wild gopher tortoises and/or commensal species from within the footprint of the public transportation project to suitable, contiguous habitat on the impacted state forest such that the final stocking density of gopher tortoises is no greater than the maximum allowable per acre amount for public conservation land as defined in the most recent revision of the Florida Fish and Wildlife Conservation Commission (FWC) Gopher Tortoise Permitting Guidelines which is incorporated herein by reference.
4. FDOT will coordinate with and solicit input from FWC on measures to reduce impacts to gopher tortoises as a result of public transportation projects. All efforts to avoid or minimize impacts to the gopher tortoise at public transportation project construction sites will be exhausted by FDOT prior to the relocation of impacted gopher tortoises to other suitable areas on any impacted state forest.
5. FFS does not become a party to any permit or regulatory agreement made in relation to the transportation project itself by accepting relocated gopher tortoises under this MOU.
6. State forest recipient sites for relocated gopher tortoises under this MOU must be situated no further than maximum allowable distance from the area impacted by the public transportation project footprint as defined by the most recent revision of the FWC Gopher Tortoise Permitting Guidelines, unless authorized by FWC.
7. The relocation of gopher tortoises on the impacted state forest shall meet the guidelines and requirements of the most recent revision of the FWC Gopher Tortoise Permitting Guidelines.
8. Prior to FDOT relocating gopher tortoises on a state forest impacted by a public transportation project covered under this MOU, both FFS and FDOT shall sign an addendum to this MOU for each individual project which shall include the following:

- a. State forest name;
 - b. FDOT project title;
 - c. Map indicating donor site(s) and burrow locations;
 - d. Map indicating proposed location and size (acres) of recipient site(s);
 - e. Documentation of recipient site suitability assessment;
 - f. Estimated number of tortoises to be relocated; and
 - g. Any and all project-specific agreements between FFS and FDOT which:
 - i) Alter the management responsibilities of either agency, either wholly or in part, as referenced in section III of this MOU; and/or
 - ii) Are otherwise not specifically referenced herein.
9. Upon completion of the gopher tortoise relocation, FDOT will provide FFS documentation of relocation which shall be appended to the addendum referenced in (8) above to serve as fulfillment of relocation responsibilities detailed herein. This documentation shall include the following:
- a. Date(s) of tortoise removal;
 - b. Date(s) of tortoise relocation;
 - c. Description of tortoises relocated including:
 - i) all demographic information collected
 - ii) any required marking of tortoises for identification purposes
 - iii) any indications of unhealthy or diseased tortoises
 - iv) any instances of mortality during relocation; and
 - d. Final number of tortoises moved.

II. MAXIMUM NUMBER OF GOPHER TORTOISES TO BE RELOCATED

- A. The maximum number of gopher tortoises which may be relocated to a designated recipient area or areas on any state forest where gopher tortoises are impacted by a public transportation project and under this MOU is 600 individuals.
- B. In order to assist the FFS with the management of recipient sites on any impacted state forest, the FDOT has provided the Friends of Florida State Forests, Inc. a total of \$600,000.00 (SIX HUNDRED THOUSAND DOLLARS), of which the mitigation contribution for relocation is \$1,000.00 (ONE THOUSAND DOLLARS) per tortoise. This sum has been provided to the Friends of Florida State Forests, Inc. prior to the relocation of any gopher tortoises on state forests impacted by a public transportation project and shall be used by Friends of Florida State Forests, Inc. for management of gopher tortoise populations and for conducting associated land management activities, to include the purchase of equipment, beneficial to gopher tortoises on any impacted state forest. Friends of Florida State Forests, Inc. shall not expend funds for any project covered under this MOU until FDOT provides FFS the final number of tortoises moved for a specific project as detailed in (I.9) above. A ledger shall be provided by

FDOT after relocation efforts for each project that shows the number of tortoises remaining eligible under the initial lump sum payment.

- C. Friends of Florida State Forests, Inc. shall be entitled to withhold up to 5% of the per-tortoise amount referenced in (II.B) for each gopher tortoise relocated as part of any relocation project covered by this MOU for overhead and administrative costs. Friends of Florida State Forests, Inc. will also maintain a ledger indicating remaining funds available after each relocation project is complete.

