Available Options to Address the Presence of Gopher Tortoises on Lands Slated for Development

15 August 2006

Florida Fish and Wildlife Conservation Commission
Species Conservation Planning Section
620 South Meridian Street, Mail Station 2A
Tallahassee, Florida 32399-1600
(850) 921-5990, ext. 17310
FAX: (850) 921-1847

AVAILABLE OPTIONS TO ADDRESS THE PRESENCE OF GOPHER TORTOISES ON LANDS SLATED FOR DEVELOPMENT

Gopher tortoises are listed by the State of Florida as a Species of Special Concern. Without proper management, this tortoise is likely to become a threatened or endangered species in the future. The primary reason for the decline of this species is habitat destruction. The tortoise burrow itself serves as important habitat for a variety of other wildlife species. Many of these animals are also listed as threatened or species of special concern.

Gopher tortoise burrows may be recognized by a 3 to 6 foot wide mound of bare, excavated sand placed outside the entrance. The burrow entrance is shaped in the form of a "half-moon" and the burrow width is generally correlated with the size of the occupant.

Due to its protected status, it is illegal to take, harm, or harass this species under rule 68A-27.005 of the Florida Administrative Code. Additionally, the destruction of gopher tortoise burrows constitutes taking under the law except as authorized by specific permit.

You should be fully aware of your responsibilities if you are currently developing or plan to develop in gopher tortoise habitat. You may wish to solicit the services of an environmental consultant to determine whether gopher tortoises inhabit your property. The Florida Fish and Wildlife Conservation Commission have provided a variety of mechanisms by which you can assist in the conservation of this dwindling species. The following options are available to individuals planning to develop gopher tortoise habitat:

1. Avoid developing in the area occupied by tortoises.

2. Develop so as to avoid gopher tortoise burrows by avoiding concentrations of burrows altogether and/or staying at least 25 feet from entrances of individual burrows.

3. Mitigate for activities that will probably entomb or kill tortoises by providing a degree of habitat protection similar to that provided by DRI developers (see Appendix I). A permit is required (see Appendix II for the appropriate office and contact person).

4. Relocate those tortoises that would otherwise be "taken." Biologically, relocation is the least effective alternative. A permit is also required (see Appendix III for the appropriate Division of Habitat and Species Conservation contact person).

5. In cases where five or fewer tortoises are affected and some habitat or open space will exist on the site following construction, tortoises may be captured by the landowner or his agents and released back onto the site in an area where they can move freely. A permit is required (see Appendix III for the appropriate Regional Division of Habitat and Species Conservation contact person). You may apply for this permit online at (application and permit is available online at http://myfwc.com/permits/Tortoise/default.asp).

Options 1 and 2 have no permitted or reporting requirements. You may wish to contact an environmental consultant to further explore options 3 - 5.

Guidelines for Gopher Tortoise Relocations
15 August 2006
State of Florida Fish and Wildlife Conservation Commission

The Florida Fish and Wildlife Conservation Commission (Commission) does not generally sanction or condone, and typically discourages, relocation of wildlife, especially as a perceived solution to land development/wildlife conflicts. Relocation normally has negative impacts on both relocated and resident populations of wildlife in the form of stress, disease and/or parasite transmission; overpopulation leading to increased competition for food, cover and other resources; or other consequences. Also, unoccupied areas which superficially may appear suitable as relocation sites are in fact likely not. Otherwise, except under unusual circumstances, the species in question would already occur there.

However, in instances where development of a site is imminent and all reasonable alternatives have been exhausted to accommodate the welfare of a particular species on-site, or where conservation measures have been agreed upon to preserve a species on portions of a site, but not throughout, or other offsetting measures have been agreed upon, the Commission will issue permits to authorize relocation of those individuals jeopardized by the impending development, provided that certain efforts are made to maximize the success potential of such relocations. Because in recent years the gopher tortoise (*Gopherus polyphemus*) has by far been the preeminent species conflicting with development plans, these guidelines have been developed specifically to constitute what is acceptable to the Commission as measures which would effect such maximization of success potential when, as a last resort, gopher tortoises are deemed in need of relocation. Such permitting authority/responsibility is embodied in Rules 68A-25.002 and 68A-27.005 of the Florida Administrative Code (F.A.C.).

