

## PROCEDURAL RECOMMENDATIONS FOR LAND MANAGERS WHO ARE CONSIDERING A TORTOISE RELOCATION ON TO THEIR PROPERTY

- LARGE LANDOWNERS, AGENCIES, AND CONSERVATION LANDS PROGRAMS
- ON SITE AND SINGLE RELOCATION SITES OF 25 – 50 ACRES
- SMALL LANDOWNERS WITH 5-10 ACRES

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### INTRODUCTION

This document has been prepared to encourage landowners in the state of Florida to participate in Gopher Tortoise relocation. Since the URTD testing rule was eliminated in August of 2006, the number of landowners considering relocation of tortoises off their property has exploded. The Florida Fish and Wildlife Conservation Commission (FWC) has done little to encourage relocation on properties but is working in that direction. This informational piece is just one of many that we have prepared to inform the various stakeholders on proper methods for protecting gopher tortoises. We encourage you to contact us for any additional information and to join the Gopher Tortoise Reserve Program which is designed to help landowners manage tortoises on their property.

### INFORMED DECISION MAKING

Eventually FWC will change their rules and methods on how relocation will be done and they will modify the permitting process for relocation sites so that it will be about the proper management of the tortoises in lieu of filling out applications properly. GTCI can provide you with detailed instructions on each how each step of the process should be developed. These instructions have been developed through the results of many years of research on the management of gopher tortoises.

## LARGE LANDOWNERS, AGENCIES, AND CONSERVATION LANDS PROGRAMS AND/OR ON SITE RELOCATION SITES OF 25-50 ACRES

### SHOW ME THE MONEY

Land managers/Landowners can charge fees for relocation. The fees are based on what the market will bare and should be carefully set TO DEMONSTRATE REAL SHORT AND LONG TERM COSTS. There are three ways that the land owner of sites to which tortoises will be relocated can receive funds – 1) set-up fees 2) conservation easement fees and 3) relocation fees

1) SET UP FEES – Paid by the Donor Site Landowners to the Relocation Site Landowners. These are fees that the Donor Site landowners (the land from which the tortoises are coming) will pay. They include:

1. If the landowner of the possible relocation (recipient) site has been contacted to identify specific site or sites on their land to which the donor site tortoises will be relocated then that landowner may include the cost of locating the specific relocation sites on their property in the fees charged to the donor site landowner. Such costs may include the baseline and initial burrow surveys for the recipient site since these are necessary activities for locating suitable recipient sites, as well as the costs of land boundary surveys of the specific site.
2. The relocation site land owner may include the costs of the site preparation needed on the specific relocation site in the fees charged to the donor site landowner. These fees may include the costs of land management activities like some clearing of trees and shrubs and burning or mowing.
3. The cost of enclosing the site with temporary or permanent fencing can also be passed on by inclusion in the fees required from the donor site land owner.
4. The cost of acquisition or preparation of any additional information or data required for the permit application can also be included in fees to the donor site landowner.

2) LAND CONSERVATION FEES – Paid by the Donor Site Landowners to the Relocation Site Landowners for the holding of the conservation easement (an agreement not to allow future development and to manage the habitat) by the FWC or by another agency or conservation organization.

The FWC will require some form of permanent to long term conservation easement or some other legally binding means to protect the habitat and tortoises. Because the Donor Site is destroying habitat, the donor site landowner should pay for the habitat loss of all species and will likely be required to pay mitigation costs for this loss. At this point, there are no clear guidelines for how much this could amount to or how such costs will be calculated. GTCI is recommending that the landowner be responsible for the acreage of tortoise habitat loss and responsible for replacing one acre for each acre lost. The cost per acre is based on the fair market value at the time the tortoises are being moved.

This fee can either pay for land to swap for the tortoise habitat, pay for a permanent conservation easement, or a wide variety of other methods that work to permanently protect the relocation site and the tortoises. It may also pay for some economic losses

such as reducing tree canopy cover to 40% on silviculture sites, or dropping the number of grazing cattle within the site to a lower number.

The recipient (relocation) site landowner can include in their fees or as a separate agreement costs related to creating conservation protections such as conservation easements.