III. MANAGEMENT RESPONSIBILITIES

- A. FFS shall assume responsibility for security and habitat management of all recipient sites pursuant to this MOU.
- B. FFS shall manage all recipient sites covered under this MOU utilizing accepted habitat management techniques and guidelines set forth in the most recent revision of the FWC Gopher Tortoise Permitting Guidelines. While all state forests are managed under the multiple-use concept, a specific goal of the management of these recipient sites will be to improve or maintain habitat suitable for the gopher tortoise. FFS may choose, at its discretion, to enter into contractual agreements with other vendors to perform management activities within the recipient areas.
- C. FFS shall specify to FDOT the state forest locations which are appropriate for assessment as potential recipient sites. FDOT shall be responsible for the assessment of a potential recipient site or sites in state forests and the measurement of gopher tortoise baseline densities at the recipient site or sites for each individual project covered under this MOU. FDOT may utilize previously collected data in determining the suitability of a recipient site if the collected data are still valid. These assessments and measurements shall be done to meet the guidelines and requirements found within the most recent revision of the FWC Gopher Tortoise Permitting Guidelines. FDOT may choose, at its discretion, to enter into contractual agreements with other vendors to perform assessment and measurement activities within the recipient area or areas. The FFS may obtain and review any comments from other agencies and organizations in its determination as to whether a particular assessment is adequate and whether any particular relocation should proceed forward.
- D. FDOT shall be responsible for gopher tortoise relocation. This shall include identification and extraction of gopher tortoises to be relocated, transportation of the gopher tortoises from the public transportation project footprint to the designated recipient site or sites on the impacted state forest, and construction of temporary enclosures as indicated for the "soft release" of gopher tortoises. FDOT may choose, at its discretion, to enter into contractual agreements with other vendors to perform relocation and temporary enclosure construction activities within the recipient area or areas. All relocations must be coordinated with FFS and made in accordance with the most recent revision of the FWC Gopher Tortoise Permitting Guidelines.

- E. FFS shall provide to FDOT the name and contact information for a FFS field representative to coordinate oversight of each relocation project, including recipient site selection. FDOT will notify FFS field staff in writing at least 30 days prior to temporary enclosure(s) construction and relocation.
- F. After approval of the initial installment of temporary enclosures by FDOT and FFS, FFS shall be responsible for monitoring and maintaining the temporary enclosures during the “soft-release” period, removing the temporary enclosures upon completion of the “soft release” period, and performing all post-release population monitoring as required by the most current revision of the FWC Gopher Tortoise Permitting Guidelines.
- G. FFS shall be responsible for the development and/or amendment of the habitat management plan for all recipient sites.
- H. FFS will be responsible for maintaining the eligibility of gopher tortoise relocation sites.

IV. SUCCESS CRITERIA

Upon completion of gopher tortoise relocation for each project covered under this MOU, FFS will assume long-term population monitoring and reporting responsibilities as required under the most recent revision of the FWC Gopher Tortoise Permitting Guidelines. FFS will work with FWC to ensure that gopher tortoise management goals are being met within the recipient sites of state forests impacted by public transportation projects.

V. GENERAL TERMS AND CONDITIONS

This MOU, including documents expressly incorporated by reference, constitutes the entire MOU between FDOT and FFS. It supersedes the “Memorandum of Understanding Between the FDOT and the DOF for Gopher Tortoise Relocation” (executed October 15, 2008, FDACS Contract #014188), and all other previous communications, representations, or contracts, either written or oral, which purport to describe or embody the subject matter of this MOU.

VI. SEVERABILITY

If any provision of this MOU, or the application thereof to any person or circumstance, is held by a court of competent jurisdiction to be partially or wholly invalid or unenforceable for any reason whatsoever, any such invalidity, illegality, or unenforceability shall not affect other provisions or applications of this MOU which can be given effect without the invalid provision or application, and to this and the provisions of this MOU are declared severable.

VII. AMENDMENTS

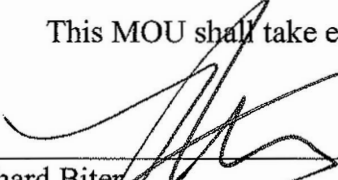
No amendment of this MOU shall be of any force or effect unless set forth in a written instrument signed by authorized representatives of each party.

VIII. TERMINATION

Sections II and III of this MOU shall terminate upon the relocation of a maximum of 600 gopher tortoises to recipient sites of state forests impacted by FDOT public transportation projects and completion of post-release monitoring requirements associated with the relocated gopher tortoises. Notwithstanding, the management of the recipient areas shall continue to be the responsibility of FFS. The FDOT or FFS may terminate this MOU at any time by providing 60 days written notice to the other party. Any money which has not been expended for relocation shall be returned to FDOT within 45 days of termination.

