APPENDIX K

CONSERVATION STRATEGY FOR THE GOPHER TORTOISE AND EASTERN INDIGO SNAKE

1.0 CONSERVATION STRATEGY FOR THE GOPHER TORTOISE AND EASTERN INDIGO SNAKE

The following conservation strategies are designed to minimize potential impacts to gopher tortoises and Eastern indigo snakes that occur in the vicinity of the proposed Southeast Expansion Project (Project) as well as methods for handling unanticipated discoveries or encounters of either species. The strategies detailed below are common to many of the projects which have recently been granted by the US Fish and Wildlife Service (FWS) and the Federal Energy Regulatory Commission (FERC).

Gulf South has determined the location of gopher tortoise burrows within and adjacent to the construction right-of-way during field surveys. Gulf South will use this information as a baseline for gopher tortoise occupation of the right-of-way. Gopher tortoise surveys methods used by Gulf South are presented in Appendix A of this Conservation Strategy.

1.1 Construction Personnel Education

All Project construction personnel will be provided comprehensive training with respect to gopher tortoises and eastern indigo snakes based on the personnel's individual level of involvement with the proposed Project. This training will include gopher tortoise and Eastern indigo snake identification methods, and training on the measures to be implemented in the event that an individual or burrow is encountered during Project activities. The training will emphasize that any contact or handling of a gopher tortoise and Eastern indigo snake is prohibited, unless under the direction of the contract qualified biologist or that either species is in a position of imminent harm.

Training will include:

1. Reasons for species protection and its protection status;

2. Penalties for killing, injuring, harassing, or otherwise disturbing a gopher tortoise or its burrow, or an Eastern indigo snake;

3. Discussion of the conservation strategy detailed herein and noncompliance with; and

4. Procedures for contacting qualified biologists should an individual gopher tortoise or Eastern indigo snake be encountered.

1.2 Pre-Construction Surveys

Prior to any construction activity commencement, work areas where gopher tortoises were identified during field surveys will be resurveyed by qualified personnel to determine if dispersion or movement has occurred. Previously unidentified gopher tortoise burrows will be documented and mapped using GPS devices. Efforts will be made to inspect all active and inactive burrows using a remote infrared video camera system that enables a determination of occupancy by tortoises or commensals such as the Easter indigo snake.

Upper Respiratory Tract Disease (URTD) has been detected in an increasing number of gopher tortoise populations in the southeast over the past decade. In order to prevent the potential spread of this disease while handling gopher tortoises, latex gloves will be worn, and

all equipment (including guide pole, scope, scale, measuring equipment, shovels, etc.) will be thoroughly cleaned with a ten percent bleach solution following each contact with an individual gopher tortoise or burrow.

Burrows will be identified using a unique numbering system to facilitate proper monitoring. Following completion of the initial re-surveys of the proposed right-of-way and before construction, a report will be submitted to the FWS and the Mississippi Museum of Natural Science (MMNS) containing information on any gopher tortoise individuals that will require capture and relocation. Gopher tortoises and burrows in area adjacent to the construction right-of-way will be excluded from the construction zone by barricading silt fencing or orange construction fencing erected along the edge of the right-of-way to prevent accidental contact with and damage from construction equipment.

1.3 Collection of Gopher Tortoises for Relocation

Collection of gopher tortoises from the work areas will be determined on an individual basis and will be constrained as follows:

1. Any personnel involved with the relocation of a gopher tortoise will have experience in working with gopher tortoises and be under the supervision of the qualified biologist;

2. Any activities resulting in the capture/relocation of a tortoise will occur only from April 1 to October 15;

3. A qualified biologist will determine whether any burrows show signs of nesting. If determined that a burrow may have eggs buried within the apron, they will be hand excavated, carried without rotation, and reburied at a suitable location. Egg relocation sites will be protected using two-inch mesh to enable hatchlings to escape, while predators are excluded;

4. If an individual is captured outside or near the entrance of a burrow, the burrow will be examined with a remote infrared video camera system. If no additional tortoises or commensal species are present, the burrow will be excavated with a backhoe to verify that the burrow is unoccupied and then filled in to prevent reoccupation;

5. Small sub-adult and hatchling burrows will be shovel excavated. Small flexible tubing (PVC, HDPE) will be entered into the burrow to determine depth and shape of the burrow and will be used as a guide for digging the burrow. This tubing will be graduated to aid in determining burrow depth. As shovel digging approaches the end of the burrow, hand digging will replace shoveling until completion of the burrow is reached. Following removal of the tortoise, backfilling can occur;