DOCUMENTATION

1) Pursuant to the requirements of Rules 68A-25.002 and 68A-27.005 (F.A.C.), a permit for a gopher tortoise capture/relocation/release activity must be secured from the Commission prior to initiating any relocation work. Such permits will be issued pursuant to any and all applications which sufficiently accommodate these guidelines. Application forms to be used are available from the Permit Coordinator, Florida Fish and Wildlife Conservation Commission, 620 S. Meridian St., Mail Station 2A, Tallahassee, FL 32399-1600, (850) 921-5990, ext. 17310/ (850) 921-1847 fax or from the Commission's web site at http://myfwc.com/permits/Protected-Wildlife/. Complete applications should be submitted to the Permit Coordinator at the above address at least 45 days prior to the time needed.

2) Because relocation is normally a last-resort accommodation of the welfare of any species, applicants should secure all local, state and federal approvals for the proposed land use involved. Copies of all such approvals must be secured before a Commission permit may be executed.

   A recipient area is an area that will be or has been used for the placement of gopher tortoises relocated from a development area. Recipient areas may be on-site or off-site.
   i. An on-site or adjacent recipient area is defined as an area that is contiguous to, abuts or is located within a 2-mile radius of the development area from which tortoises are to be

removed. This includes sites under the same ownership and sites under different ownership, with approval of FWC and the owner.

ii. An off-site recipient area is one which does not meet the definition of an on-site recipient area.

Exceptions will be considered on a case-by-case basis. A permanent, management commitment for the long-term benefit of gopher tortoises should be ensured by either (a) filing conservation easements for sites pursuant to 704.06 F.S., or (b) transmittal of confirmation letters or other formal commitments by the entities owning or otherwise controlling the recipient areas. Documented evidence of either course must be stated on the application form. Said documentation must be included with applications. The Commission's policy is to not issue relocation permits or incidental take permits for gopher tortoises on previously established recipient areas.

APPLICANT QUALIFICATIONS

Applicants should list credentials which demonstrate that they are suitably trained or experienced in relocation work on relocation applications.

UPPER RESPIRATORY TRACT DISEASE CONSIDERATIONS

Upper respiratory tract disease (URTD) has been detected in an increasing number of gopher tortoise populations in Florida in recent years. Although the population-level impacts of this disease remain unclear, after careful deliberation we have decided to suspend our testing policy. Hence, URTD test results are no longer required to relocate tortoises off-site. However, landowners (both donor and recipient site) have the option of requiring URTD testing prior to receiving relocated gopher tortoises. FWC recommends the following in cases where URTD testing is undertaken:

1. Gopher tortoises that test seronegative, suspect or seropositive and *are not* showing signs of disease (i.e. nasal or ocular discharge) may be released on-site, moved to a designated seropositive property off-site (only if seropositive) or moved to any off-site recipient site with the written approval of the landowner.

2. Gopher tortoises that test suspect or seropositive and that show signs of disease should not be relocated off-site. Tortoises presenting apparent clinical signs (nasal and ocular discharge, emaciation etc.) shall be treated in any of the following manners:
   a. Leave/relocate on-site;
   b. Quarantine at a FWC licensed wildlife rehabilitation center or licensed veterinary facility and observe for recovery and subsequent relocation along with others from the population;
   c. Place in a FWC permitted disease research program; or
   d. d. Humanely euthanized by a licensed veterinarian if disease is advanced and animal is suffering.

3. Gopher tortoise populations that meet the criteria of number 1 (e.g., do not show signs of disease) above may be relocated to:
   a. On-site recipient areas up to a final density of three tortoises or

b. Off-site recipient areas up to a final density of two tortoises per acre of suitable upland habitat.

5. Individuals wishing to be permitted to capture and handle gopher tortoises for the purposes of collecting blood for URTD tests shall review training materials available from the Commission and sign an affidavit provided by the Commission stating they have reviewed the training materials and will be responsible for the safe treatment of gopher tortoises they capture and handle for the purpose of collecting blood for URTD tests. Training materials and affidavits are available from the Permit Coordinator, Florida Fish and Wildlife Conservation Commission, 620 S. Meridian St., Mail Station 2A, Tallahassee, FL 32399-1600, (850) 921-5990, ext. 17310 or online at <http://myfwc.com/permits/Protected-Wildlife/apps/urtd_info.pdf>. A permit will be issued to qualified applicants (those submitting an appropriately signed affidavit) authorizing the following:
   a. Permittees will be granted blanket authorization to capture, hold and draw blood from gopher tortoises as needed for the purpose of compliance with these guidelines. Tortoises may be held up to 24 hours, unless otherwise stated in the issued permit.
   b. Prior to each instance where the authority conveyed by the blanket permit is exercised, the permittee shall notify the Commission's Protected Species Permit Coordinator in writing of the source location (i.e. address, Township, Range, Section, latitude and longitude), project name and estimated number of tortoises to be sampled. The permittee shall update this information in writing within 48 hours if circumstances change.
   c. Blood samples for testing (identified by the applicant's name, county and project name) shall be submitted by the applicant to Mycoplasma Testing Lab, University of Florida, Department of Pathobiology, 1600 SW Archer Road - BSB 350, Gainesville, FL 32610. The Lab may be contacted at (352) 392-4700, extension 3968. The applicant is responsible for all fees and costs associated with testing.
   d. Test results will be provided by the testing facility to the Commission and the applicant.

