4th Annual Report
Candidate Conservation Agreement for the Gopher Tortoise

October 1, 2011 – September 30, 2012

Submitted to:

U.S. Fish and Wildlife Service

and the

Southeast Regional Partnership for Planning and Sustainability

March 2013

TABLE OF CONTENTS

LIST OF ACRONYMS

ACDPS	Alachua County Department of Public Safety
ADCNR	Alabama Department of Conservation and Natural Resources
AFB	Air Force Base
AFF	American Forest Foundation
AGTHP	Aiken Gopher Tortoise Heritage Preserve
APAFR	Avon Park Air Force Range
ARRA	American Recovery and Reinvestment Act
BRAC	Base Closure and Realignment Commission
CA	Conservation Area
CCA	Candidate Conservation Agreement
CCAA	Candidate Conservation Agreement with Assurances
CCAFS	Cape Canaveral Air Force Station
DEP	Florida Department of Environmental Protection
DOF	Florida Division of Forestry
DOD (or DoD)	Department of Defense
FDACS	Florida Department of Agriculture and Consumer Services
FLARNG	Florida National Guard
FWC	Florida Fish and Wildlife Conservation Commission
GIS	Geographic Information System
GPS	Global Positioning System
GT	Gopher Tortoise
GTHP	Gopher Tortoise Heritage Preserve
GTT	Gopher Tortoise Team
INRMP	Integrated Natural Resources Management Plan
LLA	Longleaf Alliance
LIP	Landowner Incentive Program
MCSF	Marine Corps Support Facility
MCLB	Marine Corps Logistics Base
MOCC	Mobile Operations Control Center
NA	Natural Area
NAS	Naval Air Station
NSB	Naval Submarine Base
OSBS	Ordway-Swisher Biological Station
PFA	Public Fishing Area
SCDNR	South Carolina Department of Natural Resources
SERPPAS	Southeast Regional Partnership for Planning and Sustainability 78
SF	State Forest
SJRWMD	St. Johns River Water Management District
SP	State Park
SREL	Savannah River Ecology Laboratory
SW	Space Wing
TSR	Tillman Sandridge Heritage Preserve

UF	University of Florida
URTD	Upper Respiratory Tract Disease
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WEA	Wildlife and Environmental Area
WMA	Wildlife Management Area
WRD	Wildlife Resources Division
WRI	World Resources Institute

INTRODUCTION

The gopher tortoise (*Gopherus Polyphemus*) is endemic to the southeastern United States and has been in population decline in recent years. While the tortoise is federally-listed under the Endangered Species Act (ESA) in the western portion of its range, it is currently a candidate species for listing in the eastern portion. The "candidate" species status is a result of a petition to list the species (2006), and the subsequent 12-month finding published by the U.S. Fish and Wildlife Service (USFWS) in July 2011. In 2006, the United States Fish and Wildlife Service received a petition to federally list the species throughout its non-listed range which includes Florida, Georgia, Alabama, and parts of South Carolina. As a response to the listing petition received by the USFWS in 2006, stakeholders representing the fish and wildlife agencies of Florida, Georgia, Alabama, and South Carolina, branches of the Department of Defense, and related non-profit organizations drafted and executed a Candidate Conservation Agreement (CCA).

The goal of the CCA is to organize a cooperative range-wide approach to gopher tortoise management and conservation in its eastern range. The CCA allows the signing parties to leverage knowledge and funding within a common conservation approach and framework. The CCA is voluntary and flexible in nature so that various conservation and management actions can be agreed to and implemented at different levels by the signing parties.

Established under the CCA, the Gopher Tortoise Team (GTT) is charged with implementation of the Agreement. During the first 4 years of implementation of the GT CCA, the Chair position rotated among the states alphabetically, giving everyone an opportunity to learn about the implementation and administration of the agreement. The states recognize while in concept the rotation idea is good, the 4 states don't all have the same level of resources to put into leading the efforts of the CCA. Additionally, yearly Chair/Co-Chair changing complicates communication between SERPPAS and the GTT. Therefore, after a full rotation, the State representatives & leadership agreed in October 2012 that Florida will fill the responsibility as Chair of the GT CCA for the next 4 years (through October 2016), and Georgia will fill the role of Co-Chair. The leadership structure will be evaluated and the GTT will decide on future leadership structure. The Chair's responsibilities include organizing the annual meeting of the parties and compiling the annual report required under the CCA.

Florida and Georgia continue to work closely with Alabama and South Carolina to organize the annual meetings. The States also agreed that it is important to continue to rotate the location of the annual meeting to ensure the team leadership doesn't become Florida-centric. While this change was effective immediately, the language specific to team leadership will be revised in the GT CCA later in 2013 when other revisions are agreed upon by the parties.

A standardized format helps support an organized conservation approach and encourages uniform actions and reporting, integrate monitoring and research efforts with management, and support partnership formation. In 2012, the GTT re-organized the format for the annual report to specifically address the 5-factor analysis used by the USFWS when evaluating a species for federal listing. This reorganization was prompted based on

feedback from the USFWS as to the usefulness of this report. The goal of the reorganized reporting structure is to ensure the information compiled by the CCA parties will be useful and considered by the USFWS when re-evaluating the species as a candidate in the coming year.

The 4th annual meeting (June 19-21, 2012) of the GTT, was held at the Alabama 4-H Center in Columbiana, Alabama. Approximately twenty-eight participants representing the thirteen parties attended the very productive two-day meeting. During the meeting, parties presented conservation programs and actions currently being implemented by each agency. Two new parties to the GT CCA, the Joseph W. Jones Ecological Research Center at Ichauway and the Georgia Department of Transportation, were in attendance and the GTT welcomed their participation as new parties to the CCA. Additionally, representatives from the U.S. Natural Resources Conservation Service (NRCS) participated in the meeting and provided an update on the Working Lands for Wildlife cost-share program for gopher tortoise habitat. The USFWS Coordinator for Regional Candidate and Ecosystem Conservation, Gabe Horner, presented on the federal listing process, the Policy on Evaluating Conservation Efforts (PECE) policy, and talked about the role of CCAs with Assurances (CCAA). A presentation by the USFWS species recovery lead for the gopher tortoise, Matt Hinderliter, provided information to the CCA parties on how the conservation agreement can be strengthened to focus more specifically on the species recovery.

One of the important topics discussed at the annual meeting was the inconsistency of how population surveys for gopher tortoises were conducted and reported across the range. This was one of the deficiencies noted in the USFWS 12-month finding for the species. To address this issue, the GTT participants agreed that a standardized population monitoring protocol was needed to ensure consistency throughout its range. Based on results of a gopher tortoise monitoring workshop held at the Joseph W. Jones Ecological Research Center (April 9-11, 2012), the GTT participants agreed that Line Transect Distance Sampling (LTDS; Buckland *et al.,* 2001), coupled with burrow camera searches of all gopher tortoise burrows found, regardless of status, will be the standard method for estimating tortoise population size and monitoring trends over time and throughout its range. Details of this methodology are outlined in the Gopher Tortoise Survey Handbook (Smith, L., and J.M. Stober. 2009) included in Appendix F of the revised GT CCA.

As noted above, the GT CCA was revised and approved by the GTT in December 2012. The main focus of this revision was to include the adopted monitoring protocol into the agreement and adding two new parties. Other revisions were also made to update the Gopher Tortoise Team's Organizational Structure and add new parties (Figure 7.1), update Habitat Conservation Commitments – Landscape and Local levels (10.1.1 and 10.1.2), update to Appendix B, specifically under "Monitoring" and "Translocation", added new definitions for "enclosure" and "soft release" to Appendix C, and added new literature citations to Appendix D related to temporary enclosures and the new monitoring protocol.

Comprehensive reports were submitted by each CCA party in January 2013. The parties submitted their agencies' report for the period covering October 1, 2011 – September 30, 2012. It is important to note that not every section of the report is applicable to every party. Parties with no information appropriate to a particular section have indicated this

with "not provided," "not applicable," or "none provided this reporting period." Reports were submitted by each party's point of contact and compiled by the Chair with minimal edits. No report was required from the Georgia Department of Transportation because they just recently signed on to the GT CCA as a new party. Also, due to the change in leadership, the Longleaf Alliance did not submit a report this year. All other parties did submit a report.

Thank you to all the parties for compiling this information on behalf of their agency and on behalf of gopher tortoise conservation. This annual report continues to be vital for range-wide conservation of this keystone species.

SECTION I: EXECUTIVE SUMMARY

ARMY

"The US Army has five installations within the eastern portion of Gopher Tortoise range that have GT populations and manage for GTs. They are Fort Benning, Fort Gordon, Fort Rucker, Fort Stewart and Camp Blanding Joint Training Center. All installations have an active and current Integrated Natural Resources Management Plan (INRMP). Below are each installation's summary of GT activities for FY 12.

Fort Benning - Over the past fiscal year Fort Benning's focus has been preparing the arrival of the Armor School and new units beginning to train on the installation. The primary focus for gopher tortoise management has been to identify locations that could potentially be impacted by off road training with wheeled and tracked vehicles. Once those areas were determined, burrows were marked with signs and reflective posts to identify the locations of gopher tortoise burrows; signs include the language "No vehicular traffic within 50 feet - IAW MCOE Regulation 350-19". Fort Benning is currently divided into 4 habitat management units (HMUs) totaling 48,000 acres of tortoise habitat. In accordance with the CCA and Army Guidelines we conducted our first Line Transect Distance Sample (LTDS) using the Distance 6.0 software. Our current plan is to conduct a LTDS on one of the four HMUs on the installation each year providing us with a four year return interval. The first LTDS was conducted on HMU 1, which totals 7837 acres of habitat, during May-July 2012. The analysis of the LTDS data provided a density estimate of 0.33 tortoises/hectare with a population estimate for HMU 1 of 1057 tortoises. We are currently in the process of further refining our habitat delineations within each HMU. The goal is to get a better estimate on the current suitable habitat and to provide management recommendation on areas of potential habitat to improve it to suitable habitat standards. Once we have further refined our habitat areas we will conduct a LTDS this spring on one or two HMUs depending on availability of resources.

Fort Gordon - In FY2012 the Fort Gordon Natural Resources Branch maintained or improved 13,021 acres of habitat for the gopher tortoise through timber thinning, herbicide spraying, mechanical midstory removal, and prescribed fire. Four tortoises were translocated from a project area into suitable habitat and the movement of nine tortoises

was monitored periodically via radio telemetry. Fort Gordon biologists revisited and updated the status of 452 burrows in the burrow database. In addition, the entire gopher tortoise HMU (habitat management unit) was revised based on an analysis of soil type and burrow occurrence on the property and the area of "currently suitable" habitat was revised based on updated timber inventory data. In FY 2013 the Fort Gordon Natural Resources Branch plans to conduct a population re-sampling survey in a portion of the HMU as well as revisit and update the status of an additional 245 known burrows

Fort Rucker - Forest management activities beneficial to gopher tortoises such as thinning, timber stand improvement, and invasive species control continued during FY 12. The NEPA project review process continued to formally look at proposed projects for impacts to gopher tortoise habitats and to existing tortoise populations. Installation wide gopher tortoise survey performed by contract was completed and estimated 10,135 gopher tortoises on the Installation and remote airfields.

Fort Stewart - This is the fourth annual report submitted by Fort Stewart IAW the CCA. Based on the installation-wide population survey in 2009 and resurvey of Zones 1-3 in 2010-2012, the installation's population appears healthy and stable. In FY 12, Fort Stewart accomplished the following: (1) Protection (conservation easements) of Great Ogeechee Lakes and Preserve properties, consisting of 551 acres (130 acres xeric habitat) ongoing in FY 12 and should close in FY 13; one tract closed in Oct 2012. (2)Hardwood midstory reduction on 175 acres of gopher tortoise (GT) habitat via heavy-duty mowing and 161 acres were retreated with an herbicide application (single stem injection). An additional 130 acres have been delineated and will be treated (heavy-duty mowing) in FY 13. (3)Prescribed burning of 11,694 acres (6,943 growing season; 4,751 dormant season) of GT habitat on Fort Stewart. (4)Population survey of Zone 3 IAW the Management Guidelines for Gopher Tortoise on Army Installations (MGGTAI), and a combined Installation-wide analysis was conducted by pooling the FY10-12 data from all 3 zones. (5)Support for numerous information and outreach events, research projects, and scientific publications relating to GT conservation.

Camp Blanding Joint Training Center - Management of gopher tortoises continued as normal in FY 12. Wiregrass plantings, longleaf pine plantings, thinnings, and clearcuts restored or improved 914 acres of gopher tortoise habitat. An additional 6,282 acres of gopher tortoise habitat were maintained through prescribed fire and herbicide treatment of oaks and invasive plant species.

NAVY

The US Navy has five installations within the eastern range of the Gopher Tortoise (GT) that have GT populations and completed management activities: Naval Submarine Base (NSB) Kings Bay in southeastern Georgia, Naval Air Station (NAS) Jacksonville and Naval Station (NS) Mayport in northeastern Florida, and NAS Whiting Field and NAS Pensacola in the western Florida panhandle. NAS Whiting Field also has lands in southern Alabama. Naval Support Activity (NSA) Panama City occurs in the range of the GT but does not support a GT population. All installations have an active and current Integrated Natural Resources Management Plan (INRMP).

During this reporting period, the Navy managed over 12,000 acres of tortoise habitat, improved habitat on 74 acres by conversion to longleaf pine, prescribed burned 72 acres, reduced encroaching brush on 55 acres, treated 255 acres of cogon grass, and eliminated 25 feral hogs and 5 coyotes. Continued surveys were conducted with over 1,500 burrows discovered, up from 1,400 in 2011. An emphasis was directed toward burrow scoping to estimate GT population numbers. Results continue to indicate occupancy rates of active burrows to be from 24% to 31% (variable by installation). Issues with disease and predation were determined to be absent, minimal, or managed. There were no translocations conducted. There were no gains or losses of habitat. Community outreach consisted of continued distribution of brochures, posters, informational signage, one Earth Day event, and one graduate level research study (in process). No new regulations, laws, or policies were changed or implemented, although relocation and protection requirements were strengthened and enforced at all installations. There were no deviations or additions regarding the CCA Agency Conservation Strategy. Individual installation activities are reported in the following sections where appropriate. Navy GT management addresses the five Listing Factors identified in section 4 (a) (1) of the Endangered Species Act - - Listing Factor One (present or threatened destruction, modification, or curtailment of the species' habitat or range), Listing Factor Two (overutilization for commercial, recreational, scientific, or education purposes), Listing Factor Three (predation or disease), Listing Factor Four (existing regulatory mechanisms), and Listing Factor Five (other manmade or natural factors affecting the species' continued existence). Navy GT management provided a net benefit to the species and its habitat with regard to all five Listing Factors. No adverse actions were identified in reference to the five Listing Factors for GT populations or habitat on Navy lands. Therefore, footnotes and/or endnotes are not utilized in this report.