6. Backhoe digging of adult burrows will occur using the same steps as shoveling. Backhoe buckets will have their teeth removed or a metal plate welded over the teeth. A flexible tubing will be inserted into the burrow to be used as a guide for the backhoe operator and to ensure the path is maintained. A qualified person will inspect the progress of the digging. The last one or two feet of the burrow path are to be hand dug. Following extraction of the tortoise, backfilling can proceed;

7. Captured tortoises will be sexed, aged, permanently marked using standard marginal scute numbering (Cable, 1944);

8. Sick or injured tortoises will be brought to a local veterinarian for treatment by a qualified person with FWS and MMNS approval to move tortoises. If injuries are critical, it will be euthanized. Documentation for all tortoises brought to a veterinarian will be submitted to the FWS and the MMNS;

9. All materials used to capture, dig, relocate gopher tortoises will be sanitized using a ten percent bleach solution after each use to prevent spread of disease; and

10. Handling of gopher tortoises will be by qualified personnel wearing latex gloves and gloves will be changed after handling each turtle to prevent spread of disease.

1.4 Relocation of Gopher Tortoises

As has been shown with previous pipeline projects (Wester and Kolb, 1999; Thomas, 2001), gopher tortoises temporarily displaced from the construction corridor will likely remain in the immediate vicinity of their capture and will be able to reoccupy their original home range once construction and re-vegetation activities are completed. Therefore, Gulf South proposes to temporarily relocate directly impacted individuals from the proposed right-of-way into nearby burrows within their normal range. In locations where nearby burrows do not exist, starter burrows will be dug for release of displaced tortoise following the guidelines outlined in Gulf South's Gopher Tortoise Standard Operating Procedures for Protecting Gopher Tortoise Along Existing Rights-of-Way (Appendix B of this Conservation Strategy). All relocations will be within the same colony and will be supervised and directed by the qualified biologist approved for such activity and with proper permits.

The relocation of individuals from the construction areas will be conducted in accordance with the following guidelines:

1. Relocations will occur only between April 1 and October 15;

2. Relocation will take place immediately to previously selected inactive/abandoned burrows of similar size and in the same general area;

3. All tortoises to be relocated will be examined for Upper Respiratory Disease (URD). Systematic tortoises will be separated from other tortoises and reported to the FWS and the MMNS. Blood samples will be taken by qualified personnel and sent to the University of Florida for testing in accord with methodologies provided by the University of Florida and as required by the FWS and the MMNS;

4. All recipient burrows will be scoped to determine activity status prior to releasing captured individuals; and

5. A report will be prepared to detail the relocation efforts to both the FWS and the MMNS.

1.5 Construction Monitoring

An environmental inspector (EI) thoroughly trained in the procedures included in this Conservation Strategy will be on-site at all times to ensure compliance with all aspects of this plan, environmental permits, the FERC Certificate, and the Endangered Species Act (ESA). A qualified biologist with all necessary state and federal endangered species permits will be available at all times during construction to handle any gopher tortoise or eastern indigo snake issues as they arise. This biologist will provide continued training on listed species throughout construction to all construction personnel as needed.

1.5.1 Burrow Adjacent to Construction Corridor

Individual gopher tortoises, or gopher tortoise colonies located adjacent to, and outside of the construction corridor, will be protected from impacts by installation of silt fence or orange barricade type fencing. To prevent tortoises from wandering into construction areas, fencing will be placed on the outer edge of the proposed construction corridor and buried to a minimum depth of 6 inches below grade. Additionally, fencing will help to prevent inadvertent impacts from construction equipment and personnel to these areas by clearly demarcating these areas. The exact location and placement of fencing will be determined by a qualified biologist and be appropriate for the habitat being affected. Signage will be posted to clearly demarcate these areas. The EI will monitor all installed fencing at a frequency determined by the qualified biologist to insure proper functioning. Following construction, all gopher tortoise fencing will be removed and the flora and fauna allowed to re-inhabit the area.

1.5.2 Access Roads

All access roads in the general vicinity of areas where there are known populations of gopher tortoises or Eastern indigo snakes will be resurveyed prior to construction. Additionally, the following guidelines will be adhered to further protect individual species;

1. Signs will be placed on unimproved access roads where there are known colonies of gopher tortoises and speed limits restricted to 10 MPH.