TEMPORAL CONSIDERATIONS

1. Tortoises shall not be captured/relocated on days for which the overnight low temperature for that day and the two consecutive days thereafter is forecasted by the U.S. National Weather Service to be below 50°F. This 3-day window of milder overnight temperatures is to allow the relocated tortoises to settle into the recipient site prior to weather change.

2. During summer months, releases should not be made during the hottest part of the day at sites where shade is limited.

DONOR AREA TREATMENT

1. No more than 90 days prior to relocation, all potential gopher tortoise habitat (see Attachment 1) on a given development area should be thoroughly and systematically surveyed using appropriate, biologically sound methodology. Permit applicants must perform a survey to describe the estimated total number of tortoises on a subject area, size of that portion of the site which is potential tortoise habitat and a general characterization of the habitat in the application.

2. All burrows found to be "active" or "inactive" per the criteria of Auffenberg and Franz (1982) (see

Attachment 2) should be plotted on maps to facilitate efficient future relocation and included with the application.

RECIPIENT AREA SELECTION AND TREATMENT

1. Areas selected to receive relocatees should be either of similar habitat character and quality as corresponding donor areas or demonstrated to be otherwise suitable for gopher tortoise occupancy.

2. Areas already occupied by tortoises at or near carrying capacity (see Attachment 3) should not be selected as recipient sites. However, in some instances, especially at sites of marginal habitat quality, certain habitat manipulation measures (such as burning) could be employed to improve habitat quality and thereby increase carrying capacity, rendering the area acceptable as a recipient area. In those cases, however, continuous, periodic management treatments would normally be necessary to maintain carrying capacity at the elevated levels. Permit applicants opting for this course should list proposed measures for long-term management of recipient areas. The applicant shall include a long-term management plan with the application.

3. Relocation of 20 or fewer tortoises should be to recipient areas already occupied by tortoises or which abut areas already occupied. Relocation of more than 20 tortoises should be to recipient areas either vacant or occupied at population levels substantially below carrying capacity (see Attachment 3).

4. Recipient areas may be situated any distance east or west of donor areas, but no more than 100 miles north or south of donor areas unless appropriately justified.

5. Recipient areas already occupied by tortoises should not overlap or abut areas supporting genetically unique or discrete tortoise populations or areas supporting populations which otherwise merit protection from genetic swamping. In instances where such a potential exists, the Commission should be consulted for a determination as to the area's acceptability.

6. Recipient areas already occupied by tortoises should be thoroughly surveyed prior to relocation and all encountered burrows plotted on maps and categorized as "active," "inactive" or "old" per the criteria of Auffenberg and Franz (1982) (see Attachment 2) and included with the application.

CAPTURE METHODOLOGY*

Tortoises can be excavated from burrows (e.g., with backhoe), trapped or otherwise captured by nonharmful means. If trapped, five-gallon pitfall bucket traps should be buried at burrow entrances, shaded and covered with paper or cheesecloth overlain with a thin layer of soil. A hole at least one inch in diameter should be drilled into the bottom of each bucket for drainage. Each bucket should be checked at least once per day for at least 28 consecutive days.

*Capture methodology could be modified on persistently wet sites or during periods of heavy rainfall.

TRANSPORT AND RELEASE METHODOLOGY

1. Captured tortoises must be transported directly from the donor area under shaded and sanitary conditions and released at the recipient area within 24 hours, unless otherwise stated in the issued permit. Care should be taken to avoid any physical damage (e.g., abrasions) to in-transit tortoises.

2. Prior to release, each relocated tortoise should be sexed (adults only), measured and permanently and uniquely marked by scute-notching (see Attachment 4).

3. Tortoises being relocated to unoccupied recipient areas should be released within 24 hours and in groups of no more than 20 in the same general vicinities with access to shade nearby. Relocated tortoises should be distributed throughout occupied recipient areas and, when possible, individuals should be released at "old" or "inactive" burrows (per the criteria of Auffenberg and Franz [1982]).