US NAVY INSTALLATION OVERVIEW

NSB Kings Bay, GA POC: Paul Schoenfeld, paul.schoenfeld@navy.mil, (912) 573-4678

Gopher tortoise surveys have been conducted for all suitable habitat on the base with over 300 burrows recorded. Camera-scoped burrows recorded 85 burrows (28.4%) that were occupied by tortoises and 33 burrows (11.0%) that were occupied by a commensal species. Activities during 2012 included monitoring, habitat restoration, and invasive species control. Longleaf pine restoration on 48 acres was accomplished. Invasive species control included the removal of 25 feral hogs and 5 coyotes. Installation policy for protection and translocation were strengthened.

NAS Jacksonville, FL POC: Christine Bauer, christine.bauer1@navy.mil; (904) 542-5278

Gopher tortoises are located in mission sensitive areas on NAS Jacksonville and at Outlying Landing Field (OLF) Whitehouse including the Rodman Range. In addition to Navy-owned lands, gopher tortoise populations occur at the Navy's Pinecastle Range on land leased from the U.S. Forest Service. Activities during 2012 included habitat restoration with 26 acres of slash pine plantation converted to longleaf pine. This area increased the contiguous areas previously restored and has attracted gopher tortoises away from runway clear zones, as well as providing suitable recipient sites for tortoises relocated from mission-sensitive areas.

NAS Whiting Field, FL POC: Ron Cherry, ron.cherry@navy.mil; (850) 623-7602

NAS Whiting Field has a wide-ranging and significant gopher tortoise population. Gopher tortoises occur at 10 of 15 installation properties in five counties in Florida and Alabama. Activities during 2012 included continued surveys and burrow marking, 66 acres of prescribed burning for habitat restoration, 225 acres of invasive cogon grass control, and an Earth Day community outreach program on the gopher tortoise. Surveys were conducted by interns from the Student Conservation Association (SCA). A graduate level degree research project was started with a local U.S. Air Force officer trainee.

NAS Pensacola, FL POC: Mark Gibson, mark.w.gibson@navy.mil; (850) 452-3008

NAS Pensacola has gopher tortoise populations at the main installation and Bronson and Saufley Fields. In 2012, continued surveying updated the installation population estimate. A total of 363 gopher tortoise burrows were identified and scoped on 403 occupied acres out of a total habitat acreage of 1,713 resulting in a density rate of 0.90 burrows per acre. Burrow camera results identified 80 tortoises with the following breakdown: hatchling / juvenile (22%), sub-adult (35%), and adults (43%). The rate of tortoises per occupied acre was estimated to be 0.20. The age of tortoises at NAS Pensacola was estimated to range from hatchlings < 1 year old to adults 75 years and older. Additionally, a 6-acre site was prescribed burned, 30 acres of cogon grass was controlled, and mechanical brush control was accomplished on 55 acres. The installation also continued to provide Navy Region Southeast support by assigning the Natural Resources Manager as the Navy GTCCA point of contact and coordinator. The NAS Pensacola NRM attended the GT Monitoring Workshop and the GTCCA Coordinator's meeting during 2012.

NS Mayport, FL POC: Patricia Loop, patricia.loop@navy.mil; (904)270-6816

NS Mayport has a small population consisting of seven burrows occurring in a coastal dune-scrub landscape. Surveying showed activity for five of the burrows, including fresh tortoise tracks and evidence of recent burrow excavation. One tortoise was observed at the mouth of a burrow, and another tortoise was observed by inserting a digital camera into the burrow and taking a photograph. Although tortoise activity and shelter sites can be readily observed in the form of active burrow aprons, excavation spoil piles, and worn trails, the dense vegetation often obscure tracks and burrows of small sub-adult individuals, which may go undetected. Not enough information is currently known to assess recruitment and population viability at this isolated site. Protection practices implemented included fencing that was installed along a beach access road along with the installation of caution signs. Education was conducted using informational signs on dune-crossovers. Education was also provided during base indoctrination briefings to new personnel that included endangered species topics.

AIR FORCE

The US Air Force Has a number of installations and associated facilities within the eastern range of the Gopher Tortoise (GT) that have identified GT populations: Avon Park Air Force Range, FL; Eglin AFB, FL; MacDill AFB, FL; Moody AFB, GA; the 45th Space Wing, FL (includes Patrick AFB, Cape Canaveral AFS, Malabar Tracking Annex, and Jonathan

Dickinson Missile Tracking Annex); and Tyndall AFB, FL. Each installation applies management in accordance with an Integrated Natural Resources Management Plan (INRMP). This report summarizes GT management activities for these installations from October 1, 2011 thru September 30, 2012. During this FY 12 reporting period, the US Air Force:

- Managed 452,709 acres of gopher tortoise habitat on Air Force properties subject to an INRMP
- Provided prescription burning treatments to benefit GT over 112,372 acres
- Reduced invasive species over 3,504 acres using herbicides or mechanical means
- Removed 513 feral hogs, 39 coyotes, and 66 raccoons from GT habitat
- Relocated 16 Gopher Tortoises from construction sites on installations to other suitable habitats on the installation subject to management under an INRMP
- Accomplished surveys over most properties

USAF Installation Overview:

a) Avon Park Air Force Range, FL contains approximately 50,410 acres of suitable gopher tortoise habitat. Our surveys indicate we have a total of 4,129 adult tortoise inhabiting scrub, flatwoods and pine plantations. Our third year of survey work has been completed and a final report was delivered March, 2012. 10,672 acres of gopher tortoise habitat were treated with prescribed fire. 300 feral hogs were captured and removed. 400 acres were chemically treated for exotic plants. One paper was published in a professional journal this year.

b) Eglin Air Force Base, FL has continued to manage almost 384,500 acres of potential gopher tortoise habitat. Management tools include prescribed fire, chemical treatment of hardwood mid-story, and sand pine removal. Only a single tortoise had to be relocated as a result of construction during this time period. Population monitoring documented new burrows in areas of existing tortoise populations and surveys were conducted in new areas where the status was previously unknown. All burrows located were mapped and data collected for each included status, and size.

c) MacDill Air Force Base, FL is a relatively small base (5,638 acres) surrounded by the waters of Tampa Bay on three sides and dense industrial and residential development on its northern side. The base supports only a small gopher tortoise population, roughly 100 tortoises, spread across several colonies throughout the airfield and pine forest areas. Including the airfield and pine forest areas there is roughly 1,550 acres of suitable gopher tortoise habitat on base. The installation has made a concerted effort to protect and improve gopher tortoise habitat on the installation, particularly in the forested areas. MacDill spent DoD annual conservation funding to improve habitat areas through chemical treatment of exotic invasive plant species, and the removal of dense exotic understory vegetation. MacDill also works with the base Plans and Programs office to avoid construction in gopher tortoise areas. A threatened and endangered species survey, which included an evaluation of the gopher tortoise population, was completed in FY12. The survey indicated a slight decrease in the gopher tortoise population since the previous survey completed in 2005.

d) Moody Air Force Base, GA is located 10 miles northeast of the City of Valdosta in Lowndes and Lanier counties in south-central Georgia. Comprising approximately 11,000 acres of federally owned land, the installation includes the main base (5,039 acres), the adjacent Grand Bay Range (5,874 acres), and the Grassy Pond Recreational Annex (489 acres), located 25 miles southwest of the main base. There are approximately 1,000 acres of gopher tortoise habitat located on the installation. Gopher tortoise management is accomplished through projects identified in the Moody AFB Integrated Natural Resources Management Plan with concurrence by the Georgia Department of Natural Resources and the U.S. Fish and Wildlife Service. Current projects include: seasonal monitoring and surveys of known gopher tortoise populations; disease surveillance for Upper Respiratory Tract Disease; gopher tortoise movement studies in relation to military activities; gopher tortoise mark-recapture population demography study; habitat improvement/restoration through burning, chemical release, and mechanical means.

e) The 45th Space Wing (45 SW), FL consists of four major installations and several smaller annexes. The four major installations: Cape Canaveral Air Force Station (CCAFS), Patrick Air Force Base (PAFB), Malabar Tracking Annex, and Jonathan Dickinson Missile Tracking Annex, are the only properties within the 45 SW on which gopher tortoises are known to be present. Total area of all four properties is approximately 18,385 acres, of which roughly 6,200 is considered suitable gopher tortoise habitat. CCAFS has, by far, the largest population of gopher tortoises of the four sites; approximately 95% of gopher tortoises at 45 SW properties are found at CCAFS. A population survey has not been completed for all of the sites; therefore, an accurate population estimate is not available at this time. Management of gopher tortoise habitat is accomplished through mechanical cutting and controlled burning, as well as through the treatment/removal of invasive vegetation. Gopher tortoise relocations are conducted as required to support various construction projects, environmental cleanup projects, and to prevent undermining of security fencing, roads, airfield pavements and building foundations. Information pertaining to these activities is presented in this annual report. Additionally, the AF has purchased easements on two parcels of land offsite that total 151 acres that also provide gopher tortoise habitat.

f) Tyndall Air Force Base, FL, gopher tortoises are found throughout the installation, with roughly 400 acres occupied. In FY12, baseline surveys continued in previously occupied habitat and in potential habitat prior to forestry operations. 270 Gopher tortoise burrows are now included in our GIS database from 24 separate areas, with 4 of those areas newly discovered in 2012. Tyndall is marking all burrow locations so future surveys can be conducted during active nesting periods, to accurately determine the status of each burrow and delineate colony boundaries. Longleaf pine restoration, frequent prescribed fire, and invasive species control all benefit the gopher tortoise and suitable habitat.

UNITED STATES MARINE CORPS

The Marine Corps has one installation that has gopher tortoises. Marine Corps Logistics Base Albany (MCLB Albany), located in Albany, GA, has 1400 acres of potential gopher tortoise habitat and utilizes prescribed fire to maintain and enhance this habitat. No burrow surveys have been conducted to determine how many gopher tortoises are actually present on MCLB Albany. However, during Fiscal Year (FY) 13 a Threatened, Endangered, and Rare Species Survey will be conducted, which will include surveying for gopher tortoises. The results of that survey will be provided in the FY13 report.
In May 2011, Marine Corps Support Facility Blount Island (MCSF BI) translocated all MCSF BI gopher tortoises to Apalachicola National Forest Research Recipient Site (Munson Sandhills/Site 1). Since the translocation, MCSF BI has conducted two follow-on surveys. No burrows or tortoises were found. Based on this, the Marine Corps officially requests via this report to remove MCSF BI from the Gopher Tortoise CCA.

UNITED STATES FOREST SERVICE

Gopher tortoises occur on both the Conecuh National Forest in Alabama and the Apalachicola, Osceola, and Ocala National Forests in Florida. Conecuh's gopher tortoise population is likely the largest in Alabama. The gopher tortoise and its burrows are protected on all national forests by timber sale specifications requiring protection of burrows. The gopher tortoise and its burrows are also protected on Conecuh National Forest by a Supervisor's Closure Order that bans the gassing of burrows. Management activities conducted for the restoration and maintenance of native, fire-adapted, ecosystems supporting gopher tortoise habitat include: timber thinning in mature longleaf stands; timber harvest to restore native over-story species (longleaf); prescribed fire and associated activities (e.g., fire line maintenance); wildlife opening maintenance; mid-story vegetation removal; road restoration activities; gopher tortoise surveys; chemical treatment and eradication of Cogongrass and other invasive species; trapping and removal of feral hogs; native grass seed collection and propagation for future restoration needs; and educational efforts through outreach and interpretation.

UNITED STATES FISH AND WILDLIFE SERVICE

For the U.S. Fish and Wildlife Service, the National Wildlife Refuges (NWR) contributing to the 2012 annual report include: Eufaula NWR (AL); Archie Carr NWR, Cedar Keys NWR, Chassahowitzka NWR, Egmont Keys NWR, Everglades Headwaters NWR, Hobe Sound NWR, J.N. "Ding" Darling NWR, Lake Wales Ridge NWR, Lake Woodruff NWR, Lower Suwannee NWR, Merritt Island NWR, Pelican Island NWR, St. Marks NWR, and Ten Thousand Islands NWR (FL); and Okefenokee NWR (GA). Refuges that have previously been included in Gopher Tortoise CCA annual reports, but that have been removed from the list due to lack of tortoise habitat and/or populations include: Bon Secour NWR (AL); Florida Keys Refuge Complex, Florida Panther NWR, Loxahatchee NWR, and St. Vincent NWR (FL); and Bond Swamp NWR and Harris Neck NWR (GA).

Brief summaries of activities for 2012 include:
Eufaula NWR – Refuge is continuing long leaf pine restoration efforts on approximately 1000 acres. Conducted prescribed burning on 450 acres. Refuge property in AL is not occupied by tortoises but should be considered potential habitat. Tortoises do occur on lands adjacent to refuge. Refuge has fee title ownership of 250 acres of occupied tortoise habitat in Miller County, GA (Kimbrel tract).

Archie Carr NWR – Conducted pilot surveys using LTDS methodology on ~ 30 acres.

Lower Suwannee and Cedar Keys NWRs (reported together) – The Lower Suwannee NWR administers a 53,146 acre refuge along the lower reaches of the Suwannee River in Levy and Dixie Counties, Florida. While the refuge encompasses a wide variety of wetlands and coastal habitats, a portion of the refuge (approximately 7,960 acres) provides upland habitat for Gopher Tortoises. The Cedar Keys NWR encompasses 13 islands totaling 762 acres. Approximately 10% of that, or 76 acres could be considered habitat for Gopher tortoises. Primary management activities affecting gopher tortoises on the refuges included prescribed burning and pine plantation thinning. Other activities that may affect Gopher Tortoises includes mowing of refuge roads, exotic vegetation treatments, and reforestation of logging decks and cleared areas.

Chassahowitzka and Egmont Key NWRs (reported together) – The Crystal River NWR Complex (CRNWR) is comprised of five individual Refuges; Crystal River, Chassahowitzka, Pinellas, Passage, and Egmont Key NWRs. Of those five Refuges only Egmont Key and Chassahowitzka have gopher tortoise populations. In the sections covered under this summary the management activities that benefited the gopher tortoise will be summarized. Unfortunately, due to the lack of Refuge resources and staffing constraints, the Refuge "establishment priorities" typically take precedent over the gopher tortoise. Despite the lack of resources, the CRNWR has accomplished some minor tasks in an effort to more adequately protect the gopher tortoise.