NOTE that we recommend that the Recipient Site Landowner work directly with the Donor Site representatives as you would with any other land buying or selling transaction. Relocations are commonly done by Environmental Consultants (ECs). Some are great and have the appropriately trained staff to handle this new world of relocation while others should not be in the business. Demand good references and proof of specific capabilities in gopher tortoise relocation and habitat management from anyone you hire or work with to accomplish tasks related to relocations. Relocation work is specialized - a biologist or someone who has taken environmental science may or may not have ever worked with or been properly trained in relocation techniques. Be sure the trained individual that you hire is actually the person working on your site and not an inexperienced technician (which is often the case).

Recipient site should be under a conservation easement or appropriate MOU that requires long term conservation, monitoring and management. At some point if there is a permanent or short term Conservation Easement, either FWC will need to hold it or some conservation Non-Profit Organization will. Our Institute is considering such a service and may do so in the future.

3) RELOCATION COSTS-These costs usually as separate fees that are paid to and through the EC. These should cover all costs related to evaluation of the site, data collection for the permit, setting up permanent monitoring stations, conducting site prep such as thinning, burning, and fencing. A reactive Habitat Management Plan and Monitoring Program should be established and approved by the land owner and FWC. There are real costs for this and we recommend that if the EC is going to do it that you require a performance bond and the prorated costs to be put into an escrow account. Otherwise, as the landowner you collect the monitoring and management funds and you put it into an escrow account. It may be that on large relocation facilities FWC will require a performance bond. **NOTE, BE SURE THAT THE EC HAS THE PROPER CREDENTIALS TO CARRY OUT THE RECIPIENT SITE WORK.** We highly recommend to large landowners and agencies that all the work on the recipient sites is done by a selected team of tortoise biologists and botanists that have relocation experience and work with tortoises. Similarly the actual collection and relocation of the tortoises to your relocation site is usually done by a consultant this includes:

- 1- The original survey of the tortoises on the donor property so you will know exactly how many you will be receiving.

- 2- The excavation of all the burrows and the collection of the tortoises on the donor site. This includes collection of some of the commensal animals living in the burrows.

3- The health evaluation of the tortoises, weights, size, and other data you will need to carry out proper monitoring of the tortoises in the future. This includes permanent marking of the tortoises so they can be identified.

4- The transportation and release of the tortoises in to the recipient site.

5- Currently the EC usually does daily checks on the recipient site to insure that the tortoises are acclimating and the fences are in good shape.

6- On going monitoring of the site may be an option pending the situation.

How much does this cost? Figure the average rate charged is for two people with an overall cost of \$120/ hr. Excavation includes a backhoe with the highest rate being \$900/day for the top expert. Surveys should be 100% on the recipient site and take three people (\$160/hr). All surveys should include GPS locations and flagging of each burrow. These fees are paid for by the Donor Site landowner.

Currently there is a PER TORTOISE fee. This ranges from \$300/tortoise to over \$600/ tortoise in some counties in South Florida. This fee has been charged and supposedly paid to the recipient site owner to cover the costs of donating the land and to cover costs for setting up (before fencing) and future management. Whether or not these fees should be collected depends on the money coming to the Recipient Site based on land loss and if there is simply a negotiated fee to cover all the monitoring and management of the recipient site for the foreseeable future.

#### SUMMARY OF FEES

1. FEES TO MITIGATE FOR THE LOSS OF HABITAT- FEE TO THE RECIPIENT SITE OWNER TO COVER CONSERVATION EASEMENT AND POSSIBLE CHANGE IN LAND USE TO PROVIDE HABITAT.
2. FEES TO FIND, PREPARE SITE AND PREPARE PERMITS
3. FEES FOR ACTUAL RELOCATION OF TORTOISES AND COMMENSALS TO RECIPIENT SITE.
4. FEES FOR LONG TERM MONITORING AND MANAGEMENT OF THE TORTOISE RELOCATOIN SITE SHOULD BE OBTAINED AND A SYSTEM TO INSURE THEIR AVAILABLITY AS NEEDED IN THE FUTURE SHOULD BE IN PLACE

#### WHAT IS A SITE?

SIZE: Most efficient 25 acres, figure 2 tortoises per acre. On large lands consider multiple sites of 25-50 acres if you have the habitat.

Farm land Sites: The best habitat for tortoises on this type of land would be 25-50 acres of bahia pasture which still has some areas of blackberry (*Rubus*), greenbriar (*Smilax*) and/or wild grape (*Vitis*) “thickets” for hatchling and juvenile tortoises.