2. If a burrow is located within 50 feet of an unimproved road, it will be barricaded with exclusion silt fencing or orange construction fencing, with a minimal length of 150 feet.

3. All unimproved access roads in the vicinity of known gopher colonies or burrows will be examined daily for the presence of wandering individuals.

1.5.3 Right-of-Way Surveying Throughout Construction

In order to further minimize impacts to gopher tortoises and Eastern indigo snakes, Gulf South will conduct regular surveys throughout the duration of construction. The following is a listing of proposed re-surveys to be conducted during construction:

1. Re-survey the right-of-way as necessary to document any new locations or activities of gopher tortoises or Eastern indigo snakes;

2. Survey all open trenches for individual tortoises or Eastern indigo snakes daily and before backfilling. Should a tortoise be found during these surveys, the qualified

biologist should be contacted so that it may be removed in accord with proper handling procedures; and

3. All spoil piles within the general vicinity of known gopher tortoise populations will be surveyed daily by a qualified biologist to ensure that no tortoises have colonized the spoil piles. If a burrow is located in a spoil pile, it will be excavated in accord with this plan and under instruction of the qualified biologist.

1.5.4 Construction Monitoring

All monitoring of the terms and conditions of the biological assessment and conservation strategy will be carried out by the EI under instruction of the qualified biologist. Roles and responsibilities with respect to this biological assessment include:

1. At all times the qualified biologist will be available to the EI;

2. The EI will have stop work authority and direct contact with the environmental project manager and construction superintendent should a burrow or individual gopher tortoise be located with potential to be impacted by the proposed Project;

3. Except in the event that a gopher tortoise or Eastern indigo snake is in immanent danger that might lead to the injury or mortality, no personnel, other than a qualified biologist, shall handle or disturb a tortoise;

4. Any violations of the conditions or terms of this document, the FERC Certificate, or the ESA shall be reported to the environmental project manager who will contact the FWS and the MMNS;

5. Monitoring will continue until deemed complete by the FWS and the MMNS.

1.6 Operation and Maintenance

Gulf South is proposing a 60-foot wide permanent right-of-way; however, we have recommended a permanent right-of-way of 50 feet. The area will be planted with grasses that normally occupy such rights-of-way such as dallis, Bermuda, and Bahia grasses. Gulf South will follow the Standard Operating Procedures for Protecting Gopher Tortoises for the Project as summarized below and included as Appendix B of this Conservation Strategy. Gulf South will also follow the guidelines outlined in their Unanticipated Discoveries/Encounters with Eastern indigo snakes that is included in Appendix C of this Conservation Strategy.

1.6.1 Training

Qualified personnel will be used to determine if gopher tortoises or Eastern indigo snakes are present on a construction site before work begins. These personnel will be Gulf South employees or contracted mowing personnel that have been trained to identify gopher tortoises, their habitat, and/or burrows, as well as eastern indigo snakes. A training module, including gopher tortoise and Eastern indigo snake identification keys and habitat information will be provided to personnel who will be responsible for the right-of-way clearance. Maps showing the locations of known active/inactive burrows on the right-of-way will be provided to mowing personnel, as needed. A list of personnel who have completed training will be provided upon FWS request.

1.6.2 Reporting

Reporting of findings will be made by trained personnel on all jobs in affected counties/parishes. Inspection report forms will be retained for inclusion in reporting under the FERC blanket or for any reporting requested by the FWS under the terms of their approval of this plan or subsequent consultations.

1.6.3 Small Excavations

Small excavations are routinely necessary for replacing valves, sections of pipe or small appurtenance construction. Prior to the excavation, the area within which work will be conducted (including the area to be excavated and the path that equipment will be traveling) will be surveyed for tortoise burrows and individual tortoises. If an individual tortoise or Eastern indigo snake is encountered, they will be allowed to leave the area without contact from any Gulf South staff or its contractors. If maintenance activities are required within 50 feet of tortoise burrows, the burrows will be clearly marked for avoidance, and the FWS will be contacted for consultation. If an active burrow cannot be avoided, then Gulf South will initiate formal consultation with the FWS.

Except for travel on existing roads and paths, routine maintenance activities will be restricted to areas beyond at least 50 feet from tortoise burrows. Where these maintenance activities require work be performed closer than 50 feet from burrows, only hand-held equipment will be used, and maintenance personnel will avoid the burrow apron, entrance and area immediately behind the entrance.