Everglades Headwaters NWR – Refuge established this year, which currently consists of 10 acres.

Hobe Sound NWR – The Hobe Sound NWR encompasses 1035 acres of coastal beach, mangrove, hammock, and scrub. Gopher tortoises occur on about 250 acres of sand pine scrub and 25 acres of coastal dune habitat. During the period of performance, a survey was conducted on the sand pine scrub. Invasive plants were removed from 4 acres of occupied gopher tortoise habitat. We also provided educational opportunities to school groups and the general public in addition to updating trail maps, messaging, and exhibit areas.

Ding Darling NWR – Gopher tortoise surveys were completed on all inhabited sites. An educational poster was developed for use at the Refuge Education Center. Survey protocols were finalized and included marking all active burrows in future surveys.

Lake Wales Ridge NWR – We conducted a census survey on approximately 25 acres at the Lake McLeod.

Lake Woodruff NWR – Jones Island and Volusia Tracts 2, 3, and 4 were burned in the growing season for a total of 956 acres of gopher tortoise habitat treated with prescribed fire. No gopher tortoise habitat treated with prescribed fire in the dormant season. The Volusia and Eastside units were surveyed for gopher tortoises and burrow locations were recorded. One quarter of an acre of gopher tortoise habitat was treated with imazapyr to control cogon grass.

Merritt Island NWR – 8,900 acres of gopher tortoise habitat were prescribed burned in the growing season and 5198 acres were prescribe burned in the dormant season. 21. 5 acres of gopher tortoise habitat were treated with imazapyr to control cogon grass.

Pelican Island NWR – GPS points taken of 3 active tortoise burrows on refuge property.

St. Marks NWR – Gopher tortoises occur throughout upland sites within the 70,360 acre (28,473 ha) St. Marks National Wildlife Refuge. This area supports a heterogeneous matrix of upland pine ecotypes such as sandhill, scrubby flatwoods and mesic flatwoods interspersed with freshwater and brackish wetlands. Prior surveys for gopher tortoises conducted at St. Marks NWR in 1978 and 1988 estimated a wide range of between 5589 to 1,811 acres of suitable habitat. No systematic surveys for this species were conducted on the refuge during the last two decades and objective, robust population estimate techniques were not employed during the 1978 and 1988 surveys.

In 2011, Line Transect Distance Sampling was conducted at St. Marks NWR by a three-person team. We established 85.1 miles of transect length within 5,536 ac of suitable gopher tortoise habitat that we believe best captures the core habitat for the majority of the refuge's population while minimizing effort expended surveying in ephemeral or marginal habitats. In 2012, we analyzed our results in Program DISTANCE 6.0, which yielded a site-wide estimated mean population density of 0.12 tortoises/acre (0.294 tortoises/hectare) for a total median population estimation of 640 mature gopher tortoises. Density and population estimates have a coefficient of variance of 14.3% within a 95% confidence interval. Other relevant results from the survey are summarized in section 2)d).

Okefenokee NWR – Prescribed burning and timber harvest was conducted on the suitable gopher tortoise habitat owned and managed by Okefenokee NWR. Timber harvest, site prep, and herbicide application was conducted on lands owned by Okefenokee NWR but managed by Forest Investment Associates. One film crew from England filmed gopher tortoise and indigo snakes for potential inclusion in a nature-based documentary.

ALABAMA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Report not received.

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

The Gopher Tortoise Management Plan (GTMP) was revised and approved by the Florida Fish and Wildlife Conservation Commission (FWC) Commission in September 2012. The FWC published its first gopher tortoise (*Gopherus polyphemus*) management plan in 2007. The revised GTMP guides the continued recovery of the gopher tortoise in Florida through

2022. For this 10-year plan, the overarching objective of no net loss of gopher tortoises will be accomplished by meeting four objectives: minimize loss; increase and improve habitat; enhance and restore populations; and, maintain the gopher tortoise's function as a keystone species. The plan presents a suite of conservation strategies and actions that serve to achieve these objectives. The actions are captured under the following broad categories: regulation, permitting, local government coordination, law enforcement, habitat protection, habitat management, population management, disease management, incentives, monitoring, education and outreach, and research. Some highlights of the new plan include: creating a new incentives model for private landowners; collaboration with military partners on INRMPs on the management of gopher tortoises on U.S. military installations in Florida; practical considerations for managing habitat; actions minimizing tortoises removed from the wild (waif tortoises) and identifying solutions to accommodate them; and expanded monitoring provisions to track the success of gopher tortoise conservation efforts.

The revised Gopher Tortoise Management Plan also includes a new chapter addressing the conservation of "priority" commensals. Working closely with stakeholders, an improved policy limiting the relocation of commensals was developed and implemented in conjunction with the approval of the GTMP. The policy helps transition away from the previous agency policy allowing humane relocation of all commensals captured during gopher tortoise relocation activities with little or no guidance and follow-up, to a now limited, on-site relocation or, if no habitat remains, contributing the specimen to an authorized research study.

Originally approved in April 2008, the Gopher Tortoise Permitting Guidelines were revised based on stakeholder and staff input and approved by FWC's Commission in November 2011 and again in September 2012 to incorporate the new relocation policy on commensals approved with the management plan approval. The guidelines also include a new permit option for replenishing public conservation lands where gopher tortoise populations are depleted. Additional revisions to the Disturbed Site permit were made to help make this permit process more efficient for both FWC biologists and the permittee. The FWC continues to work with stakeholders to discuss any new challenges and work together toward possible solutions throughout the implementation of the Gopher Tortoise Management Plan. The continued participation of stakeholders is important to the long-term conservation of the species.

This report includes conservation and management activities that benefit gopher tortoise conservation on nearly 150,872 acres of habitat throughout Florida. Specific accomplishments in implementing the management plan within the reporting timeframe are included in the sections that follow. In all, gopher tortoise conservation efforts in Florida are making significant progress. Much of the progress in prescribed fire and habitat management is made possible through partnerships with cities, counties, non-profit conservation organizations, and other state agencies.

During the reporting timeframe, more than 116,796 acres of gopher tortoise habitat were managed and restored either mechanically, chemically, by eradicating exotic plants, or through prescribed burning. Progress has also been made in protecting additional acres of habitat on private lands through the gopher tortoise recipient site permit program. Approximately 1,786 additional acres are now permanently protected and are being

managed for gopher tortoises. One significant change from that last reporting cycle is the acres of habitat lost due to development. Compared to the last three years (9,000 acres in FY11; 5,000 acres in FY10; 30,000 acres in FY09), development in Florida has increased slightly and that has resulted in a permanent loss of habitat. During this reporting period (FY12), approximately 10,107 acres of habitat were permanently lost specifically resulting from development activities.

Research on cattle/tortoise compatibility has been completed and a final report is anticipated any day. Unfortunately there have been reports of extreme mortality (>200 tortoises) on this site and the causes are not yet fully understood; upper respiratory tract disease testing is being undertaken, and results should be available in spring 2013. A permitted recipient site has also reported mortality (ca. 20+ shells) and plans to do follow-up trapping and testing from those tortoises will help provide information as to the cause of this mortality. Multiple research studies have been published and are included in the full report below.

Florida continues to excel at educating the citizens of Florida on the importance of gopher tortoises. Program staff and interns have organized and implemented numerous workshops, school education programs, festivals and community events, stakeholder meetings, and training for law enforcement recruits and officers. New outreach materials have been created which include an *Online Permit System* and *Commensal Species* factsheet, and newly revised *Captive Gopher Tortoise Care Guidelines* that are being distributed to all wildlife rehabilitators and waif gopher tortoise permit holders.

GEORGIA DEPARTMENT OF NATURAL RESOURCES

The State of Georgia permanently protects 31,716 acres of tortoise habitat on Wildlife Management Areas, Public Fishing Areas, State Parks, and Historic Sites. Land management conducted by GA DNR-WRD personnel beneficial to the gopher tortoise on these and other properties included prescribed burning of 14,858 acres, thinning or clear-cutting of 2,218 acres of off-site planted pines, removal of invasive and exotic sand pine from 300 acres, planting longleaf pine on 599 acres, and planting native warm-season grasses on 30 acres. Additionally, through the Multistate Sandhills Ecological Restoration Projects (funded by two Competitive State Wildlife Grants), GA DNR-WRD assisted private landowners with prescribed burns totaling 5,776 acres, longleaf pine plantings totaling 395 acres, mechanical removal of sand pine on 30 acres, and herbicide treatment of hardwoods on 90 acres. Through the creation of numerous conservation easements, GA DNR-DNR protected 2,507 acres of tortoise habitat during the reporting period. GA DNR-WRD conducted or contracted gopher tortoise surveys and population estimates, using line transect distance sampling (LTDS), on 17 total sites, including 2 state-owned sites. Results from this effort are presented. 19 tortoises were relocated to Yuchi WMA, a priority repatriation site. Numerous publications, website materials, workshops, and events aimed at increasing awareness for gopher tortoise conservation among both professionals and the general public were produced and/or conducted during the past year.

SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

During the 2012 calendar year the Wildlife Section of the South Carolina Department of Natural Resources (SCDNR) experienced a reduction in forces due to staff moving to new positions, promotions, or retirement. Steve Bennett was one of the individuals that decided to leave the agency and retire early. His position still remains vacant; however, the position is posted externally and should be filled shortly. Efforts continued within the state to conduct land management and population management activities at Aiken Gopher Tortoise Heritage Preserve (AGTHP) and Tillman Sand Ridge Heritage Preserve (TSRHP). One of the most substantial events that occurred this past year was the memorandum of understanding established between the Florida Fish and Wildlife Conservation Commission (FWC) and SCDNR to restock waif tortoises from Florida on the Aiken Gopher Tortoise Heritage Preserve. Consequently, we focused on the translocation and augmentation of new tortoises to the preserve, by erecting new temporary holding pens and excavating starter burrows. As a result of this effort, 58 waif gopher tortoises were transported from FL to AGTHP in late summer, measured, weighed, the sex determined, and the shell marked. Currently, these gopher tortoises are being held in temporary holding pens based on methodology established by Tuberville et al. 2005. Translocation as a conservation tool: site fidelity and movement of repatriated gopher tortoises (*Gopherus polyphemus*). Animal Conservation 8: 349-358. Another significant accomplishment was the acceptance of the following article by Chelonian Conservation and Biology: Grosse, A.M., K.A., Buhlmann, B.B. Harris, B.A. DeGregorio, B.M. Moule, R.V. Horan, and T.D. Tuberville. 2012. Nest Guarding in the Gopher Tortoise (*Gopherus polyphemus*). Chelonian Conservation and Biology 11(1): 148-151. Additional goals established this past year at these heritage preserves were to maintain and enhance existing habitat for the gopher tortoise. This was accomplished by using cultural practices such as prescribed fire and herbicide.

POARCH BAND OF CREEK INDIANS

The Gopher Tortoise project for Poarch Band of Creek Indians continues to be located at Magnolia Branch, a large Reserve located along the Big Escambia, Little Escambia, and Sizemore Creek area. The Tribe's Reserve is located about 20 miles south of the Tribe's Reservation near the town of Atmore, Alabama and Interstate 65 which connects Montgomery, AL to the North and Mobile, AL to the South.

AMERICAN FOREST FOUNDATION (AFF)

AFF's work during 2012 focused on working with partners to develop a credible habitat credit trading framework and to achieve regulatory predictability for the approach from USFWS.

LONGLEAF ALLIANCE

- Attended GTCCAA annual meeting at Charley Elliott WMA in January
- Included materials creating/maintaining gopher tortoise habitat in Longleaf 101 and 201 Academies, and all longleaf workshops

- Continued work on Pre-listing Mitigation Banking Proposal with World Wildlife Fund, American Forestry Association, and Advanced Conservation Strategies
- Meetings/Discussions with DoD and USF&WS personnel at regional and local scales, focusing on Ft. Benning/Columbus area
- Field tested Army COE inventory process and our habitat crediting system in a weeklong field exercise on TNC lands near Butler, GA
- Conducted survey (with Mike Sorice of the VPI faculty) on private landowner acceptance and interest in mitigation banking and other programs for tortoise conservation (in press)
- Completed writing with Mary Snieckus (AFA), Todd Gartner (WWF), and Josh Donlan (ACS)of a chapter on pre-compliance habitat crediting and mitigation banking for tortoises for a book on mitigation banking (in press)
- Developed a brochure/pamphlet that included a description of how mitigation would work on private lands for public dissemination

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

More than half of the suitable gopher tortoise habitat on Ichauway was prescribed burned in 2012. Hardwoods were mechanically removed from approximately 125 ac of uplands to allow reintroduction of prescribed fire. We completed a site-wide tortoise population survey in fall 2011 and data were analyzed in 2012. Jessica McGuire defended her dissertation on gopher tortoise population health in Georgia, including testing for exposure to Mycoplasma and health assessments of tortoises at Ichauway.

SECTION II: RELEVANT ACTIVITIES TO LISTING FACTOR A (THE PRESENT OR THREATENED DESTRUCTION, MODIFICATION, OR CURTAILMENT OF THE SPECIES HABITAT OR RANGE)

a) Properties or Area Covered

ARMY

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement)
Fort Benning - "There are approximately 11,800 acres of potentially-suitable GT habitat (based on soil types known to be highly favored by the animal on Fort Benning) within Fort Benning's Army Compatible Use Buffer (ACUB) that are permanently protected by either ownership by The Nature Conservancy, or permanent conservation easement. These habitat acres comprise approximately half of the 23,000 acres protected thus far in Fort Benning's ACUB. Fort Benning staff does not monitor these habitat acres, but The Nature Conservancy has documented occurrences (active burrows, and/or observed animals) on 19 of the 31 tracts that comprise that habitat acreage, and conducting inventories on selected tracts with the best populations. GT may also occur, or be restored, on

the remaining 12 tracts but have not been encountered. All protected acres with potentially suitable habitat are being managed to enhance or restore GT habitat.
Fort Gordon –0
Fort Rucker- 0
Fort Stewart - There are 1,094 acres of GT habitat within Fort Stewart's Army Compatible Use Buffer (ACUB) that are permanently protected by either ownership or permanent easement; based on soil type. Fort Stewart staff does not monitor these acres, but there are documented occurrences on some tracts and anecdotal evidence that GT may occur on other tracts based on soil type.
Camp Blanding Joint Training Center – 0

ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement)
Fort Benning - N/A
Fort Gordon –N/A
Fort Rucker- N/A
Fort Stewart –N/A
Camp Blanding Joint Training Center– N/A

iii) Total estimated acreage of **unprotected** tortoise habitat
Fort Benning - N/A
Fort Gordon –N/A
Fort Rucker- N/A
Fort Stewart – N/A
Camp Blanding Joint Training Center – N/A

iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise
Fort Benning - 48,000 acres
Fort Gordon –28,481 acres The gopher tortoise HMU at Fort Gordon is 28,481 acres. This includes all areas that are suitable or potentially suitable as gopher tortoise habitat, but excludes areas where development, current, or future military mission, or other incompatible land use precludes management of tortoise habitat. The portion of the HMU that is considered to be "currently suitable" gopher tortoise habitat is 7,321 acres. The remainder of the HMU is considered to be "potentially suitable." Fort Rucker- 49,066 acres including marginal habitat
Fort Stewart- 15,953 acres on Fort Stewart (14,294 accessible acres and 1,659 inaccessible acres in the Artillery Impact Area (AIA)); based on soil type, anecdotal evidence, and surveys
Camp Blanding – 18,169 acres

NAVY

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement): N/A for installations with a current INRMP.

ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement): N/A for installations with a current INRMP.

iii) Total estimated acreage of **unprotected** tortoise habitat: N/A for installations with a current INRMP.
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise: 12,140 acres. Installation subtotals include: NSB King's Bay 5,000 acres, NAS Jacksonville 776 acres, NAS Whiting Field 4,384 acres, NAS Pensacola 1,978 acres, and NS Mayport 2 acres.

AIR FORCE

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement):
Avon Park AFR: 0
Eglin AFB: 0
MacDill AFB: 0
Moody AFB: 0
Patrick-Cape Canaveral: 189.71 acres (easements off-site)
Tyndall AFB: 0
ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement):
Avon Park AFR: 0
Eglin AFB: 0
MacDill AFB: 0
Moody AFB: 0
Patrick-Cape Canaveral: 0
Tyndall AFB: 0
iii) Total estimated acreage of **unprotected** tortoise habitat:
Avon Park AFR: 0
Eglin AFB: 0
MacDill AFB: 0
Moody AFB: 0
Patrick-Cape Canaveral: 0
Tyndall AFB: 0
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise:
Avon Park AFR: 50,410 acres
Eglin AFB: 384,500 acres
MacDill AFB: 1,550 acres
Moody AFB: 946 acres
Patrick-Cape Canaveral: 6,200 acres
Tyndall AFB: 15,303 acres

UNITED STATES MARINE CORPS

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement) **N/A**

ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement) **N/A**
iii) Total estimated acreage of **unprotected** tortoise habitat **N/A**
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise **MCLB Albany – 1,400 acres**

UNITED STATES FOREST SERVICE

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement)
There are 221, 448 acres of gopher tortoise habitat in long-term protection with 161,448 acres occurring on national forests in Florida, and an additional 60,000 acres on Conecuh National Forest in Alabama.
ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement)
None. All tortoise habitat is under long-term protection.
iii) Total estimated acreage of **unprotected** tortoise habitat
None. All tortoise habitat is protected.
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise
None. All tortoise habitat is protected.

UNITED STATES FISH AND WILDLIFE SERVICE

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement)

Eufaula	,250 (1,000 unoccupied, 250 occupied)
Archie Carr	2,000
Cedar Keys/Lower Suwannee	8,036
Chassahowitzka	40
Egmont Keys	260
Everglades Headwaters	10
Hobe Sound	272
Ding Darling	13
Lake Wales Ridge	1,900
Lake Woodruff	2,400
Merritt Island	88,751
Pelican Island	300
St. Marks	10,928
Ten Thousand Islands - The NWR is ~ 35,000 acres, including all submerged lands. Gopher tortoises occur or are suspected to occur on two mainland sites and five islands, totaling 104 acres of habitat.	
Okefenokee	800
TOTAL	117,064

ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement) – none reported

iii) Total estimated acreage of **unprotected** tortoise habitat

Archie Carr	100
Lake Wales Ridge	17,000
Okefenokee	2,100
TOTAL	19,200

iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise

Cedar Keys/Lower Suwannee	8,036
Chassahowitzka	40
Egmont Keys	260
Everglades Headwaters	100,000
TOTAL	108,336

FLORIDA

Acreage reported below is not the total acreage of the properties, but the acreage of land within those properties that had reportable activities. The lands listed below reflect gopher tortoise recipient sites protected under a perpetual conservation easement newly permitted within the reporting period.

i) Total estimated acreage of **permanently** protected tortoise habitat (either by public ownership or by easement) **19,833.9 acres**

Acreage reported below is not the total acreage of the properties, but the acreage of land within those properties that had reportable activities. The lands listed below reflect gopher tortoise recipient sites protected under a perpetual conservation easement newly permitted within the reporting period.

Long-term Protected Recipient Sites

Recipient Site Name	County	Acreage	Gopher tortoise habitat acres
Chinquapin Farm	Columbia/ Suwannee	465.0	465.0
Adams Ranch	Osceola	486.3	273.1
Heritage Ranch Section 12	Sarasota	407.3	407.3
PCS Gopher Ranch	Hamilton	57.9	55.8
Nokuse Plantation Magnolia Creek Sandhill	Walton	279.0	250.0
Allen Broussard Conservancy Long-Term Protected Site	Osceola	361.4	294.8

City of Oakland Park (Waif Recipient Site)	Broward	5.0	5.0
Total gopher tortoise acreage			**1,751.0**

Local Government Properties	**Manager (County)**	**Gopher tortoise habitat acres**
Alachua Fairgrounds	Alachua	4.0
Cypress Lakes Preserve	Hernando	63.0
Indrio Savannahs Preserve	St. Lucie	55.0
Jumping Gully Preserve	Pasco	40.0
Lake Park Scrub	Dept. of Environmental Resources	38.0
Patton Park	City of Carrabelle	20.0
Pine Island Flatwoods	Lee	181.0
Pine Island Preserve at Matalacha Pass	Conservation Foundation of the Gulf Coast	98.0
Pine Lily Preserve	Orange	17.6
Sheraton Scrub Preserve	St. Lucie	56.0
Tippecanoe Environmental Park	Charlotte	65.0
Yamato Scrub Natural Area	Palm Beach	67.0
Total gopher tortoise acreage		**582.6**

Data reported includes additional areas maintained or restored by Central Florida Ecosystem Support and the Northeast Florida Resource Management Partnership (a partnership of FWC, The Nature Conservancy, and the Florida Fire Strike Team). Their work was conducted at the following sites:

TNC Partner Property	**Gopher tortoise habitat acres**
ADB Catfish Creek Preserve State Park	54.0
Big Shoals State Park	46.0

Blackwater River State Forest	83.8
Bok Tower Gardens	5.0
Carter Creek (WEA)	73.8
Crooked Lake Sandhill	2.0
Crooked River Preserve	10.0
Hal Scott Preserve	1224.0
Hidden Waters Preserve	5.5
Highlands Hammock State Park	271.0
Lake Wales Ridge State Park	145.0
Longleaf Flatwoods Reserve	65.0
Mike Roess Goldhead Branch State Park	548.0
Nokuse Plantation	634.0
Ordway-Swisher BS	0.3
Paynes Prairie Creek Preserve	72.0
Perdido River Nature Preserve	9.4
Pumpkin Hill State Park	64.0
Reed Island	2.0
Rice Creek CA	80.0
Royce Unit (WEA)	120.0
Silver River State Park	50.0
Tiger Creek Preserve	0.3
Whiting Field Naval Air Station	33.0
TOTAL	**17,456.3**

*Site with zero acreage listed reported activities such as workdays removing exotics but did not report acreage. For those activities, data are reported as workdays in the discussion below.

ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement) **131,038.1 acres**

Acreage reported is not the total acreage of the properties, but the acreage of gopher tortoise habitat acres within those properties.

FWC-managed land

Name of Property	Manager	Gopher tortoise habitat acres
Andrews	FWC	707.6
Apalachee WMA	FWC	2,254
Apalachicola River	FWC	263.9
Aucilla	FWC	96.5
Babcock Ranch Preserve	FWC	2,994.3
Babcock/Webb	FWC	10,080.2
Bell Ridge Longleaf Mitigation Park	FWC	721.9
Big Bend WMA	FWC	8,325.6
Box – R	FWC	241.1
Branan Field Mitigation Park	FWC	131.8
Bullfrog Creek Mitigation Park	FWC	261.7
Caravelle Ranch	FWC	758.0
Chassahowitzka	FWC	8,074.7
Chinsegut	FWC	599.6
Crooked Lake	FWC	591.5
Escribano Point	FWC	90.9
Fisheating Creek	FWC	298.1
Florida Keys	FWC	40.6
Fort White Mitigation Park	FWC	981.5
Guana River	FWC	879.7
Half Moon	FWC	1,397.4
Herky Huffman/Bull Creek	FWC	4,686.6
Hickey Creek Mitigation Park	FWC	581.8
Hilochee	FWC	3,193.7
J.W. Corbett	FWC	2,659.0
Janet Butterfield Brooks Preserve	FWC	185.9
Joe Budd	FWC	1,379.5
L. Kirk Edwards	FWC	6.6
L. Kirk Edwards, Wood Sink	FWC	446.8
Lafayette Forest Mitigation Park	FWC	454.7
Lake Wales Ridge	FWC	12,366.1
Little Gator Creek	FWC	29.7

Moody Branch Mitigation Park	FWC	568.8
Okaloacoochee Slough	FWC	1,540.8
Perry Oldenburg	FWC	338.6
Platt Branch Mitigation Park	FWC	254.8
Salt Lake	FWC	1,051.8
Spirit of the Wild	FWC	1,243.8
Split Oak Mitigation Park	FWC	1,005.7
Suwannee Ridge Mitigation Park	FWC	1,274.0
Three Lakes	FWC	30,767.2
Tosohatchee	FWC	334.6
Triple N Ranch	FWC	4,485.7
Watermelon Pond Mitigation Park	FWC	789.7
Total gopher tortoise acreage		**109,437.1**

Short-term Protected Recipient Sites

Recipient Site Name	**County**	**Acreage**	**Gopher tortoise habitat acres**
Seabranch Preserve State Park	Martin	40.0	40.0
Total gopher tortoise acreage			**40.0**

iii) Total estimated acreage of **unprotected** tortoise habitat. *Note: unprotected habitat is not acquired by any agency or program and represents undeveloped gopher tortoise habitat within the state of Florida. Therefore, the total acreage cannot be restricted to a date range and includes all potential habitat, regardless of time period in which the property was recorded. Total unprotected habitat may include some lands where a management plan exists, but no special protection status is designated.* **1,913,635.0 acres**

iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise. **None during this reporting period.**

GEORGIA

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement)

The State permanently protects 31,716 acres of tortoise habitat on Wildlife Management Areas, Public Fishing Areas, State Parks, and Historic Sites. The table below breaks down the acreages by property. All state lands harboring tortoises are considered permanently protected. At this time we do not have

information on protected tortoise habitat on private lands with conservation easements.

Site	acreage	suitable tortoise acres
Altamaha WMA	30,368	88
Bagby SP	742	82
Ballard Tract WMA	5700	840
Big Hammock WMA/NA	6900	140
Bullard Creek WMA	9331	1140
Chickasawhatchee WMA	19700	4200
Crooked River SP	511	195
Dixon Memorial WMA	35559	500
Dodge County PFA	445	110
Doerun Pitcher Plant Bog WMA	600	300
Elmodel WMA	1600	200
Evans County PFA	400	30
Fall Line Sandhills WMA	1576	1488
Flat Tub WMA	3597	740
Flint River WMA	2300	600
General Coffee SP	1428	564
George L. Smith SP	1666	380
Georgia Veterans SP	1474	388
Grand Bay WMA	8700	250
Griffin Ridge WMA	5600	645
Horse Creek WMA	8100	875
Howfyl-Broadfield State Historic Site	1264	200
Kolomoki Mounds SP	1297	185
Laura Walker SP	659	150
Little Ocmulgee SP	1290	332
Mayhaw WMA	4700	250
McDuffie PFA	600	40
Moody Forest WMA	4455	1206
Ocmulgee WMA	11,700	600
Ohoopee Dunes WMA	2500	1342
Paradise PFA	1300	100
Penholoway Swamp WMA	4565	500
Reed Bingham SP	1622	233
River Creek WMA	2793	1310
Seminole SP	776	300
Silver Lake WMA	8506	5000
Townsend WMA	24400	3263
Tuckahoe WMA	15100	250
Yuchi WMA	7800	2700
TOTAL	**241,624**	**31,716**

ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement)
Not applicable.
iii) Total estimated acreage of **unprotected** tortoise habitat
Not applicable.
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise
Not applicable.

SOUTH CAROLINA

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement):
Aiken Gopher Tortoise Heritage Preserve (AGTHP) = 1,622 AC
Tillman Sandridge Heritage Preserve (TSHP) = 1,437 AC
ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement):
Not applicable or none during this reporting period.
iii) Total estimated acreage of **unprotected** tortoise habitat
Not applicable or none during this reporting period.
ii) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise
Not applicable or none during this reporting period.

GEORGIA DEPARTMENT OF TRANSPORTATION

New signatory to the GT CCA; report not required this year.

POARCH BAND OF CREEK INDIANS

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement) – about 7,500 acres
ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement) - About 1000 acres
iii) Total estimated acreage of **unprotected** tortoise habitat - None
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise – None

AMERICAN FOREST FOUNDATION

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement) - N/A
ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement) - N/A

iii) Total estimated acreage of **unprotected** tortoise habitat - N/A
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise - N/A

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement): **18,821 ac (7616.7 ha)**
ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement): **N/A**
iii) Total estimated acreage of **unprotected** tortoise habitat: **N/A**
iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise: **N/A**

b) Land Management

ARMY

i) Acres of gopher tortoise habitat restored or improved
Fort Benning – 1092
Fort Gordon – Within the 28,481 acre HMU, 13,021 acres was improved through prescribed fire, timber harvest, mechanical midstory removal, and herbicide application (11,343 burning, 846 timber harvest, 19 mechanical midstory removal, and 813 herbicide application).
Fort Rucker- 248 (longleaf conversion)
Fort Stewart – in FY 12, 175 acres were improved via heavy-duty mowing, with an additional 130 acres delineated and ready for treatment in FY 13. Herbicides (single stem injection) were used to re-treat an additional 161 acres. Since 2004, 1,424 acres have undergone midstory reduction (1,239 acres – heavy duty mowing and 185 acres – herbicide). Since 1994, 315 acres (6 acres FY 12) have been restored (converted to wiregrass and longleaf pine) to suitable GT habitat and in FY 12, 38 acres were thinned for restoration efforts to conclude in FY 13 with wiregrass and longleaf planting.
Camp Blanding Joint Training Center – 914
ii) Acres of gopher tortoise habitat maintained
Fort Benning – 48,000
Fort Gordon – 7,321 acres
Of the 28,481 acre HMU, 7,321 acres is considered currently suitable gopher tortoise habitat. This entire area was maintained by prescribed fire and/or herbicide treatment in FY 2012.
Fort Rucker- 4288
Fort Stewart – 15,953 acres (14,294 accessible acres and 1,659 inaccessible acres in the AIA). Inaccessible habitat in the AIA is maintained by frequent prescribed fire (1-2 year interval) using aerial ignition.
Camp Blanding Joint Training Center – 6,282

iii) Acres of gopher tortoise habitat burned

(1) Total

Fort Benning -23,629

Fort Gordon - Prescribed burning was conducted on 11,343 acres of the 28,481 acre HMU in FY 2012 (6,317 acres in "potentially suitable," and 5,026 acres in "currently suitable").