Tree Farms: Tortoise Preserves can be established in open areas and where pines have been thinned to no more than 60% canopy cover and where saw timber is being sustained. Open weedy, grassy edges around tree farms if wide enough and if they have ample burrowing sites could be suitable preserves.

Natural Areas: Any type of natural habitat in Florida (tortoises are not just in sandhill habitats). It must have no more than 60% canopy, shrub, and wiregrass cover. Or, that this cover can be reduced in the recipient site.

Areas where there are less than 2 tortoises per acre unless there is a plan to augment the population after the site has been approved.

Areas adjacent to highways, communities or other development should plan to have a permanent fence that will keep tortoises in and humans, dogs, cats, etc out. Other access and use may be planned like passive parks but eliminating ATV use.

Community green spaces that are at least 10 acres if there are less than 15 tortoises. The shape should be circular and provide some bahia forage.

#### WHAT IS THE MANAGEMENT GOAL OF THE SITE?

Are the economic and conservation goals compatible with tortoise relocation? Is there a compromise based on the new income flow?

If the goal is Agriculture: We have found that bahia pasture that is not sprayed or managed for a secondary crop of sod can be one of the best sites for tortoises. However the ground water table should be at least 18 inches below the surface. Even then soil pile or perms should be put into place for burrows. We have found that the average of 1.1 cow/calf units per acre work well for both tortoises and burrowing owls. If this matches the goals economic goal along with the additional potential income per acre for tortoises, then one should consider this.

If the goal is Silviculture: We have found that dense tree stands, short cycle forestry, and sand pines, are not good places for tortoise relocation. Sites with long cycles, saw timber, areas set aside for wildlife and natural habitat, Red-cockaded woodpecker sites, and expansive open areas are potential sites. Yes, tortoises can live through site preparation and do well in sites after prep until the canopy cover gets to more than 60%.

If the goal is Power line/ pipeline and/or other types of “rights of way”: These can be excellent areas as long as the land use on either side is compatible or is fenced (possibly funded by relocation). Herbicide use should be compatible and safe. Mowing and clearing in the power line right of way can benefit the growth of forage species of tortoises.

If the goal is Protected Lands Programs: State or County lands are frequently excellent sites as long as they do not have their own resident populations. Major issues to address before making such lands into a preserve include whether they have compatible management goals. If the site is scrub and has scrub jays, then remember that the natural density of tortoises is 0.8 tortoises/acre in scrub unless bahia or centipede grass in patches are present. Encouraging growth of high level non-native forage plants may be in opposition to a policy of “no exotics” on conservation lands. Federal and State Forestry lands, Water Management District and other public lands will need evaluate their properties and provide relocation sites or protection and conservation of tortoises from development will be extremely difficult.

If the goal is Hunting: Deer, turkey and quail habitats are excellent habitats for tortoises as well. Relocating tortoises can in fact increase overall income that may help provide funds for developing infrastructure and carrying out overall management of the lands.

If these are Smaller Private Lands: Although there is a plan for people to have tortoises in their backyards as part of humanitarian relocations, the in between areas of less than 25 acres to about 10 acres are also possible sites. There are many highly dedicated people who wish to establish sites for tortoises and enhance those natural habitats. These areas will need careful planning and approval. The two major issues are fencing and what will happen to the site after the current landowners are gone.

## SOME SUGGESTIONS FOR GETTING STARTED

### 1. Identify Potential Areas or Sites

A. Large landowners or managers may wish to identify one or more potential areas for relocation sites and then have experts identify specific sites. Or, have experts identify a number of specific sites and possibly establish boundaries, carrying capacity and baseline data and monitoring programs for both vegetation and any existing tortoises. The cost of this effort should be prorated over the relocations that would be placed on the sites. This eliminates a number of issues with EC staff doing the work that may not be qualified or have vested interest in helping their client.

B. Small landowners may wish to produce a Habitat management Plan (HMP) which includes the pre-relocation management to get the site permitted. This would avoid spending money that you may not be able to recover if a permit is not given.

2. Establish costs for the site prep including temporary fencing.

3. Establish a clear agreement or contract to use with the donor site and their EC

4. Establish the methods to manage the income from the relocation to insure that required

5. Monitoring and management and conservation easements are in place. Much of the funding should be paid up front, especially the mitigation for habitat loss.