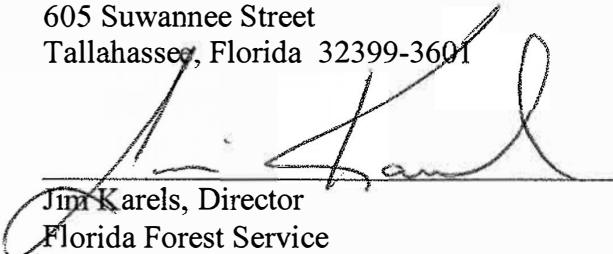
IX. EFFECTIVE DATE

This MOU shall take effect on the last signature date, as completed below.




Richard Biter
Assistant Secretary
Intermodal Systems Development
Florida Department of Transportation
Haydon Burns Building
605 Suwannee Street
Tallahassee, Florida 32399-3601

6-30-15
Date



Jim Karels, Director
Florida Forest Service
Department of Agriculture and Consumer Services
3125 Conner Boulevard
Tallahassee, Florida 32399-1650

7-8-15
Date



D. Alan Edwards, Director
Division of Administration
Department of Agriculture and Consumer Services
407 South Calhoun Street
Tallahassee, Florida 32399-0800

8-12-15
Date

ATTACHMENT G
Gopher Tortoise Presentation



Gopher Tortoise

How do they impact your project and
how can PLEM help?

David Bogardus

Senior Environmental Specialist

FDOT District IV Planning & Environmental Management

TEL: (954) 777-4339

David.Bogardus@dot.state.fl.us



Gopher Tortoise: Uplisted to Threatened Species (2007)

“No person shall take, attempt to take, pursue, hunt, harass, capture, possess, sell or transport any gopher tortoise or parts thereof or their eggs, or molest, damage, or destroy gopher tortoise burrows, except as authorized by Commission permit or when complying with Commission approved guidelines for specific actions which may impact gopher tortoises and their burrows.” (Chapter 68A-27.004, F.A.C.)



What does a gopher tortoise look like?



Gopher Tortoise Burrow



Gopher Tortoise Burrow



Potential Gopher Tortoise Habitat



Unconventional Gopher Tortoise Habitat



How does PLEM help?

COORDINATION POINTS IN REVIEW PROCESS WITH PLEM:

- Identify Environmental Features
- Environmental Activity Coordination Meeting
- Initial Environmental Impact Review
- Constructability Environmental Impact Review
- Biddability Environmental Impact Review
- Environmental Certification
- Coordinate Gopher Tortoise Permitting/Relocation