Fort Rucker -3,380

Fort Stewart =11,694

Camp Blanding Joint Training Center

(2) Acres burned during dormant season (% of total acres burned)

Fort Benning – 12,760

Fort Gordon – Of the 28,481 acre HMU, 8,815 acres was burned during the dormant season in FY 2012. (78% of total burned acreage, 4,955 acres in "potentially suitable," and 3,860 acres in "currently suitable").

Fort Rucker- 2873

Fort Stewart – 4,751

Camp Blanding Joint Training Center – N/A

(3) Acres burned during growing season (% of total acres burned)

Fort Benning – 10,869

Fort Gordon – Of the 28,481 acre HMU, 2,528 acres was burned during the growing season in FY 2012. (22% of total burned acreage, 1,362 acres in "potentially suitable," and 1,166 acres in "currently suitable").

Fort Rucker- 507

Fort Stewart – 1,037

Camp Blanding Joint Training Center – N/A

iv) Acres of invasive species treated/eradicated (include species involved)

Fort Benning - 53 (Feral Swine acres removed), 305 (Kudzu acres treated), 1 (Cogon grass treated)

Fort Gordon –None

Fort Rucker- cogon grass 16 acres, kudzu 22.5 acres

Fort Stewart – None

Camp Blanding Joint Training Center – 62 Cogon grass, Japanese climbing fern, Chinese tallow tree, Kudzu, Chinaberry, Red sesbania

v) Other land management activities

Fort Benning - None

Fort Gordon – Within the HMU 846 acres of habitat was improved by timber thinning (824 acres in "potentially suitable" and 22 acres in "currently suitable") Herbicide was applied to 813 acres within the HMU to reduce the coverage of understory and midstory hardwoods. (420 acres in "potentially suitable," and 393 acres in "currently suitable"). Mechanical midstory removal was used to improve 19 acres within the HMU to reduce the coverage of midstory hardwoods. (3 acres in "potentially suitable," and 16 acres in "currently suitable").

Fort Rucker- 350 acres

Fort Stewart – N/A

Camp Blanding Joint Training Center – 746 acres of herbicide treatment of encroaching hardwoods

NAVY

i) Acres of gopher tortoise habitat restored or improved: 74 acres
ii) Acres of gopher tortoise habitat maintained: 55 acres
iii) Acres of gopher tortoise habitat burned: 72
   (1) Acres burned during dormant season (% of total acres burned): 90%
   (2) Acres burned during growing season (% of total acres burned): 10%
iv) Acres of invasive species treated/eradicated (include species involved): 255 acres
v) Other land management activities: N/A

AIR FORCE

i) Acres of gopher tortoise habitat restored or improved:
Avon Park AFR: 0
Eglin AFB: 1,350 acres were treated with chemicals in order to remove hardwood mid-story thus improving herbaceous groundcover. In addition, sand pine saplings were removed from 5729 acres for overall sandhills ecosystem restoration.
MacDill AFB: 0
Moody AFB: 35 acres
Patrick-Cape Canaveral: 443 acres
Tyndall AFB: 0

ii) Acres of gopher tortoise habitat maintained
Avon Park AFR: 0
Eglin AFB: The majority of the potential habitat listed above is in good condition. Prescribed fire was applied to 100,450 acres and most of the forested habitat is on a three year burn rotation. Urban habitat and cleared test ranges are mowed regularly.
MacDill AFB: 1,000 acres of airfield area are mowed routinely to keep grass short, and 550 acres of flatwoods/scrub habitat is treated with herbicide to control exotic invasive species growth.
Moody AFB: 447 acres
Patrick-Cape Canaveral: 1,055 acres
Tyndall AFB: 0

iii) Acres of gopher tortoise habitat burned:
Avon Park AFR: 10,672 acres
Eglin AFB: 100,450 acres
MacDill AFB: 0
Moody AFB: 61 acres
Patrick-Cape Canaveral: 121 acres
Tyndall AFB: 1,068 acres
   (1) Acres burned during dormant season (% of total acres burned):
   Avon Park AFR: 1,755 acres (16%)
   Eglin AFB: 74,168 acres (74%)
   MacDill AFB: 0 (0%)
   Moody AFB: 61 acres (100%)
   Patrick-Cape Canaveral: 121 acres (100%)

Tyndall AFB: 598 acres (56%)

(2) Acres burned during growing season (% of total acres burned):
Avon Park AFR: 8,917 acres (84%)
Eglin AFB: 26,282 acres (26%)
MacDill AFB: 0 (0%)
Moody AFB: 0 (0%)
Patrick-Cape Canaveral: 0 (0%)
Tyndall AFB: 470 acres (44%)

iv) Acres of invasive species treated/eradicated (include species involved):
Avon Park AFR: Approximately 300 acres treated for cogon grass; 100 acres treated for old world climbing ferns.
Eglin AFB: 100 acres treated for cogon grass, Chinese tallow, Japanese climbing fern, and torpedo grass.
MacDill AFB: 1,618 acres were treated with herbicides to control growth of exotic invasive species (Brazilian pepper, lead tree, melaleuca, and cogon grass). 18 acres of mechanical clearing of Brazilian pepper and melaleuca was accomplished in areas of potential gopher tortoise habitat.
Moody AFB: 5 acres treated for Japanese climbing fern
Patrick-Cape Canaveral: 1,170 acres treated for Brazilian pepper, cogon grass, Vitex, Wedelia, natal grass, lantana, and Australian pine.
Tyndall AFB: 70 acres treated with herbicide for cogon grass.

v) Other land management activities:
Avon Park AFR: Feral hog control has been underway, primarily to control damage to Sensitive, Threatened, and Endangered plant habitats. Hog rooting permanently alters the soil structure upon which these plants rely. Approximately 300 hogs were removed from APAFR between October 2011 and September 2012. Rooting of sensitive plant sites has been noticeably reduced. Effects on gopher tortoise are also presumed to be beneficial.
Eglin AFB: None
MacDill AFB: Six acres of mechanically cleared invasive species were replanted with native plant species including longleaf pines, buttonwood, wax myrtle, and native grasses.
Moody AFB: None
Patrick-Cape Canaveral: 10 acres of mechanical/treatment of invasives completed on REPI lands off-site.
Tyndall AFB: 511 acres roller drum chopping, selective thinning of timber from 425 acres, and applying herbicide on 107 acres.

UNITED STATES MARINE CORPS

i) Acres of gopher tortoise habitat restored or improved **None**
ii) Acres of gopher tortoise habitat maintained **MCLB Albany – 1,400**
iii) Acres of gopher tortoise habitat burned **None. Due to lack of staff, no burning was conducted in FY12. However a new Natural Resources Manager has been hired and in FY13 much, if not all, of the 1400 will be burned.**

(1) Acres burned during dormant season (% of total acres burned) **None**

(2) Acres burned during growing season (% of total acres burned) **None**

iv) Acres of invasive species treated/eradicated (include species involved) **None**

v) Other land management activities **None**

UNITED STATES FOREST SERVICE

i) Acres of gopher tortoise habitat restored or improved
Approximately 27,300 acres are restored as follows: 21,000 acres on Conecuh National Forest and 6,298 acres on the National Forest in Florida.

ii) Acres of gopher tortoise habitat maintained
Approximately 62,900 acres of gopher tortoise habitat maintained as follows: 21,000 acres on Conecuh National Forest and 62,888 acres on the National Forest in Florida.

iii) Acres of gopher tortoise habitat burned
A total of 62,975 acres were burned as follows: 27,265 acres on Conecuh National Forest and 35,710 acres on the National Forest in Florida.

(1) Acres burned during dormant season (% of total acres burned)
A total of 23,383 acres (37%) were burned during the dormant season as follows: 18,107 acres (67%) on Conecuh National Forest and 5,276 acres (15%) on the National Forest in Florida.

(2) Acres burned during growing season (% of total acres burned)
A total of 39,592 acres (63%) were burned during the growing season as follows: 9,158 acres (33%) on Conecuh National Forest and 30,434 acres (85%) on the National Forest in Florida.

iv) Acres of invasive species treated/eradicated (include species involved)
A total of 125 acres of invasive species were treated as follows: 65 acres (cogongrass, tallowtree, Japanese climbing fern, and kudzu) on Conecuh National Forest and 60 acres (cogongrass, air potato, and Japanese climbing fern) on the National Forest in Florida.

v) Other land management activities
500 acres - feral hog control

UNITED STATES FISH AND WILDLIFE SERVICE

i) Acres of gopher tortoise habitat restored or improved

Eufaula	1,000
Archie Carr	300
Cedar Keys/Lower Suwannee	3,100
Okefenokee	350
TOTAL	4,750

ii) Acres of gopher tortoise habitat maintained

Eufaula	250
Archie Carr	350
Cedar Keys/Lower Suwannee	4,936
Chassahowitzka	40
Egmont Keys	260

Everglades Headwaters	10
Hobe Sound	275
Ding Darling	13
Pelican Island	300
St. Marks	10,928
Ten Thousand Islands	104
Okefenokee	800
TOTAL	18,266

iii) Acres of gopher tortoise habitat burned

Eufaula	450
Archie Carr	75
Cedar Keys/Lower Suwannee	2,000
Lake Woodruff	956
Merritt Island	14,098
St. Marks	4,752 (43% of the NWR)
Okefenokee	145
TOTAL	22,476

(1) Acres burned during dormant season (% of total acres burned)

Merritt Island	5,216 (37%)
St. Marks	3,421 (72%)
Okefenokee	145 (100%)
TOTAL	8,782 (39% of total acres burned)

(2) Acres burned during growing season (% of total acres burned)

Eufaula	450 (100%)
Archie Carr	75 (100%)
Cedar Keys/Lower Suwannee	2,000 (100%)
Lake Woodruff	956 (100%)
Merritt Island	8,882 (63%)
St. Marks	1,331 (28%)
TOTAL	13,694 (61% of total acres burned)

iv) Acres of invasive species treated/eradicated (include species involved)

Archie Carr	250 (FWS lands); 350 (partners' lands)
Cedar Keys/Lower Suwannee	700 (cogongrass, Brazilian pepper)
Hobe Sound	4 (cogongrass, beach naupaka)
Lake Wales Ridge	100
Lake Woodruff	0.25 (cogongrass)
Merritt Island	21.5 (cogongrass)
Pelican Island	250
St. Marks	5 (cogongrass, Japanese climbing fern, camphor tree, lantana)

Egmont Key As of 1/18/13 a contractor is working on the Refuge to eradicate all species of exotic invasive plants within the managed area. The contractor is focusing on the most serious species, including: Brazilian pepper, cogon grass, and Australian pine. This exotic plant control has been done several times over

the previous 10 years, but this contractor has been directed to treat all species that may spread across the island or may out-compete native vegetation.

Ten Thousand Islands	23 acres (Brazilian pepper), Lather leaf follow-up treatments from 2011 treatments.
TOTAL	Approx. 1,354 acres treated for invasive species

v) Other land management activities
Lower Suwannee/Cedar Keys NWRs – 84 acres planted with longleaf pine / wiregrass seedlings; 298 acres pine timber thinned in 2012; 2 compartments were sold in 2012, but thinning will not take place until 2013. 122 acres mowed - maintain firelines and openings.

Ding Darling – Mowed 7 acres.

FLORIDA

i) Acres of gopher tortoise habitat restored or improved
Acreage reported is not the total acreage of the properties, but the acreage of land within those properties that had reportable activities. *Note: affected habitat area may exceed total habitat acres since multiple treatments and activities may be applied to the same acreage.*

FWC Managed Land	**42,283.2**
TNC Fire Strike Team Projects	**17,456.3**
Local Government Managed	**582.6**
TOTAL acres	**60,322.1**

Name of Property	Manager	Gopher tortoise habitat managed (ac.)
Andrews	FWC	517.9
Apalachee WMA	FWC	1230.4
Babcock/Webb WMA	FWC	3.8
Bell Ridge Longleaf WEA	FWC	4765.6
Big Bend WMA	FWC	721.9
Box - R WMA	FWC	2054.3
Bull Creek WMA	FWC	30.1
Caravelle Ranch WMA	FWC	1327.6
Chassahowitzka WMA	FWC	6.0
Chinsegut WMA	FWC	885.7

Crooked Lake WEA	FWC	1092.0
Fisheating Creek WMA	FWC	50.8
Fort White Mitigation Park	FWC	20.8
Guana River WMA	FWC	250.6
Half Moon	FWC	418.6
Hickey Creek Mitigation Park	FWC	242.6
Hilochee WMA	FWC	11.8
J.W. Corbett	FWC	947.9
Janet Butterfield Brooks WEA	FWC	2057.6
Joe Budd WMA	FWC	791.3
L. Kirk Edwards WEA	FWC	306.7
Lafayette Forest WEA	FWC	234.1
Lake Wales RidgeWMA	FWC	261.8
Okaloacoochee Slough	FWC	1245.1
Perry Oldenberg Mitigation Park	FWC	4090.6
Platt Branch Mitigation Park	FWC	1392.4
Salt Lake WMA	FWC	77.8
Spirit of the Wild	FWC	193.5
Split Oak Mitigation Park	FWC	969.5
Suwannee Ridge Mitigation Park	FWC	271.4
Three Lakes	FWC	809.7
Tosohatchee WMA	FWC	12404.6
Triple N Ranch WMA	FWC	231.3
Watermelon Pond Mitigation Park	FWC	2104.8
SUB TOTAL		**42,283.2**