Habitat management may need to take place two or three months before relocation occurs. It is assumed that relocation permits will be let in a much more efficient system while relocation sites may have more scrutiny. After sites are identified, then recommended management should be undertaken. Long range planning may get the relocation site back into a schedule that was already set for that area of your land.

#### CHECK LIST TO GIVE CONSULTANTS OR POTENTIAL DONOR SITE OWNERS WHEN THEY APPROACH YOU FOR A RELOCATION SITE (S).

1. Project Name, Location, Address, County
2. Name of Owner and contact information
3. Environmental Consultant or Land manager handling relocation. (background information on qualifications)
4. FWC permit copy. (FWC permits for relocation are likely to be separate from the relocation permit. The donor site will need to send in the recipient site's permit number, not all the stuff that has to be done now.)
5. Schedule for Relocation
6. Plan for funding from mitigation of habitat loss\*.
7. Cost of site prep, fencing, monitoring and all other pre-relocation activities.
8. Methods of Marking numbers, forms and electronic data (compatible with the agency or land manager's office).
9. Instructions you wish to have followed regarding delivery, who does initial monitoring, etc.
10. Costs and payments. Instructions on what is expected and when.
11. Copy of legal contract.

These steps can be applied to the following sites:

#### 1. LARGE PROPERTIES WITH POSSIBLY MORE THAN ONE SITE..

Landowners or managers may wish to identify one or more potential areas for relocation sites and then have experts identify specific sites. This effort will require aerial photos with good resolution. 1" to 200' are great. Tax aerials will work which can be obtained from the County Tax Assessor's Office.

Decide which areas you would prefer to use before spending time to look for specific habitats. If you are not sure about what tortoises need, we suggest that you buy the book *Gopher Tortoise, A Life History* by Ashton and Ashton, 2004. Pineapple Press. Some large books stores carry it or it can be purchased on line through the Pineapple Press.com web page or Amazon.com.

#### 2. RANCHES

Good pasturelands used for cattle or horses with a good base of bahia grass with some weedy edges and fence rows and possibly some palmetto flatwoods around the site are good sites. In south Florida, one needs to be aware of the water table and how often the

site floods. The water table should average below 18" so the tortoise can burrow. Soil piles or berms or piles along dug canals can provide burrow habitat. Minimum area for economic purposes is around 25 acres although smaller enclosures can be arranged with the donor site owners.

Sites away from roads are best. If there is a road or development nearby then permanent fencing is needed to keep tortoises from wandering into harm's way through time. GTCI can provide plans including gates with tortoise excluder bases if needed.

Plan to run 1.1 cattle/calf units per acre. They should not be in the tortoise enclosures for the six months that it will be closed off. After that, standard grazing and pasture management will work.

### 3. FORESTRY

The magic number is 60% tree and shrub canopy cover. If the area is in fairly mature forest or thinned areas and areas around planted areas will work. The ground cover can be natural or a mixture of native grasses, bahia, and various broadleaf vegetation (weeds). The magic number is between 130-150 species of forage plants should be available. Note that we have not mentioned wire grass. That is because a little wire grass is fine but if it is covering more than 40% of the soil then it is reducing the density and diversity of forage plants needed.

Tortoises can withstand clear cutting and clear cut sites after planting are good habitat if they have high diversity of forage. However, the tree densities and management plan for that planting would have to comply with the maximum canopy cover plus shrub canopy of 60%.

### 4. CONSERVATION LANDS

The most important question is what are the management goals that have been approved for the sites being considered? Are there tortoises present and at what density? Would the relocation program enhance management of the sites being considered by providing guaranteed funding for monitoring and management? Can lands be added through the tortoise relocation program to the conservation lands program? Once these decisions can be answered then the sites need to be evaluated as we outlined under forestry and using the methods of evaluating forage, burrow sites, and security. Staff or hired experts should be used to identify sites and carrying capacities.

We currently recommend one 25 acre relocation site with up to 3 tortoises per acre for every 200 acres of surrounding habitat suitable for tortoises. Our ten year study on our Preserve shows that tortoises over that period of time move in and out of the area and cover at least that area. Eventually the population will expand into those areas.