If excavations are to be left unattended in areas where gopher tortoises have been identified, the area will be fenced to prevent gopher tortoises from entering the excavation area. Small excavation projects such as those applicable to this management plan are unlikely to exceed two days from the initial date of ground disturbance. Excavation areas within 100 feet of tortoise burrows will be surrounded by a fence with a minimum 2-inch mesh to exclude tortoises during construction. Attention should be paid to the bottom of the fence to make sure that it is secured to prevent tortoises from going underneath the fence. Enough area should be fenced to allow work to proceed within the enclosure with minimal limitations on tortoise foraging habitat as practical. Fencing should remain in place until the excavation is backfilled.

All excavated trenches and underneath vehicles will be checked daily for tortoises before commencing work. All maintenance debris that could hinder tortoise movement will be removed at the completion of construction activities.

1.3.4 Right-of-Way Mowing

The mowing of rights-of-way is a necessary and regulated practice. Since gopher tortoises and Eastern indigo snakes have been documented to utilize existing rights-of-way, special attention should be given before and during mowing activity. The right-of-way should be walked before mowing begins to determine areas of occupied habitat and potentially occupied habitat. When mowing in these areas, a “tortoise monitor” will verify that the right-of-way is clear immediately ahead of the mowers. Individual tortoises should be allowed to move out of the path of the mowers. Gopher tortoises are active year round; however their activity slows down in the winter months. When possible, mowing should be conducted in the winter (between November 1st and March 1st) to reduce the likelihood of encountering gopher tortoises. If practical, mowing should be planned for cloudy days when the temperature is below 50ºF. This

will further reduce the probability of encountering a tortoise. Mowing will be conducted at a frequency sufficient to maintain suppression of woody growth, and in accord with FERC and US Department of Transportation (DOT) standards. In addition, no herbicides will be used to control vegetation within areas occupied by tortoises.

Maintenance personnel will use hand-held power equipment to mow vegetation surrounding the burrows. Hand-pushed mowers and hand-held equipment will be used within 50 feet of tortoise burrows, and maintenance personnel will avoid mowing across the burrow apron, burrow entrance, and the area immediately behind the entrance.

1.3.5 Pipeline Leaks and Emergencies

In case of emergency such as a pipeline leak or blowout, it may be necessary to initiate repair work immediately. If this occurs in an area inhabited by gopher tortoises, every effort will be made to protect the burrows and individuals. Gulf South will contact qualified personnel to address any and all impacts to gopher tortoises. This will include immediate assessment of the potential effects of the situation, and every effort will be made to minimize or avoid such any potential adverse effects. Any such events will be reported to appropriate FWS Field Offices and state agencies.

2.0 POST-CONSTRUCTION MONITORING, COORDINATION AND REPORTING

The pipeline right-of-way will be monitored for three years following the initial relocations of gopher tortoises to assess the success of relocation efforts. Surveys will be conducted during the active periods of the year. Burrows located within the right-of-way will be identified and located with GPS coordinates. The status of starter and relocation burrows will also be assessed during surveys. Using GIS technology, these burrows will be mapped and compared to pre-construction and yearly post-construction data.

Gulf South will compile the findings of this monitoring efforts into an annual summary report and present its findings to the FWS and the MMNS beginning one year after construction completion and site restoration.

3.0 References

Cox, J., D. Inkley, and R. Kautz. 1987. Ecology and habitat protection needs of gopher tortoise (Gopherus polyphemus) populations found on lands slated for large-scale development in Florida. Florida Game and Freshwater Fish Commission Nongame Wildlife Program Technical Report 4, Tallahassee, Florida. 74 pages.

Thomas, D.P. 2001. Recruitment of Gopher Tortoises to a newly constructed pipeline corridor in Mississippi. Proceedings of the Seventh International Symposium on Environmental Concerns in Right-of-Way Management, Calgary 2000. Elsevier Science Ltd. London.

Wester, E.E. and J.W. Kolb. 1997. Conservation of the gopher tortoise and associated species during construction of the Florida Gas Transmission Company Phase III Expansion Project. Pp. 330-34- in J.R. Goodrich-Mahoney, J.R. Wisniewski, and J. Wisniewski eds. Elsevier Sci. New York. X+511pp.