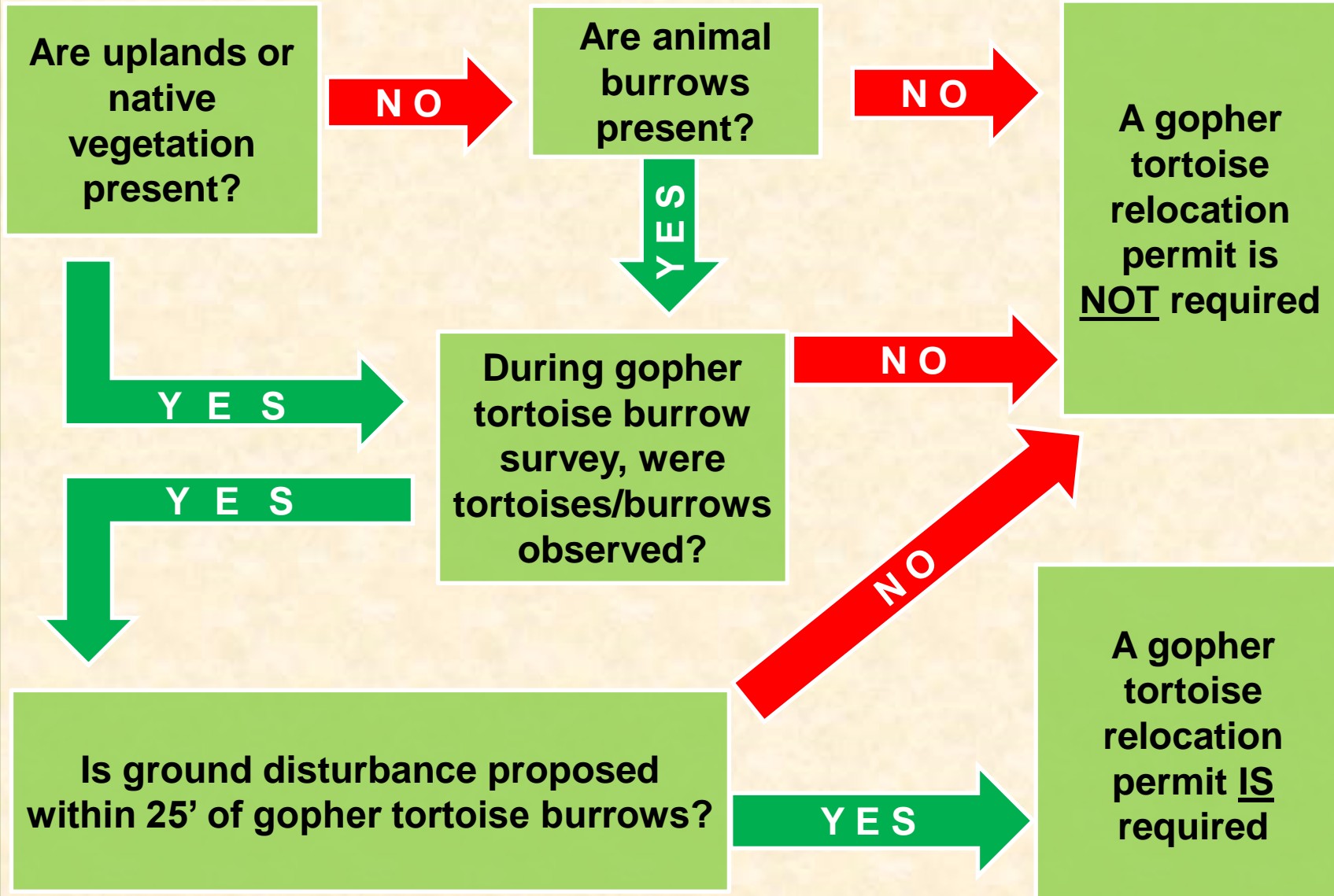


Identify Environmental Features

PLEM Environmental Liaison will:

- Determine if suitable gopher tortoise habitat exists by reviewing available GIS, aerial, PD&E (if applicable), and database information
- Conduct a field review if suitable habitat exists (urbanized vs. public lands)
- Detail results of reviews in the Environmental Features Identification (EFID) Memo
- Identify next steps needed to address the presence of tortoises

Decision Matrix





Environmental Activity Coordination Meeting

PLEM Environmental Liaison will:

- Provide Project Manager with gopher tortoise review information (Environmental Features Memo)
- Discuss next steps with Project Manager
 - Ways to avoid permitting and scheduling conflicts
 - Review potential costs and schedule impacts
 - Need for additional surveys

Examples of DOT Projects



Initial Environmental Impact Review

PLEM Environmental Liaison will:

- Review initial engineering plans and compare with gopher tortoise surveys to identify potential burrow impacts
- Enter comments into the Electronic Review Comment (ERC) system regarding:
 - Avoidance and minimization efforts recommended
 - Plan notes
- Evaluate if a permit is required and if so what type
 - Conservation vs. 10 or fewer
 - Type of relocation options - on-site (preferred) vs. off-site (recipient site)

Activities Requiring a Permit

Not all activities require a permit, but any ground disturbing activities within 25' of a gopher tortoise burrow require a permit.

- Bulldozing
- Digging
- Building Construction
- Clearing
- Grading
- Paving



Activities that don't require a permit

No Permit Required:

- Wholly avoid the area(s) inhabited by gopher tortoises
- Design your project such that activities requiring a permit DO NOT occur within 25 feet of a gopher tortoise burrow entrance and provide sufficient habitat for remaining gopher tortoises



A vertical strip on the left side of the slide shows a lush green forest with tall trees and dense foliage. The main title is centered at the top in a large, bold, green font.

Costs associated with Gopher Tortoise Relocation Permits

10 or Fewer Burrows Permit
(relocate on-site or off-site)

\$217

Conservation Permit:
(>10 burrows, relocated to
long-term protected area)

\$217 for first group of 10 burrows
(5 gopher tortoises max). \$319 each
additional gopher tortoise.