REPORTING

1. Any tortoise mortality or debilitating injury occurring during the capture, relocation and release phases of a relocation effort is to be reported to the Commission within five days of the incident.

2. An after action report form for gopher tortoise relocations shall be submitted to the Commission within 30 days of permit execution.

We are continuing our efforts to create a long-term conservation plan for the gopher tortoise that will consider the role of relocation and other factors in meeting statewide conservation goals that will be formulated for the species. FWC has assembled an external Tortoise Stakeholder Advisory Council to ensure that external input is provided during this process. In the interim, it is our hope that these additional guidelines will help maximize the number of tortoises being relocated from development sites in Florida.

Approved and issued by Ken D. Haddad, Executive Director, Florida Fish and Wildlife Conservation Commission, August 15, 2006.

Attachment 1

Equivalent Classification Systems for Gopher Tortoise Habitat Types

U.S. Soil Conservation Service	Florida Land-Use and Cover Equivalence(s)	Florida Natural Areas Inventory Equivalence(s)
North Florida Coastal Strand	310 Grassland 720 Sand other than beaches	Coastal Strand Overwash Plain
South Florida Coastal Strand	310 Grassland 720 Sand other than beaches	Coastal Strand Overwash Plain
North Florida Flatwoods	321 Palmetto prairies 411 Pine flatwoods 441 Coniferous planted forests	Mesic Flatwoods Scrubby Flatwoods Dry Prairie
South Florida Flatwoods	321 Palmetto prairies 411 Pine flatwoods 441 Coniferous planted forests	Mesic Flatwoods Scrubby Flatwoods Dry Prairie
Sand Pine Scrub	311 Coastal scrub 323 other scrub and brush 413 Sand pine scrub 441 Coniferous planted forests	Scrub
Longleaf Pine-Turkey Oak Hills	412 Longleaf pine-xeric oak 441 Coniferous planted forests	Sandhill
Mixed Hardwoods and Pine	431 Mixed forest 441 Coniferous planted forest 442 Hardwood planted forest	Upland Pine Forest Upland Mixed Forest
Upland Hardwood Hammocks	422 Other hardwood 442 Hardwood planted forest	Upland Hardwood Forest
Oak Hammocks (Ruderal)	421 Xeric oak forest 170 Recreational 180 Mixed 190 Open land and other 210 Cropland and pastureland 220 Orchards, groves (except citrus), etc. 230 Citrus groves 260 Grassland 450 Clear-cut areas 740 Altered Lands 760 Other barren land	Xeric Hammocks

ATTACHMENT 2

Criteria for Determining the Status of Gopher Tortoise Burrows*

Burrows are to be judged active if the soil at the mouth has recently been disturbed by a tortoise, inactive if the soil is undisturbed but the burrow appears to be maintained and old[1] if the mouth has been washed in or covered with debris.

* *Paraphrased from* Auffenberg, W. & R. Franz. 1982. The status and distribution of the gopher tortoise (*Gopherus polyphemus*). Pp. 95-126 *in* North American Tortoises: Conservation and Ecology, U.S. Fish & Wildl. Serv. Wildl. Res. Rept. 12 (R. Bury, Ed.).

[1] Cox, J.D. Inkley, and R. Kautz. 1987. Ecology and habitat protection needs of gopher tortoises (*Gopherus polyphemus*) populations found on lands slated for large-scale development in Florida. Florida Game and Fresh Water Fish Commission Nongame Wildlife Program Technical Report No. 4. Tallahassee, FL., page 41.
You may download an electronic copy of Technical Report 4 and other FWC publications online at http://research.myfwc.com/publications/search.asp