APPENDIX A

SURVEY METHODOLOGY FOR GOPHER TORTOISES AND EASTERN INDIGO SNAKES

1.0 SURVEY METHODOLOGY

Areas of suitable gopher tortoise habitat, as described in the following section, as well as areas considered to be of marginal quality will be “100 percent” surveyed for the presence of tortoise burrows. Survey sites will be divided into consecutive “site distance” strip transects, each of which will be traversed, on foot, by a member of the survey team across the entire width of the survey corridor as required. The width of each transect will be determined by ground visibility within the site. In other words, a site composed of pasture, recent timber clear-cut, or other forms of open land will have a greater transect width than that of a very thick timber stand with reduced sight distance. Transect widths may range from 10 to 50 feet, depending on ground visibility within the site.

If a tortoise burrow is found, the coordinates for the burrow will be documented, a photo taken, and the location and activity status will be documented as active, inactive, or abandoned. The classification for activity status is defined below and is based on the appearance of the burrow apron and entrance at the time of survey.

1. Active – most likely occupied by a tortoise; as evidenced by presence of tortoise, freshly dug sand, tortoise tracks, or tortoise scat.

2. Inactive – used by a tortoise as part of a home range with other burrows, but is not currently occupied. Evidence includes absence of active burrow signs listed above and/or the presence of debris in burrow entrance.

3. Abandoned – most likely not occupied by a tortoise for many years; as evidenced by deteriorated nature of burrow entrance, (i.e. burrow collapsed, lack of maintained apron, sand washed in, etc.) Old burrows are in such a condition that they are not considered to be good candidates for future use by tortoises.

Gopher tortoises occupy a wide range of upland habitat types. The general physical and biotic features thought to characterize suitable adult tortoise habitat are:

1. Presence of well-drained, sandy soils, which allow easy burrowing;

2. Abundance of herbaceous ground cover; and

3. Generally open canopy and sparse shrub cover, which allows sunlight to reach the ground floor (Cox et al., 1987).

1.1 Soils

Soil conditions are responsible for the nature of habitats preferred by tortoises. The U.S. Fish and Wildlife Service has assigned each soil series as either a priority, suitable, marginal, or unsuitable type for the gopher tortoise. US Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) county soil survey maps can be obtained either from the NRCS website (if available) or from the local NRCS office.

1. Priority soils are humus poor, excessively well-drained, relatively deep to deep sandy soils, without fragipans. These soils typically occur on the highest upland positions

and adjacent side slopes. Priority soils include Lakeland, Alaga, Eustis, and Troup/Waldey.

2. Suitable soils consist of deep, well drained, loamy sands, without fragipans. Suitable soils, in comparison to priority soils, have horizons with a greater portion of clay. Suitable soils usually occupy topographically adjacent and lower positions when associated with priority soils. Suitable soils include Benndale, McLaurin, Smithdale, and Ruston.

3. Marginal soils are deep, moderately well drained soils, with a greater amount of clay or plinthite, which may include fragipans. Marginal soils are not classified as hydric or wetland soils. Marginal soils include Poarch, Saucier, Susquehana, Freest, and Lucy types.

All other soil series are considered unsuitable soils. These soils frequently are classified as hydric, or they occur on stream terraces and floodplains.

1.2 Vegetation

The vegetation characterizing gopher tortoise habitats varies with geography, soil type, and past and present land use. Long-leaf pine (Pinus palustris) , loblolly, slash pine(loblolly) and/ or hardwood trees (i.e. turkey oak, blackjack oak, wax myrtle, etc) can often be found at such sites. Herbaceous vegetation tends to be composed of species tolerant of dry conditions (i.e. wiregrass, prickly pear, reindeer moss, gopher apple, blackberry, and several grasses of the genera Andropogon and Panicum).

Tortoise burrows also can be found along powerline and pipeline rights-of-way, road rights-of-way, and ruderal habitats; including fence rows, orchard edges, golf course roughs and edges, old fields, and pasturelands. Tortoises are often pushed into these areas due to adjacent habitat becoming unsuitable (i.e. thick under and mid story canopy, residential and commercial development, etc).

APPENDIX B

GULF SOUTH'S STANDARAD OPERATING PROCEDURES FOR

PROTECTING GOPHER TORTOISES

ALONG EXISTING RIGHTS-OF-WAY

January, 2007

Before any tortoise can be handled, moved, harassed, etc., Gulf South must first obtain a federal incidental take permit from the FWS and a state permit from the MDWFP.

