

The Voluntary Sandhill (Gopher Tortoise) Habitat Credit Trading System

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Background

Fire-maintained longleaf pine once occupied 90 million acres in the Southeastern States of the USA, but today this has declined to roughly three million acres as a result of development, habitat conversion, invasive species, and fire suppression. Lack of fire in the landscape has resulted in limited habitat for a variety of species dependent upon a more open canopy and diverse herbaceous ground cover. Consequently, many species have experienced population declines, including the gopher tortoise.

The gopher tortoise is federally listed as threatened under the Endangered Species Act in the western portion of its range (west of the Tombigbee River in Alabama), and the U.S. Fish and Wildlife Service (USFWS) recently received a petition from Save Our Big Scrub, Inc., a Florida based environmental not-for-profit organisation, to include the eastern populations on the same list. With over 80% of land under private ownership in the Southeast, the greatest potential for conservation, restoration and management of pine habitat for declining species lies in the hands of family forest owners.

To address these issues, the American Forest Foundation and Longleaf Alliance are working to develop and implement a market-based habitat credit trading system for the gopher tortoise and associated species on family forestlands in

portions of Georgia and Alabama. Under the programme, interested family forest owners within particular forest service areas become eligible for habitat management assistance and conservation credit payments through a reverse auction process,¹ which considers the potential habitat contribution of the property in conjunction with the landowner's bid requirements.

Designing the Habitat Credit System

There will be several minimum requirements to assess landowner eligibility and participation, which will help ensure a net conservation benefit. These minimum requirements include:

- Agreement and Management Plan, finalised and signed by all parties.
- Conveyance of Conservation Easement.²
- Secure endowment.
- Determination of baseline habitat conditions and an estimation of gopher tortoise population.
- Minimum habitable area of 200 acres, preferably higher. A parcel of at least 10 acres may be considered if adjacent to protected lands of at least 200 acres with no major barriers. 200 acres is the minimum acreage to support a viable population, defined as 80 tortoises.

Landowners selected to participate will be issued credits for verifiable gopher tortoise habitat and/or agreed upon management activities. These credits are the "currency" in the habitat trading system: each credit is a unit of trade that places monetary value on habitat preservation or restoration. Credits are quantified in acres, although acreage is weighted based on ecological factors, priority locations, and other relevant variables. These credits can then be voluntarily purchased by federal agencies (e.g. Department of Defence



Gopher Tortoise leaving burrow. Photo: Mark Bailey, Conservation Southeast.

¹ A reverse auction is a type of auction in which the roles of the buyer and seller are reversed, with the primary objective of driving down purchase prices. In this case, landowners compete to sell habitat credits.

² A conservation easement is a legally binding agreement between a landowner and a government agency or qualified "land trust". Certain types of land uses or development will be prohibited in perpetuity while private property rights remain.



Longleaf pine season burn. Photo: Bob Franklin, Clemson Extension Service.

or Department of Transportation), state or county governments or private companies to offset impacts on sandhill habitat and gopher tortoise populations. Banked credits may also assist the credit holders in meeting their regulatory obligations should the eastern population of the gopher tortoise become federally listed in the future.

Conclusions

This is an innovative payment for environmental services (PES) approach aimed at developing a voluntary, incentive-based framework for a non-listed species that will hopefully generate new income streams for private landowners. Lands will remain as well-managed forests, providing valuable environmental services and timber products. The silviculture and economics of longleaf and southern pine timber production are highly compatible with gopher tortoise habitat and the credit trading framework being developed.

A holistic habitat focus will better address the primary causes of declines in gopher tortoise population while simultaneously addressing the suite of other species who utilise the longleaf system. This approach is different from traditional species conservation banking in the USA, which focused on individual specimens and translocation of animals. Traditional approaches have led to varying degrees of successful recovery, often failing to address the true drivers of species imperilment - land use change and forest loss. A proactive approach, focusing on mitigation before listing occurs, provides numerous benefits and increases the likelihood of success. Pre-compliance credits are expected to be dramatically less expensive than compliance credits,

hopefully leading to an increased number of acres conserved. Offset programmes that are not directly tied to listed species also allow for a higher degree of flexibility in programme development and implementation, thus increasing the attractiveness of the option to both potential buyers and sellers.

Towards implementation

Voluntary PES transactions focused on carbon sequestration and storage have been doubling on an annual basis in the USA. Lessons learned from these efforts are being incorporated into the design of this voluntary habitat offset programme. The project is working closely with several similar efforts - the Bay Bank in the Chesapeake Bay region and the Willamette Partnership in Oregon - to ensure consistent protocols and methodologies, increasing the likelihood of USFWS framework endorsement and project replication.

An advisory group of stakeholders has been formed and will be consulted throughout the entire process. The framework is being designed to incorporate monitoring, evaluation and adaptation protocols, and will build upon previous and forthcoming USFWS species and habitat mitigation guidance. Initial credit transactions are anticipated to occur in 2010.

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