ATTACHMENT 3

Gopher Tortoise Habitat Carrying Capacity

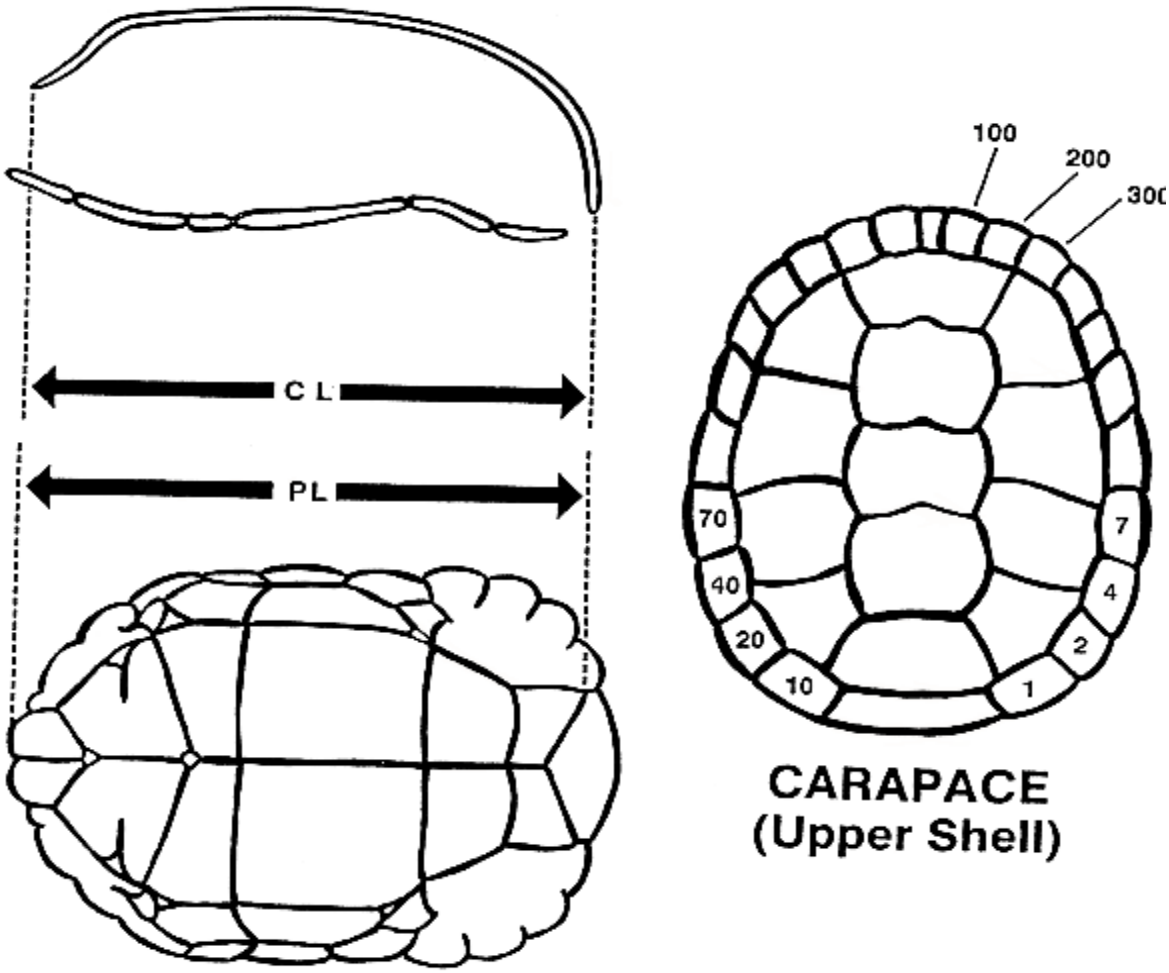
Gopher tortoise habitat carrying capacity varies with habitat types (see Attachment 1) and habitat quality within those types. There are as yet no quantitative parameters for formulae one can reference to determine with precision what the carrying capacity of a given site is. However, one way to demonstrate conclusively that a site is at some, although quantitatively indeterminate, level below carrying capacity is to demonstrate that a sustained tortoise harvest has occurred on the given site over recent years. Considering the low reproductive potential of the gopher tortoise, any substantial sustained harvest on a site will result in suppressed tortoise numbers for a considerable amount of time. Demonstration of such could be achieved by one or more, in combination, of three methods: (1) consulting local persons having knowledge of the history of the site; (2) analyzing the ratio of "old" (see Attachment 2) burrows to active ones (an inordinately high proportion of old burrows would indicate a previously more numerous population); and (3) analyzing the tortoise population structure on the sites (a "bottom heavy" population, or one with disproportionately high numbers of small or young individuals, could indicate past exploitation of that population).

ATTACHMENT 4

Marking and Measuring Gopher Tortoises

Marking: Tortoises may be marked by notching of drilling holes in one or a combination of the eight rearmost scutes - the four right ones and the four left ones - and the three right-front ones. Each scute is assigned a numerical value per the scheme devised by Cagle (1939), as illustrated below. The scheme is additive; e.g., tortoise #5 would require the drilling or notching of the first and third scutes right of the rear marginal, tortoise #14 would require the drilling or notching of the first scute left of the rear marginal and the third scute right of the rear marginal, etc.