This Standard Operating Procedure (SOP) is to be included into all future biological assessments submitted to the FWS during formal consultation per Section 7 the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). This SOP will be considered part of the "proposed action" for that particular project.

This SOP is intended to cover the majority of tortoise relocation issues. Additional information may need to be included on a project by project basis such as specific relocation site information, additional monitoring and reporting, etc.

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1.0 COLLECTION OF TORTOISES FROM PROJECT AREA

a) Gopher tortoises will only be captured and relocated during the active season (April 1 to October 1).

b) All burrow excavation efforts will be directly supervised by a biologist with experience excavating gopher tortoise burrows. All active burrows will be fitted with wire have-a-hart traps. All traps should be clearly marked "Do not disturb". Traps will be sufficiently shaded to prevent overheating of a trapped tortoise and will be checked twice daily, once in late morning and once in late afternoon. Hatchling and subadult burrows will be hand excavated, using shovels. Backhoes may be used to excavate adult burrows if have-a-hart traps fail to trap tortoises.

c) Before beginning hand or backhoe excavation, a flexible tube, with length graduations marked, will be inserted into the burrow to ensure that the burrow path is

not lost and to indicate the distance to the end of the burrow or to the tortoise/commensal. Throughout the excavation process, the burrow will be frequently inspected to ensure that the tortoise/commensal has not moved to a position where it might be injured by the backhoe or shovel. The last one - two feet of the burrow will be excavated by hand using shovels and small hand spades. Following removal of the tortoise/commensal, all excavated burrows will be refilled.

d) Captured gopher tortoises will be photographed (dorsal, ventral, and anterior views for tortoises), measured, weighed, sexed (if possible), aged (if possible), and marked using a standard marginal scute numbering scheme.

e) All relocated gopher tortoises will be examined for visual signs of upper respiratory tract disease (URTD). A blood sample will be collected for each tortoise and sent to the University of Florida for an ELISA test for URTD antibodies. Because of the specialized expertise needed for this sampling effort, field personnel should have experience extracting blood for URTD analysis according to the protocol established by the Gopher Tortoise Council. Immediately following data/blood sample collection, each tortoise will be given an opportunity to drink water.

2.0 RELOCATION AND MONITORING OF TORTOISES FROM PROJECT ROW

a. If available, release burrows will be inspected with a remote video system to ensure that they are unoccupied. In areas with limited numbers of existing unoccupied burrows, starter burrows will be dug for release of displaced tortoises. Starter burrows will be dug at a 20-30 degree angle with shovels/post hole diggers/power augers to the greatest distance possible (minimum 3-4 feet). Starter burrows should have a size and shape similar to the burrow being replaced.

b. All colonies will remain intact and starter burrows for each colony will be located within 600 feet of each other. Starter burrows and tortoises will be temporary penned using silt screen fencing material for seven days. Individual pens will be a minimum of 40 feet in diameter and round in construction to eliminate corners in which tortoises will tend to dig.

c. To minimize the risk of disease transmission, all material used during the displacement of gopher tortoises from the construction corridor (e.g., traps, shovels, backhoe buckets, remote video cameras, etc.) will be disinfected with a dilute chlorine solution after each use. Tortoises will be handled with disposable latex gloves.

3.0 CONSTRUCTION PERSONNEL EDUCATION

Before any construction activities, Gulf South will require all construction personnel to attend an educational presentation, conducted by trained personnel, to acquaint them with gopher tortoise ecology, their protected status, and Gulf South's conservation /mitigation efforts. Such a presentation will include:

a) An overview of the terms and conditions of the FWS's biological opinion and penalties for noncompliance.

b) Legal penalties for killing, injuring, harassing, or otherwise disturbing a gopher tortoise or its burrow.

c) Procedures for coordinating with and contacting the Project biologist.

4.0 MONITORING OF CONSTRUCTION ACTIVITIES

a) Any new burrows found within the construction corridor or spoil piles will be inspected for occupancy using a remote video system. Occupied burrows will be trapped or excavated and the tortoises/commensals handled, data collected and released into designated unoccupied/starter burrow following preconstruction procedures. Unoccupied burrows will be collapsed.

b) Except in emergencies, only gopher tortoise Project biologists and specifically trained environmental inspectors will be allowed to handle tortoises. Tortoise biologists and inspectors will have access to radios or cellular phones while in the field.

c) If a gopher tortoise is encountered by construction personnel within the construction corridor, all activities that might harm these species will cease and a Project biologist or environmental inspector will be summoned. The USFWS will be contacted to determine where the tortoise should be released.

d) If a gopher tortoise is found dead during construction activities, the Project biologist will be notified, who will then report the incident to the USFWS.