Local Government Properties	**Manager (County)**	**Gopher tortoise habitat managed (ac.)**

Alachua Fairgrounds	Alachua	4.0
Cypress Lakes Preserve	Hernando	63.0
Indrio Savannahs Preserve	St. Lucie	55.0
Jumping Gully Preserve	Pasco	40.0
Lake Park Scrub	Dept. of Environmental Resources	38.0
Patton Park	City of Carrabelle	20.0
Pine Island Flatwoods	Lee	181.0
Pine Island Preserve at Matalacha Pass	Conservation Foundation of the Gulf Coast	98.0
Pine Lily Preserve	Orange	17.6
Sheraton Scrub Preserve	St. Lucie	56.0
Tippecanoe Environmental Park	Charlotte	65.0
Yamato Scrub Natural Area	Palm Beach	67.0
Total gopher tortoise acreage		**582.6**

TNC Partner Property	**Gopher tortoise habitat managed (ac.)**
ADB Catfish Creek Preserve State Park	54.0
Big Shoals State Park	46.0
Blackwater River State Forest	83.8
Bok Tower Gardens	5.0
Carter Creek (WEA)	73.8
Crooked Lake Sandhill	2.0
Crooked River Preserve	10.0
Hal Scott Preserve	1224.0
Hidden Waters Preserve	5.5
Highlands Hammock State Park	271.0

Lake Wales Ridge State Park	145.0
Longleaf Flatwoods Reserve	65.0
Mike Roess Goldhead Branch State Park	548.0
Nokuse Plantation	634.0
Ordway-Swisher BS	0.3
Paynes Prairie Creek Preserve	72.0
Perdido River Nature Preserve	9.4
Pumpkin Hill State Park	64.0
Reed Island	2.0
Rice Creek CA	80.0
Royce Unit (WEA)	120.0
Silver River State Park	50.0
Tiger Creek Preserve	0.3
Whiting Field Naval Air Station	33.0
TOTAL	**17,456.3**

ii) Acres of gopher tortoise habitat maintained *(see above)*

iii) Acres of gopher tortoise habitat burned: **42,945.9 acres**

(1) Acres burned during dormant season: **27,263.8 acres**

(2) Acres burned during growing season: **15,682.1 acres**

Name of Property	**Area manager**	**Prescribed Fire-Dormant Season**	**Prescribed Fire-Growing Season**	**Total acres by property**
Andrews	FWC		517.9	517.9
Apalachee WMA	FWC	1,018.0	126.0	1,144.0
Aucilla	FWC	3.8		3.8
Babcock/Webb WMA	FWC	3,248.8	408.1	3,656.9
Bell Ridge Longleaf WEA	FWC		721.9	721.9
Big Bend WMA	FWC	831.1	214.5	1,045.6

Box – R	FWC	25.6		25.6
Bull Creek WMA	FWC	109.5	1,035.1	1,144.6
Caravelle Ranch	FWC	6.0		6.0
Chassahowitzka	FWC	390.5	177.9	568.4
Chinsegut Nature Center	FWC	25.6		25.6
Fort White Mitigation Park	FWC		65.0	65.0
Guana River	FWC	143.8	127.4	271.2
Half Moon	FWC	145.9	54.2	200.1
Hickey Creek Mitigation Park	FWC		11.8	11.8
Hilochee	FWC	244.5	91.4	335.9
J.W. Corbett	FWC	7.9		7.9
Joe Budd	FWC	97.0	69.3	166.3
L. Kirk Edwards	FWC	2.9	106.0	108.9
Lake Wales Ridge	FWC	406.0	113.6	519.6
Okaloacoochee Slough	FWC	131.8	258.0	389.8
Perry Oldenburg Mitigation Park	FWC	14.7		14.7
Platt Branch Mitigation Park	FWC	10.1	1.4	11.5
Salt Lake	FWC	29.1	118.1	147.2
Spirit of the Wild	FWC	0.5	101.6	102.1
Split Oak Mitigation Park	FWC		226.8	226.8
Suwannee Ridge Mitigation Park	FWC	422.8		422.8
Three Lakes	FWC	3,307.1	8,916.5	12,223.6
Tosohatchee	FWC		51.9	51.9
Triple N Ranch	FWC	994.8	1,037.6	2,032.4

SUBTOTAL	**FWC**	**11,617.8**	**14,552.1**	**26,169.8**
Pine Island Preserve at Matalacha Pass	Conservation Foundation of the Gulf Coast (NGO)	49.0		49.0
SUBTOTAL	**Local Government Funded Projects**	**49.0**		**49.0**
ADB Catfish Creek Preserve State Park	TNC and Partnering Agency	54.0		54.0
Big Shoals State Park	TNC and Partnering Agency	46.0		46.0
Carter Creek (WEA)	TNC and Partnering Agency	72.0		72.0
Crooked River Preserve	TNC and Partnering Agency	10.0		10.0
Hal Scott Preserve	TNC and Partnering Agency	1,224.0		1,224.0
Highlands Hammock State Park	TNC and Partnering Agency	271.0		271.0
Lake Wales Ridge State Forest	TNC and Partnering Agency	145.0		145.0
Longleaf Flatwoods Reserve	TNC and Partnering Agency	65.0		65.0
Mike Roess Goldhead Branch SP	TNC and Partnering Agency	548.0		548.0
Nokuse Plantation	TNC and Partnering Agency	632.0		632.0
Paynes Prairie Creek Preserve	TNC and Partnering Agency	10.0		10.0
Pumpkin Hill State Park	TNC and Partnering Agency	64.0		64.0

Rice Creek CA	TNC and Partnering Agency	80.0		80.0
Royce Unit (WEA)	TNC and Partnering Agency	120.0		120.0
Silver River SP	TNC and Partnering Agency	50.0		50.0
Whiting Field Naval Air Station	TNC and Partnering Agency	33.0		33.0
SUBTOTAL	**TNC Fire Strike Team Projects**	**15,597.0**	**1,130.0**	**16,727.0**
TOTAL PRESCRIBED FIRE		**27,263.8**	**15,682.1**	**42,945.9**

iv) Acres of invasive species treated/eradicated (include invasive plant/animal type):
6,879.5 acres and 52 additional workdays

Each agency has reported exotic removal in various manners. Because of the inconsistency, the data below are broken into three tables.

FWC Managed Properties

Name of Property	Exotics-Hardwood	Exotics-Shrubs/Herbaceous	Exotic Removal by Property (ac)
Apalachee WMA		5.6	5.6
Babcock/Webb		473.9	473.9
Bull Creek WMA		0.3	0.3
Chassahowitzka WMA		144.0	144.0
Chinsegut Nature Center/ WEA	113.0	415.0	528.0
Crooked Lake WEA		50.8	50.8
Fisheating Creek WMA		20.8	20.8
Guana River WMA	0.4		0.4
Hilochee WMA	0.3	56.7	57.0
J.W. Corbett		1,019.3	1,019.3
Janet Butterfield Brooks WEA	146.4	248.7	395.1
Joe Budd WMA		20.0	20.0
Lake Wales Ridge WEA	25.5	210.5	236.0
Okaloacoochee Slough		2,962.2	2,962.2
Perry Oldenburg	334.8	331.5	666.3

Mitigation Park			
Platt Branch Mitigation Park		2.1	2.1
Salt Lake WMA	2.1	2.0	4.1
Spirit of the Wild		0.8	0.8
Split Oak Mitigation Park		44.6	44.6
Three Lakes		7.6	7.6
Tosohatchee WMA		138.3	138.3
Triple N Ranch WMA		2.8	2.8
Watermelon Pond Mitigation Park		50.5	50.5
Total FWC Lands			6,830.5

Local Government Agency

Local Government Agency Property	Managing Agency	Exotic Removal by Property (ac)
Pine Island Preserve at Matalacha Pass	Conservation Foundation of the Gulf Coast	49.0
Total Local Government Agencies		49.0

The Nature Conservancy Partner Projects

TNC Partner Property	Exotic Removal by Property (ac)	Work Days
Blackwater River State Forest	83.8	5
Bok Tower Gardens	5.0	1
Carter Creek (WEA)	1.8	3
Crooked Lake Sandhill	2.0	2
Hidden Waters Preserve	5.5	1
Ordway-Swisher BS	0.3	1
Nokuse Plantation	2.0	3
Paynes Prairie Preserve State Park	62.0	
Perdido River Nature Preserve	9.4	4
Reed Island	2.0	1
Tiger Creek Preserve	0.3	1
Total Partner Project	729.3	52

v) Other land management activities (chemical/mechanical treatment): **6,649.1 acres**

FWC Managed Properties

Name of Property	Chemical Treatment (not for exotics)	Mechanical Treatment	Ground Cover Restoration	Total of other land management

				activities (ac.)
Apalachee WMA	4.4	76.4		80.8
Babcock/Webb WMA		160.9		634.8
Big Bend WMA		660.0	348.7	1,008.7
Box - R WMA		4.5		4.5
Bull Creek WMA		182.4		182.7
Chassahowitzka WMA		29.3		173.3
Chinsegut WMA			10.4	538.4
Fort White Mitigation Park		185.6		185.6
Guana River WMA	9.3	137.7		147.0
Half Moon		41.8	0.7	42.5
Hilochee WMA	36.0	486.4	32.6	555.0
J.W. Corbett		11.1		1,030.4
Janet Butterfield Brooks WEA		1.1		396.2
Joe Budd WMA	23.4		97.0	120.4
L. Kirk Edwards WEA		19.2	106.0	125.2
Lafayette Forest WEA		24.5	237.3	261.8
Lake Wales Ridge	42.1	43.7	403.7	489.5
Okaloacoochee Slough	233.8	114.9	389.9	738.6
Perry Oldenburg Mitigation Park		30.4	14.7	711.4
Platt Branch Mitigation Park		45.3	16.8	64.2
Salt Lake	21.2	21.0		42.2
Spirit of the Wild		865.7		866.6
Suwannee Ridge Mitigation Park		386.9		386.9

Three Lakes		165.8		173.4
Tosohatchee	3.0	38.1		41.1
Triple N Ranch		66.8		69.6
Watermelon Pond Mitigation Park	78.1		134.0	212.1
SUBTOTALS	451.3	3,799.3	1,791.8	6,042.5

Local Government Projects

Property Name	Fire Line Installation	Hardwood Reduction	Roller-chopping	Other (Reseeding)	Total of other land management activities (ac.)
Alachua County Fairgrounds		4.0			4.0
Cypress Lakes Preserve			63.0 (Mulching)		63.0
Indrio Savannah Preserve			55.0		55.0
Jumping Gully Preserve				40.0	40.0
Lake Park Scrub			38.0		38.0
Patton Park		20.0			20.0
Pine Island Flatwoods			181.0		181.0
Pine Lily Preserve			17.6 (Mulching)		17.6
Sheraton Scrub Preserve	56.0				56.0
Tippecanoe Environmental Park			65.0 (Mulching)		65.0
Yamato Scrub Natural Area			67.0		67.0
SUBTOTALS	56.0	24.0	486.6	40.0	606.6

GEORGIA

i) Acres of gopher tortoise habitat restored or improved
See items below.

ii) Acres of gopher tortoise habitat maintained
See items below.

iii) Acres of gopher tortoise habitat burned

(1) Acres burned during dormant season (% of total acres burned)11,315 ac (76%). The table below breaks down the acreages by property.*

Bullard Creek WMA	800
Chickasawhatcee WMA	451
DiLane WMA	1117
Doerun WMA	190
Elmodel WMA	115
Fall Line Sandhills WMA	415
Flat Tub WMA	57
Flint River WMA	131
George L. Smith SP	150
Grand Bay WMA	330
Horse Creek WMA	600
Kolomoki Mounds SP	30
Mayhaw WMA	850
Moody Forest WMA	1022
Ocmulgee WMA	1064
Ohoopee Dunes WMA	80
River Creek WMA	838
Seminole SP	310
Silver Lake WMA	1000
Townsend WMA	200
Yuchi WMA	1565
2012 TOTAL	**11315**
2011 TOTAL	15487
2010 TOTAL	14326
2009 TOTAL	17865

* Our burn data do not break down acreages by habitat. As a result, the acreages given here unfortunately over-estimate tortoise habitat burned by including all habitats within burn units.

(2) Acres burned during growing season (% of total acres burned) 3,543 ac. (24%). The table below breaks down the acreages by property.*

Big Dukes Pond WMA	170
Chickasawhatcee WMA	537
Doerun WMA	214
Fall Line Sandhills WMA	370
Lewis Tract (DNR easement)	110
Mayhaw WMA	135
Moody Forest WMA	807
Reed Bingham SP	60
River Creek WMA	299
Seminole SP	75
Silver Lake WMA	766
2012 TOTAL	**3543**
2011 TOTAL	1830
2010 TOTAL	1360
2009 TOTAL	305

* Our burn data do not break down acreages by habitat. As a result, the acreages given here unfortunately over-estimate tortoise habitat burned by including all habitats within burn units.

iv) Acres of invasive species treated/eradicated (include species involved) 300 acres of sand pine was eradicated on state lands.

v) Other land management activities 1598 acres of state lands harboring gopher tortoises were thinned of off-site pines and 620 acres were clear-cut. Prior to these timber operations, all tortoise burrows in the sale units were marked and loggers were informed to avoid disturbance to them. Additionally, 599 acres of longleaf pine and 30 acres of native warm season grasses (NWSG) were planted on state lands harboring gopher tortoises. The tables below break down the acreages by property.*

	CLEARCUT	THIN	MULCH	HERBICIDE	LONGLEAF	N.W.S.G.
Chichasawhatchee WMA	42				74	30
Doerun WMA					20	
Elmodel WMA					49	
Moody Forest WMA					54	
River Creek WMA	64	147				
Silver Lake WMA	59	1017				
Townsend WMA	155				402	
Yuchi WMA	300	434				
2012 TOTAL	**620**	**1598**	**0**	**0**	**599**	**30**
2011 TOTAL	1225	197	50	60	427	280
2010 TOTAL	426	2633	not reported	not reported	872	0
2009 TOTAL	156	3190	not reported	not reported	375	0

* Our timber data do not break down acreages by habitat. As a result, the acreages given here unfortunately over-estimate tortoise habitat thinned or clear-cut by including all upland habitats within timber sales.

Additionally, through the Multistate Sandhills Ecological Restoration Projects (funded by two Competitive State Wildlife Grants), Georgia DNR assisted private landowners with prescribed burns totaling 5,776 acres, longleaf pine plantings totaling 395 acres, and mechanical removal of sand pine on 30 acres, and herbicide treatment of hardwoods on 90 acres.