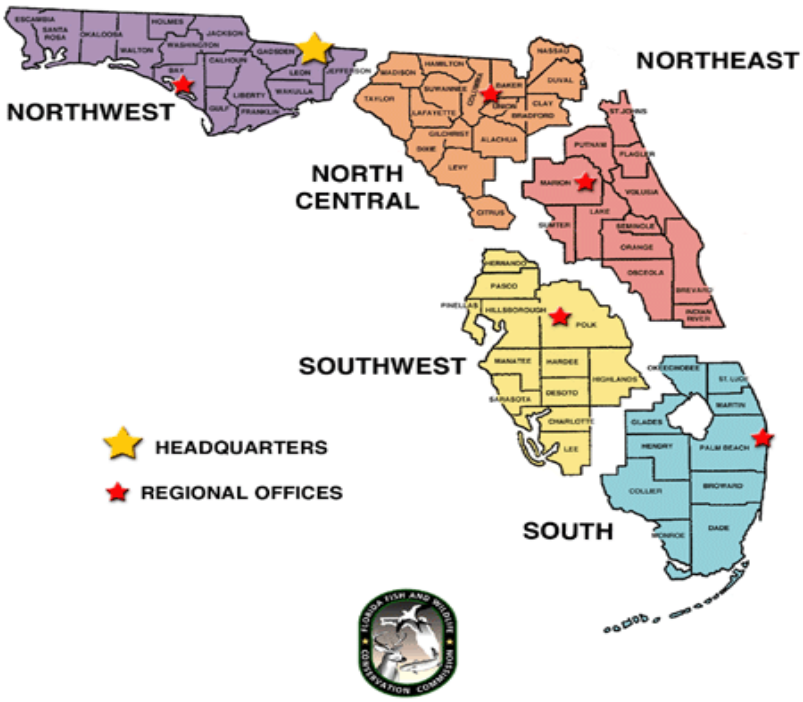
Measuring: Straight-line carapace length (CL) and plastron length (PL) should be recorded in millimeters (see below). Forestry tree calipers are useful for making those measurements.



APPENDIX I - Tortoise Habitat Protection Option and **APPENDIX II** - FWC Contacts for Gopher Tortoise Mitigation have been removed from this document. Please visit the following website at http://myfwc.com/permits/Tortoise/pdf/GopherTortoiseIncidentalTakePermitsText.pdf for updated information on tortoise incidental take applications or contact the office by phone at (850) 488-6661.

APPENDIX III.

Florida Fish and Wildlife Conservation Commission
DIVISION OF HABITAT AND SPECIES CONSERVATION
TORTOISE RELOCATION CONTACTS



STANDARD TORTOISE RELOCATION
(More than five on-site or any number off-site)

You may mail applications and direct calls relating to applications or guidelines to:
Permit Coordinator
FL Fish and Wildlife Conservation Commission
620 South Meridian Street, Mail Station 2A
Tallahassee, FL 32399-1600
(850) 921-5990, ext. 17310 /Fax (850) 921-1847
Direct all other tortoise related calls to your Regional contact person listed below:

SPECIAL TORTOISE RELOCATION
(Five or fewer for on-site relocation)
http://myfwc.com/permits/Tortoise/default.asp (online)
Or Mail/ fax application to:

Northwest Region
Species Conservation Planning Section
FL Fish and Wildlife Conservation Commission
3911 Highway 2321
Panama City, FL 32409-1658
(850) 265-3677/Fax (850) 747-5690

North Central Region
Species Conservation Planning Section
FL Fish and Wildlife Conservation Commission
P.O. Box 177
Olustee, FL 32072
(904) 758-0525/Fax (904) 758-0533

Northeast Region
Species Conservation Planning Section
FL Fish and Wildlife Conservation Commission
1239 S.W. 10th Street
Ocala, FL 34474-2797
(352) 732-1225/Fax (352) 369-2455

Southwest Region
Species Conservation Planning Section
FL Fish and Wildlife Conservation Commission
3900 Drane Field Road
Lakeland, FL 33811-1299
(863) 648-3203/Fax (863) 701-1248

South Region
Species Conservation Planning Section
FL Fish and Wildlife Conservation Commission
8535 Northlake Boulevard
West Palm Beach, FL 33412
(561) 625-5122/Fax (561) 625-5129

Please visit the aforementioned website for additional information regarding, tortoise biology, capture and relocation methods and other tortoises references.

tortoise contacts.doc revised 23 May 2006