### 5. LANDS SMALLER THAN 25 ACRES

The quality of habitat if the land is a pasture or park or if it is a tree farm or natural area must be evaluated just like those on larger lands. The smaller the relocation area, the greater need to have high quality habitat and to have that habitat monitored and managed

on a regular basis. Most of these areas will likely require permanent fencing. These areas could include in site mitigation sites, enclosed parks with passive use only.

## 6. SMALL PROPERTIES AND YARDS

Many people would like to host tortoises in their yard, in fact many people already do. FWC has not set any new rules regarding this practice. It appears that you will simply register saying that you will care for and protect the tortoises and that you will relocate them (possibly with some fees attached) to a recipient site in your area.

You will need to have a perimeter fence that is in the ground at least 8-12” and is sturdy hog wire or welded fence, chain link will work as well. Do not use chicken wire. Gates must be constructed so the tortoises cannot get under or through the sided between the gate and posts. Gates will have to be closed at all times. Figure 1 tortoise per half acre of good forage (you can’t count your driveway or building foot print). For proper forage needs go to [www. Ashtonbiodiversity.org](http://www.Ashtonbiodiversity.org) and go to the information page. There you can download “Tortoises In My Yard.....”.

### STEP BY STEP

Basically all size and types of potential relocation sites must follow similar steps to successful relocation.

1. Determine if tortoise relocation will work. What is the purpose of the relocation on the property? Conservation, Economic, Education?
2. Identify the site(s) that may be good for relocation based on habitat and use.
3. Get expertise (tortoise and botanical) to locate and evaluate the sites and determine what management is required.
4. Determine the costs and determine what you will require for relocation costs. This includes payment for conservation easements data management for monitoring and management.
5. Apply for relocation permit. Once received, your lands will be put on the list of relocation sites.
6. Develop a contract with a donor site to cover calendar, methods, and payments to include:
  - a. Up front costs for site prep and fencing. Payments for fencing, burning,
  - b. Capturing tortoises, marking, data collection and delivery. How this will be done.
  - c. Note be sure that the EC staff actually doing the work are well trained and possibly certified.
  - d. Calendar of events. Do not do relocations in winter unless south of Orlando. This is very important because of the time needed based on site prep, fencing, and the actual first delivery.
    1. Habitat modification should be done soon after the site has been picked.
    2. Put temporary (hay bale or special cloth) or permanent fence in after burning and any other site prep. Set permanent monitoring transects.

Prepare Habitat Management and Monitoring Program Create computer files for monitoring data.

3. Obtain permit
4. Take reservations for tortoises; develop contract and non refundable deposit.
5. Establish easement plan and receive all payments.
6. Take tortoises
7. Monitor tortoises daily for a week.
8. Temporary fences should be checked at least once a week for first month.
9. Take up all or parts of temporary fence at 6 months after the last tortoise was released.
10. Annual monitoring of vegetation and tortoises. Respond to conditions by burning, mowing, or what is needed to maintain ideal conditions.

Currently, it is possible that the donor sites may be responsible for the cost of replacing each acre of tortoise habitat lost. The cost per acre is the amount that acre is worth in the county where the project is located. Now, the recipient site owner could actually require up to the full amount to either buy land or provide a conservation easement (at about 80% of the land value at the recipient site). It is likely that the FWC is going to charge a fee for permits with a percentage of the value of land being taken. Counties may also extract a fee. This is not at all clear. At the moment the recipient site can negotiate with the donor site owner for the best deal he can get.

The fees for site development, management and development are charged in advance or if done in advance the costs including time are charged to the donor site owners. The donor site pays for the work done on the donor site by ECs and the actual excavation, and handling of the tortoises.

#### FOR MORE INFORMATION

GTCI can provide detailed information on establishing sites, monitoring and management plan development, and tortoise excavation, handling and management. Email us at [Tortfarm2@aol.com](mailto:Tortfarm2@aol.com) .

As of October 2006, no details have been released on the actual changes that have been made by FWC on the permitting. The development of the recipient sites as outlined here are within the permitting perimeters. The fees charged by the landowner for conservation easements and for the actual costs of prepping and establishing the relocation sites are between the two landowners.

We recommend that you sign up to be a part of the Gopher Tortoise Reserve Program. The program is simply a group of landowners of all types that are interested in sustaining gopher tortoises and other wildlife on their property. We provide information to the members and keep them up to date on the relocation program. Membership forms are located at [www.Ashtonbiodiversity.org](http://www.Ashtonbiodiversity.org).