SOUTH CAROLINA

i) Acres of gopher tortoise habitat restored or improved
Aiken Gopher Tortoise Heritage Preserve (AGTHP) = 476 AC burned and 245 AC treated with herbicide.
Tillman Sandridge Heritage Preserve (TSHP) = 337 AC burned.

ii) Acres of gopher tortoise habitat maintained - Refer to 2.b.i.

iii) Acres of gopher tortoise habitat burned
(1) Acres burned during dormant season (% of total acres burned)
476 AC burned
(2) Acres burned during growing season (% of total acres burned)
337 AC burned

iv) Acres of invasive species treated/eradicated (include species involved)
Not applicable or none during this reporting period.

v) Other land management activities
Not applicable or none during this reporting period.

POARCH BAND OF CREEK INDIANS

i) Acres of gopher tortoise habitat restored or improved – 7,500 acres

ii) Acres of gopher tortoise habitat maintained – 1,000 acres

iii) Acres of gopher tortoise habitat burned – 750 acres
(1) Acres burned during dormant season (% of total acres burned) - 10%
(2) Acres burned during growing season (% of total acres burned) – 0%

iv) Acres of invasive species treated/eradicated (include species involved)- 950 acres of cogon grass and privet were treated some through aerial spraying and others through individual spraying.

v) Other land management activities – Complete burning for fire lane placements

AMERICAN FOREST FOUNDATION

i) Acres of gopher tortoise habitat restored or improved – N/A

ii) Acres of gopher tortoise habitat maintained – N/A

iii) Acres of gopher tortoise habitat burned – N/A
(1) Acres burned during dormant season (% of total acres burned) – N/A
(2) Acres burned during growing season (% of total acres burned) – N/A

iv) Acres of invasive species treated/eradicated (include species involved) – N/A

v) Other land management activities - N/A

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

i) Acres of gopher tortoise habitat restored or improved: **HW removal on 125 ac (51 ha)**

ii) Acres of gopher tortoise habitat maintained: **18,821 ac (7616.7 ha)**
iii) Acres of gopher tortoise habitat burned: **11,940.5 ac (4832.1 ha)**
   (1) Acres burned during dormant season (% of total acres burned): **66.8% (Jan, Feb, Mar, Oct, Dec)**
   (2) Acres burned during growing season (% of total acres burned): **33.2% (Apr, May, Jun)**
iv) Acres of invasive species treated/eradicated (include species involved): **N/A**
v) Other land management activities: **N/A**

c) Land Conservation

ARMY

i) Acquisitions, easements and other long-term conservation protection
   Fort Benning - 0
   Fort Gordon –0
   Fort Rucker- 0
ii) Fort Stewart – Great Ogeechee Lakes and Preserve properties, consisting of 551 acres (130 acres xeric habitat) began in FY 12 and should close in FY 13 (1 tract closed Oct 2012). There are 1,106 acres of GT habitat within Fort Stewart's ACUB (excluding Great Ogeechee Lakes and Preserve properties) that are permanently protected either by ownership or permanent easement. Fort Stewart staff does not monitor these acres, but there are documented occurrences on some tracts and anecdotal evidence that GT may occur on other tracts based on soil type.
   Camp Blanding Joint Training Center – 0
iii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent)
   Fort Benning - 0
   Fort Gordon - 0
   Fort Rucker- 0
   Fort Stewart - 0
   Camp Blanding Joint Training Center – 75 acres was lost due to the creation of 2 new military ranges. Approximately 66 acres, or more, will be returned to gopher tortoise habitat upon range construction completion.

NAVY

i) Acquisitions, easements and other long-term conservation protection: N/A
ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent): N/A

UNITED STATES MARINE CORPS

i) Acquisitions, easements and other long-term conservation protection **None**
ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent) **None**

AIR FORCE

i) Acquisitions, easements and other long-term conservation protection:

Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: Purchased three easements on parcels of land off-site for a total of 82.04 acres as part of the REPI program (reported 50 acre parcel purchase under REPI in 2011 reporting period).
Tyndall AFB: None

ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent):

Avon Park AFR: None
Eglin AFB: 554 acres lost permanently due to construction activities
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: Less than five acres of tortoise habitat permanently removed due to development of facilities or expansion of current facilities. Several hundred acres of habitat temporarily disturbed due to various projects listed under d) below. Approximately 75 acres of overgrown scrub/maritime hammock permanently removed as part of an airfield clearzone project at CCAFS; however, those acres are being considered non-permanent since the area will be maintained as mowed grass. Based on observations by installation biologists, gopher tortoises routinely burrow into areas such as this and actual clearing improved habitat since previous vegetation was too overgrown to support a large population of tortoises.
Tyndall AFB: None

UNITED STATES FOREST SERVICE

i) Acquisitions, easements and other long-term conservation protection
None during this reporting period.

ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent)
None during this reporting period.

UNITED STATES FISH AND WILDLIFE SERVICE

i) Acquisitions, easements and other long-term conservation protection – none

ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent)
Egmont Key NWR – The only known cause of habitat degradation or loss within the entire Refuge complex is occurring on Egmont Key NWR. In a matter of approximately 10 years the island has been reduced from roughly 380 acres to 260 acres today. This reduction in the total size of the island has been caused by global climate change and sea level rise, which has caused a great deal of

erosion. A major objective of USFWS staff has been to convince the US Army Corps of Engineers to supply renourishment sands to the western shore of Egmont Key. The USFWS has led the way in creating a cooperative stakeholders group working under the title "Save Egmont Key Initiative". This group has been fundamental in providing fundraising support, education, outreach, and lobbying support.

FLORIDA

i) Acquisitions, easements and other long-term conservation protection: **1,785.99 acres**

The properties covered in this section reflect gopher tortoise recipient sites protected under a conservation easements *newly permitted* within the reporting period. Other permitted long-term recipient sites were utilized for relocation efforts during this reporting period.

Long-term Protected Recipient Sites

Recipient Site Name	**County**	**Acreage**	**Gopher tortoise habitat acres**
Chinquapin Farm	Columbia/ Suwannee	465.0	465.0
Adams Ranch	Osceola	486.3	273.1
Heritage Ranch Section 12	Sarasota	407.3	407.3
PCS Gopher Ranch	Hamilton	57.9	55.8
Nokuse Plantation Magnolia Creek Sandhill	Walton	279.0	250.0
Allen Broussard Conservancy Long-Term Protected Site	Osceola	361.4	294.8
City of Oakland Park (Waif Recipient Site)	Broward	5.0	5.0
Total gopher tortoise acreage			**1,751.0**

Short-term Protected Recipient Sites

Recipient Site Name	**County**	**Acreage**	**Gopher tortoise habitat acres**
Seabranch Preserve State Park	Martin	40.0	40.0
Total gopher tortoise acreage			**40.0**

ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent)

Description	Number of Permits	Acres of gopher tortoise habitat impacted/lost
Gopher Tortoise 10 or Fewer Burrows	256	2,829.7
Gopher Tortoise Conservation	173	7,277.0
Total acres lost due to development activities	**10,106.7**	

GEORGIA

i) Acquisitions, easements and other long-term conservation protection 2,507 tortoise habitat acres were protected through conservation easements as part of the Georgia Land Conservation Tax Credit Program. The table below breaks down the acreages by property.

Type	County	Total ac.	Tortoise habitat ac.
Total Acquisition			**0**
Easement	Schley	784	252
Easement	Randolph	486	341
Easement	Webster	136	17
Easement	Calhoun	1984	337
Easement	Worth	590	151
Easement	Colquitt	1011	198
Easement	Ben Hill	154	20
Easement	Coffee	884	297
Easement	Early	152	50
Easement	Seminole	526	43
Easement	Grady	47	24
Easement	Thomas	688	262
Easement	Wheeler	715	92
Easement	Richmond	88	28
Easement	Crisp	1025	395
2012 TOTAL		**9270**	**2507**
2011 TOTAL		4960	1686
2010 TOTAL		25404	6568
2009 TOTAL		26385	3772

ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent)
None during this reporting period.

SOUTH CAROLINA

i) Acquisitions, easements and other long-term conservation protection

SCDNR is expecting to acquire 75 AC section of property adjacent to AGTHP.

ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent)
Not applicable or none during this reporting period.

POARCH BAND OF CREEK INDIANS

i) Acquisitions, easements and other long-term conservation protection – Continuation of all activities above
ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent) – None planned

AMERICAN FOREST FOUNDATION

i) Acquisitions, easements and other long-term conservation protection – N/A
ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent) – N/A

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

i) Acquisitions, easements and other long-term conservation protection: **N/A**
ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent): **N/A**

b) Gopher tortoise burrow survey date(s), methodology, results by property, and comparisons to previous surveys: Survey date(s): fall 2011, Method: line transect distance sampling with burrow scoping, Results: N= 5091 ± 715.54, D= 0.67 ± 0.09, CV= 14.05%.

d) Gopher tortoise burrow survey date(s), methodology, results by property, and comparisons to previous surveys

ARMY

Fort Benning -Property = HMU1 (7837 acres), Methodology = LTDS, Results = d=0.33/hectare and p= 1057. No previous surveys.

Fort Gordon –Fort Gordon biologists revisited and updated the status of 452 burrows in the burrow database. The burrows were all within the 28,481 acre HMU. Each burrow was updated with respect to condition (useable or not useable) and activity (active, inactive, or abandoned). The 452 burrows revisited represents 60% of the total known burrows on Fort Gordon. In addition, three training areas (976 HMU acres) were also surveyed for burrows prior to a timber harvest operation. Surveyors found 5 new burrows during this search.

In FY2013 the Fort Gordon Natural Resources Branch plans to conduct a population survey (re-sampling) on a portion of the HMU to fulfill requirements listed in the *Management Guidelines for the Gopher Tortoise on Army Installations*. The branch will also continue to make updates to its burrow database by revisiting approximately 245 burrows and recording their condition and activity status.

Fort Rucker-Baseline survey conducted using USACE handbook method (Line Distance Transect Sampling) installation wide. Plus complete surveys of suitable habitat located on small portions of outlying airfields. Results were as follows:

High Suitability habitat: average density 0.998 tortoises /acre with confidence intervals 0.535 – 1.858. This equates to 3,228 tortoises with 95% CI of 1,732-6,016. Moderate Suitability habitat: average density 0.323 tortoises/acre with 95% confidence interval of 0.162-0.643. This equates to 6,855 tortoises with 95% CI of 3,439-13,666.

Pooling the data resulted in a density of 0.412 tortoises/acre with 95% confidence interval of 0.248-0.683.

Total population estimate 10,084 gopher tortoise with 95% confidence interval 6,083-16,716.

It should also be noted that the greatest area of High Quality Habitat at Fort Rucker is located within the Impact Area (4,901 acres), which not assessed during the Pilot Study or Full Survey. Therefore, the data for the High Quality Habitat outside of the Impact Area (3,210 acres) was extrapolated to the area within the Impact Area using the CDS Uniform-Cosine model assuming that the habitat within the Impact Area is in fact of high quality.

Results from the airfields were six individual gopher tortoise observed at Runkle Stagefield, 46 at Cairns Army Airfield and 0 at Hunt Stagefield.

Fort Stewart – In 2009, Fort Stewart implemented Management Guidelines for Gopher Tortoise on Army Installations (MGGTAI).

- In 2009, an Installation-wide baseline survey was conducted in accordance with the MGGTAI.
- The 2009 baseline survey population estimate for the adult and sub-adult population was 2,203 individuals (Lower Confidence Limit; LCL = 1,483, Upper Confidence Limit; UCL = 3,273)
- Average density of suitable habitat is 0.15 GT/acre (2009 baseline survey).
- After completion of the baseline survey, the Fort Stewart GT population was sub-divided into 3 zones.
- One zone is surveyed each year, such that each zone is re-surveyed every third year. After each 3-year interval, the data is combined to generate an updated Installation-wide population estimate.
- Zone 1 (6,433 acres) was re-surveyed in 2010. The population estimate was 1,341 (LCL = 840, UCL =2,141) or 0.23 GT/acre.

- Zone 2 (5,404 acres) was re-surveyed in 2011. The population estimate was 888 (LCL = 459, UCL = 1,718) or 0.24 GT/acre.
- Zone 3 (2,457 acres) was re-surveyed in 2012. The population estimate was 619 (LCL = 381, UCL = 1,006) or 0.13 GT/acre.
- In 2012, Zones 1-3 data were pooled to produce an updated Installation-wide population estimate (The Installation-wide population estimate is more statistically robust than the estimates for individual zones). The population estimate was 2,862 (LCL = 2,092; UCL = 3,917) or 0.20 GT/acre.

Camp Blanding Joint Training Center – N/A

AIR FORCE

Avon Park AFR: No surveys conducted this year. Final report on three year survey of Avon Park Gopher Tortoise population was completed in March 2012: Population survey and monitoring of the gopher tortoise (*Gopherus polyphemus*) at Avon Park Air Force Range. Final report. 2008 –2011. Authors: Betsie Rothermel and Traci Castellon. Archbold Biological Station, Lake Placid, FL. Report concluded that the gopher tortoise population is best estimated by sampling a representative sample of habitats and estimating that one tortoise occurs in every active burrow. Estimate of 1435 adults in scrub habitat and 2694 adults in flatwoods/plantation habitats were derived. Densities of burrows in other habitats were too low to allow for reliable sampling.

Eglin AFB: Complete surveys were conducted on construction and testing projects totaling 762 acres. A total of 25 burrows were found during these surveys. In addition 142 acres that had not been previously surveyed were surveyed in order to determine occupancy. A total of 43 burrows were documented during this survey, 10 were active, 9 were inactive and the rest were abandoned. Two areas were resurveyed to determine change in status of known burrows. Burrow status and changes are as follows:

Active burrows remaining active – 26 burrows, Active to inactive – 3 burrows, Active to abandoned – 9 burrows, Active to not found – 7 burrows, Inactive remaining inactive – 7 burrows, Inactive to active – 3 burrows, Inactive to abandoned – 6 burrows, Inactive burrows not found – 3 burrows. Sixteen burrows remained abandoned and 5 abandoned burrows were gone. In addition, 39 new active burrows were documented as well as 4 inactive and 3 abandoned. In the course of other threatened and endangered species survey work, an additional 73 active and inactive burrows were also documented.

MacDill AFB: T&E Species Survey, including Gopher Tortoise, was completed between October 2011 and March 2012. Results for all species identified, including Gopher tortoise, were compared to the data from previous survey (2005) to determine population trend. Survey indicated that the gopher tortoise population on MacDill has decreased slightly since 2005.