5.0 COORDINATION AND REPORTING

a) The development of a tortoise relocation plan (i.e. tortoise relocation and monitoring) and any significant changes to the proposed Project will be coordinated with the FWS. FWS personnel will be invited to visit the construction site and accompany Project biologist during all phases of the gopher tortoise conservation effort.

b) Following the relocation of tortoises, a report documenting the capture and displacement of gopher tortoises will include the following information: (1) names and qualifications of the investigators; (2) survey dates; (3) area surveyed, including mileposts; (4) specific burrow locations, including the milepost, distance from roadway centerline, and direction; (5) survey methods; (6) burrow size, condition, and activity level; (7) the individual marking used to identify each relocated tortoise or snake and their associated original and relocated burrow sites; (8) date of relocation; and (9) conclusions. The survey report will be sent to the FWS.

6.0 POST-CONSTRUCTION ROW MAINTENANCE AND OPERATIONS

a. Maintenance personnel will be trained in tortoise awareness. Maintenance personnel will use power equipment to mow vegetation surrounding the burrows, but will reduce their speed within 50 feet of burrows. Maintenance personnel will avoid mowing across the burrow apron, burrow entrance and the area immediately behind the entrance.

b. In case of an emergency (e.g., chemical or fuel leaks and/or spills), a gopher tortoise biologist will be called to the site as soon as possible to assess the potential impacts of the emergency and repair work on nearby tortoises, and to prevent further impacts during ongoing repair work. The FWS will be immediately contacted concerning any adverse effects on a gopher tortoise.

c. All tortoises or burrows found along existing roads will be reported to the Project biologist.

d. When a tortoise is found alive in the road and in danger of being hit by vehicular traffic, the tortoise should be moved to one side of the road. If the tortoise appears to be heading in one direction, move the tortoise to that side of the road. If unsure, then relocate tortoise to closest side.

e. If a tortoise is found in the road that has been hit by a vehicle, and is still alive, contact the Project biologist (Gulf South) or Tom Mann (MMNS), for coordination on where injured tortoises can be taken.

f. Dead tortoises found in Gulf South's right-of-way should be photographed if possible, location recorded (mile marker, north or south bound lane, etc), and reported to the Project biologist.

g. A database will be developed that catalogs the occurrence of tortoises/burrows found on Gulf South right-of-way, number of tortoises impacted by vehicles, location, etc.

APPENDIX C

UNANTICIPATED DISCOVERIES/ENCOUNTERS WITH EASTERN INDIGO SNAKE

EASTERN INDIGO SNAKE UNANTICIPATED DISCOVERIES/ENCOUNTERS

The Eastern indigo snake is a threatened species that occurs throughout peninsular Florida. This species is actually characteristic of moist habitats, but inhabits sandy xeric habitats in conjunction with gopher tortoises. In the drier habitats, the Eastern indigo snake will occupy gopher tortoise burrows. The preferred habitats include pine flatwoods, xeric oak stands, palmetto scrub, and tropical hammocks. No Eastern indigo snakes were observed within the proposed Southeast Expansion Project study area during any of the field surveys. The prevalence of potential habitat within the corridor could potentially involve the Eastern indigo snake. However, to minimize any impacts to any individual Eastern indigo snakes during construction, the following special provision will be included in the construction contract to advise the contractor of the potential presence of this species and its protected status:

- If an Eastern indigo snake is sighted during construction, the contractor will be required to cease all operation(s) which might cause harm to the snake.

- If the snake does not move away from the construction area, a state or federal biologist will be contacted to capture and relocate the snake to suitable habitat either adjacent to the proposed Project area or off-site to an acceptable donor site.

- If an Eastern indigo snake is killed or found dead within the construction area, the snake should be frozen and the FWS Jackson Field Office [(601) 965-5392] will be notified immediately.

- Due to the condition of the surrounding area, the abundance of habitat in the Project area, and the special provisions to protect transient individuals encountered during construction, the proposed Project is not anticipated to affect the Eastern indigo snake.