Temporary Exclusion Permit

\$109 - \$326 per gopher tortoise

Emergency Take

\$4,349 per gopher tortoise

Recipient Site*

Between \$700 - \$1,000 per tortoise in
addition to the fees listed above



Constructability Environmental Impact Review

PLEM Environmental Liaison will:

- Review constructability engineering plans to identify any design changes that could impact more or less burrows
- Final coordination with Project Manager on any additional avoidance and minimization measures
 - Gopher tortoise Fencing
 - Staging areas
- Enter ERC Comments and additional plan notes if applicable
- If a permit is required start the application process with FWC

Permitting Timelines

Burrow Survey	Valid for 90 days
Permit Application Preparation	1 - 2 weeks
Permit Review	Up to 90 days
Permit Duration	6 months to 2 years



Biddability Environmental Final Impact Review

PLEM Environmental Liaison will:

- Review biddability engineering plans for any final design changes
- Ensure fencing and comments are shown on plans as recommended during constructability review
- Final ERC Comments (if necessary)
- Finalize Gopher Tortoise Permit



Checklist/Environmental Certification

PLEM Environmental Liaison will:

- Final checklist and memo provided to the Project Manager
- Signature by Environmental Administrator
- Schedule meeting with District Construction Environmental Coordinator (DCEC) in order to make the Construction Department aware of the gopher tortoise issues.
- Identify Construction Date
- Additional surveys may be necessary (90 days)

Prior to Construction

PLEM Environmental Liaison, in coordination with DCEC, will:

- Funding – permit, recipient site, excavation
- 100% Survey (no more than 90 days prior to construction)
- Relocate Tortoises in conjunction with mobilization
 - Bucket trapping - 28 days
 - Weather Conditions
 - Excavation



Permit Execution

A valid Gopher Tortoise Relocation Permit from FWC must be issued before land clearing can begin

An Authorized Gopher Tortoise Agent must conduct the relocation. Can only be conducted when average daily low is higher than 50°F for 3 straight days. Makes winter relocations difficult

Silt fence installation is now encouraged (and in specific cases, required) by the FWC to limit gopher tortoise movements

Permit issuance does NOT preclude the permit holder from relocating additional gopher tortoises encountered during the life of the project



Gopher Tortoise Exclusionary Fencing

UTILITIES



Utilities often conduct work prior to what Project Manager considers ground breaking. **Tortoises must be relocated prior to any work, including utility relocation.**

GT Agent and/or backhoe operator must understand utility locations prior to digging. **Get utility locates Before You Dig: Call 811.**



Disturbed Site Permit

If you don't contact PLEM regarding gopher tortoises it may take more time and money.

Special case permit sometimes necessary after premature site clearing has occurred

May be issued in association with a FWC law enforcement investigation

Requires a more thorough (= time and cost intensive) site review

\$1,631 additional per tortoise added to the standard mitigation fee [Evaluated on a case-by-case basis]



THE END

http://www.youtube.com/watch?v=td6F_rU6l3k&feature=player_embedded

ATTACHMENT H
FWC Authorized Gopher Tortoise Agent Permit
Application Checklist

Authorized Gopher Tortoise Agent Permit Application Checklist

To register as a new user:

- _____ Applicant's contact information including physical and mailing addresses and phone and fax numbers, and email address (if applicable)
- _____ Applicant's social security number *or* driver's license state of issuance and number
- _____ If applying as a business, FEID/FEID number and contact name, phone and fax numbers

To apply for an authorized agent permit:

- _____ Applicant's contact information including mailing address and phone and fax numbers
- _____ Training course information including company name, course name/s, activity trained upon, and date completed
- _____ Training course completion certificate in electronic format
- _____ To demonstrate previous gopher tortoise burrow survey experience: project names, counties, project total acres, gopher tortoise habitat acres, total survey hours, and permit numbers
- _____ To demonstrate previous bucket trapping; live trapping; hand shoveling; mark, transport, and release; blood sample collection; and pulling with a modified rod experience: project names, counties, number of tortoises, and permit numbers for each activity
- _____ To demonstrate previous supervision of gopher tortoise burrow excavations using mechanical equipment experience: project names, counties, number of burrows, number of tortoises, and permit numbers for each activity
- _____ Required mitigation contribution