Moody AFB: Pedestrian surveys of suitable gopher tortoise habitat are conducted annually to identify new gopher tortoise burrows. All known burrows are marked in

the field with semi-permanent markers, measured to determine occupant size class, and GPS'd for incorporation into the installation Geographic Information System (GIS) database. The activity of each burrow is collected annually and is used for making tortoise population estimates. Concurrent with gopher tortoise surveys, installation personnel conduct visual searches for eastern indigo snakes by searching burrow entrances and aprons for indigo snake skin sheds. As of 30 September 2012, there are 319 marked gopher tortoise burrows in seven colonies on the installation: Colony 71st (87 burrows), Colony CP (39 burrows), Colony AR (8 burrows), Colony BR (18 burrows), Colony BF (13 burrows), and Colony CS (154 burrows). There was no change in the number of burrows as compared to last year.
Patrick-Cape Canaveral: Twenty-eight surveys were conducted during FY12 for project specific activities on CCAFS. The majority of these projects consisted of facility construction or expansion, installation of underground utility lines, airfield clearing, and contaminated soil remediation. All surveys were conducted in 100% of the area being impacted. A total of 185 burrows were observed within these project areas. All burrows were scoped using a gopher tortoise burrow camera. Installation biologists worked with construction personnel to avoid as many burrows as possible. Burrows identified as unavoidable were scoped to determine occupancy. Burrows that were empty were immediately collapsed. Burrows that either contained a tortoise or where occupancy was undetermined using the camera were marked for either excavation with backhoe or bucket trapping. One survey was conducted at the PAFB to support leveling of dirt piles within the airfield clear zone. Two burrows were observed. Both were scoped to determine occupancy. One burrow was empty and immediately closed. The second burrow contained a tortoise and was excavated the following day; however, the tortoise was not present at that time.

Tyndall AFB: 2012 surveys included ongoing in-house baseline burrow surveys in high and medium potential habitat identified with GIS modeling. Areas surveyed from Dec 2011 through Feb 2012 included sites for upcoming timber harvesting or roller chopping. Additional areas were surveyed in Apr-May 2012 prior to a large scale sand pine chipping/harvest operation. Between Sep-Dec 2012, known colonies were revisited to update GPS data, locate new burrows, and uniquely mark each individual burrow for future surveys. Survey method is primarily walking transects with 2-6 individuals and visually locating burrows, attempting 100% coverage of suitable habitat. Occasionally, ATVs are used if the habitat is very large with minimal vegetation. There were 192 burrows in 2011, and 270 burrows have been included in the database to date. However, the total number of burrows may change as quality control processes are applied to combining 3 years of survey data in GIS. Due to the time of year for surveys, burrow activity may not be accurate. Preliminary results show 146 active burrows, 28 possibly active, 35 inactive burrows, 44 old (abandoned), and 17 unknown (primarily because they were not found in 2012 surveys).

UNITED STATES MARINE CORPS

Due to the presence of gopher tortoise on MCLB Albany, the installation requested funding for a gopher tortoise survey. During FY13 a Threatened,

Endangered, and Rare Species Survey will be conducted, which will include surveying for gopher tortoises. The results of that survey will be provided in the FY13 report.

UNITED STATES FOREST SERVICE

Recent and ongoing State Wildlife Grant research involving the Conecuh National Forest and the gopher tortoise are summarized at Alabama Department of Conservation and Natural Resources website at: http://www.outdooralabama.com/research-mgmt/State%20Wildlife%20Grants/projectsfunded.cfm

UNITED STATES FISH AND WILDLIFE SERVICE

Hobe Sound NWR – (November 2011 – March 2012) using line-transect methods. Located 20 active and 39 inactive burrows on 55 acres of sand pine scrub habitat. These results indicate an increase in gopher tortoise activity since the last survey (2000).

St. Marks NWR – A baseline survey effort utilizing LTDS was conducted in 2011 and results analyzed in both 2011 and 2012. Results from this survey significantly varied from the only two previously published gopher tortoise surveys done at St. Marks (Logan 1978-1979 and McCoy and Mushinsky 1988). As these two prior surveys were focused on burrows and did not include scoping to observe individual animals, limited comparisons of active/inactive burrows between the studies can be made with the caveat that burrow occupancy correction factors were used by Logan, McCoy and Mushinsky. Logan (1979) estimated 4,072 active/inactive burrows, McCoy and Mushinsky (1988) estimated 5,655 active/inactive burrows, and the 2011 LTDS project estimated 2,783 active/inactive burrows. While actual population estimation comparisons are not possible given the limitations of the previous two surveys, the mean population estimation derived in the 2011 LTDS survey of 640 +/- 14% individuals is approximately four times smaller than Logan's population estimate (2,500 tortoises) or McCoy and Mushinsky's estimates (2,828 tortoises). Logan's results were based on a nearly identical assessment of available gopher tortoise habitat (5589 ac) to what was surveyed in 2012 (5,536 ac), while McCoy and Mushinsky's results were inexplicably based on an unrealistically low figure of 1,811 occupied acres.

2011 Survey Effort: 803 total burrow features GPSd along 77 miles (123.9 km) of transect (8.2 miles (13.2 km) of transect (9.6% of total) discarded due to unsuitable habitat conditions). 514 burrows scoped; 496 burrows classified as active/inactive and 307 burrows classified as abandoned/collapsed. 114 tortoise observations on transects (23% occupancy rate). 110 tortoises in 311 classified as "active" (35% occupied "active" burrow rate)

Ding Darling NWR – Few gopher tortoise studies have been conducted on the J.N. "Ding" Darling National Wildlife Refuge. In 1978, 51 active burrows (not including

six introduced gopher tortoises) and 69 inactive burrows were documented. Two other studies were conducted in the 1980s to re-survey the 1978 study. In the same study area, 9 active and 106 inactive burrows were documented in 1987. All of these studies concluded that the low numbers of gopher tortoises on the Refuge were mainly due to limited areas having both adequate elevation and open mid-story and canopy layers which can shade out ground vegetation. The 2012 survey consisted of 11 different areas on the Refuge, using line transects along a grid. From the survey results; 9 juvenile burrows, 4 abandoned adult burrows, and 38 active/inactive adult burrows were located.

Lake Wales Ridge NWR – Pilot census survey completed using LTDS on 4/10/12.
Archie Carr NWR – LTDS Pilots surveys completed March 2012.
Lake Woodruff NWR – The Volusia and Eastside units were surveyed for gopher tortoises, and burrow locations were recorded.

FLORIDA

During FY 2011-2012, gopher tortoise surveys were conducted on six FWC WMAs. Results of these surveys are listed in the table below:

Name of Property	Survey date	Gopher tortoise acres surveyed	Active and Inactive burrows	Total Estimated Burrows	Survey results (density)	Notes
Aucilla WMA	June 2012	346.56 (22.95% of 1,510.19 acres)	9	39.22	0.01 tortoises/acre	The population appears to be skewed toward the adult end, possibly indicating past extended periods with low reproduction.
Blackwater WMA	May – October 2012	3,000 (3.37% of 89,000 acres)	249	7,387	0.04 tortoises/acre	Although the number of juvenile burrows found was low, it does indicate that some recruitment is occurring.

Econfina Creek WMA	May-June 2012	1,267 (100% of 1,267 acres)	203	203	0.08 tortoises/acre	
Jennings State Forest WMA	April 2012	40 (0.50% of 8,028 acres)	29	5,820.30	0.36 tortoises/acre	
Point Washington WMA	July 2012	1,336.41 (8.77% of 15,247 acres)	34	387.90	0.01 tortoises/acre	Surveys have revealed a continuous cycle of burrow creation and abandonment over time.
Pine Log WMA	June 2012	2,202.96 (31.88% of 6,911 acres)	131	410.97	0.03 tortoises/acre	The number of juvenile tortoise burrows has fluctuated more than that of the other size classes in recent years. This could reflect an actual change in population of juvenile tortoises.

Information on these survey results is only included for the recipient site since the relocation site is assumed developed and all tortoises relocated. The following are survey results from surveys conducted during the reporting period: Gopher tortoise recipient site survey (Permitted within the reporting time period)

Recipient Site Name	**Survey date**	**Gopher tortoise acres surveyed**	**Survey results (**density)
Seabranch 2012	3/28/2012	6.1 (15.25% of 40 acres)	0.25 tortoises/acre
The Woods – Phase 1	5/2/2012	76.25 (29.63% of 257.3 acres)	0.05 tortoises/acre

Recipient site surveys (in process or permitted after the CCA reporting timeframe)

Recipient Site Name	**Survey date**	**Gopher tortoise acres surveyed**	**Survey results (**density)
Beville Ranch Phase 2	8/30/2012	125.3 (22.57% of 555.08 acres)	0.18 tortoises/acre
Gator Hole Preserve	1/30/2012	20.85 (19.51% of 106.82 acres)	0 tortoises/acre
Isle of Pine Preserve	11/30/2011	7.05 (16.78% of 42 acres)	1.49 tortoises/acre
Viera Wilderness Park Stage 1	4/11/2012	41.18 (17.79% of 231.45 acres	0.08 tortoises/acre
Camp La-No-Che Wildlife Conservation Area – Phase 1	6/21/2012	92 (63.90% of 143.96 acres)	0.01 tortoises/acre
Bowman's Beach	11/23/2011	62.89 (95% of 66.2 acres)	0.52 tortoises/acre
Venus Ranch	1/5/2012	200 (92.43% of 216.37 acres)	0.08 tortoises/acre

GEORGIA

Below are gopher tortoise population density and abundance estimates derived using line transect distance sampling (LTDS) for 17 sites in Georgia obtained during the reporting period. # obs = total number of tortoises observed; *D* = density (tortoises/ha); *N*= estimated abundance; *CV* = coefficient of variation.

Site	**#obs**	***D***	**95% CL**	***N***	**95% CL**	***CV***
Arcadia	39	0.493	0.307 – 0.792	412	257 – 662	22.6
Balfour (D)	55	0.679	0.536 – 0.859	664	525 – 841	10.6
Balfour (S)	72	0.661	0.447 – 0.978	693	469 – 1025	18.3
Ballard	65	0.685	0.490 – 0.957	178	127 – 248	16.8
Blackjack Crossing	49	0.633	0.436 – 0.917	118	81 – 171	18.9
Jeffords	35	0.843	0.459 – 1.547	433	236 – 795	30.1
Lentile	165	1.684	1.332 – 2.129	1877	1485 – 2373	11.6
Moody Forest WMA	112	0.640	0.500 – 0.828	134	104 - 172	12.8

Murff	34	0.307	0.208 – 0.452	163	111 – 240	19.6
OISP- lower	78	1.238	0.977 – 1.569	118	93 – 150	11.6
Persons	59	0.286	0.205 – 0.398	102	73 – 142	16.6
Plum Creek	43	0.605	0.415 – 0.883	89	61 – 129	19.1
Reed Bingham SP	72	3.081	1.997 – 4.753	202	131 – 312	21.8
Samara	132	2.092	1.540 – 2.842	465	342 – 631	15.4
Tallokas	98	1.742	1.147 – 2.645	950	626 – 1443	20.6
Thompson Brothers	66	0.777	0.537 – 1.125	241	167 – 349	18.5
Warbick Farm	43	0.297	0.208 – 0.423	167	117 – 238	18.0
Warnell	41	0.539	0.304 – 0.955	355	201 – 630	28.7
Yuchi WMA	26	0.11	0.075 – 0.174	44	29 - 67	21.2

SOUTH CAROLINA

Ocular surveys were conducted throughout the year.

POARCH BAND OF CREEK INDIANS

Survey done by Land Management Staff who observed approximately 20-25 new burrows in working and traveling the many trails of the property. This was an increase of approximately 25 new burrows. No known tortoises were brought into area by individuals this year, however Tribal members sometime bring in gopher tortoises when they come for recreation, and the staff at Magnolia Branch never know about it but everyone is aware this is a safe place to bring them so this could happen from time to time.

AMERICAN FOREST FOUNDATION

d) Gopher tortoise burrow survey date(s), methodology, results by property, and comparisons to previous surveys. **None during this reporting period.**

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

d) Gopher tortoise burrow survey date(s), methodology, results by property, and comparisons to previous surveys: **Survey date(s): fall 2011, Method: line**

transect distance sampling with burrow scoping, Results: N= 5091 ± 715.54, D= 0.67 ± 0.09, CV= 14.05%.

e) Research – conducted by or supported by agency (if published, include citation)

ARMY

Fort Benning - None
Fort Gordon – Nine tortoises were periodically monitored using radio telemetry, yielding 97 telemetry locations. Three of the nine tortoises were monitored in conjunction with a translocation effort.
Fort Rucker- None
Fort Stewart – Tuberville, T.D, K.M. Andrews, J.D. Westervelt, H.E. Balbach, J.N. Macey, and L. Carlile. 2012. Using Demographic Sensitivity Testing to Guide Management of Gopher Tortoise at Fort Stewart, Georgia: A Comparison of Individual-Based Modeling and Population Viability Analysis Approaches Pp. 109-131 *in* J.D Westervelt and G.L. Cohen, eds., Ecologist – Developed Spatially Explicit Dynamic Landscape Models. Springer, NY.

- Rostal, D. August 2012. Embryonic Development, Sex Determination and Egg Incubation in Turtles, presented at 2012 National Reptile Breeders Expo, Daytona, FL.
- Georgia Southern University (GSU), Dave Rostal, PhD, and Matt Erickson. Ongoing research – artificial diet growth rates for captive rearing/head-starting GTs.
- GSU, Dave Rostal, PhD, currently head-starting 100 GTs to be released into natal areas in FY 13.

Camp Blanding Joint Training Center – None

NAVY

A graduate level degree research project was started at NAS Whiting Field with a local U.S. Air Force officer trainee; results will be available in 2013.

AIR FORCE

Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

UNITED STATES MARINE CORPS

None to report.

UNITED STATES FOREST SERVICE

Amphibian and Reptile Response to Longleaf Pine Ecosystem Restoration, Conecuh National Forest: Conecuh National Forest (CNF) is in the third year of a 30-year plan to restore the native longleaf pine ecosystem. CNF supports populations of 38 high priority amphibians and reptiles, including more species of frogs than any other National Forest. This project will evaluate 60 restoration plots to document amphibian and reptile response to longleaf ecosystem restoration, compare current conditions to previous studies, identify potential reintroduction sites for rare and extirpated species, evaluate monitoring protocols of Partners in Amphibian and Reptile Conservation and provide educational opportunities for partners and resource managers. Craig Guyer, AU and Mark Bailey, Conservation Southeast. October 2004 - November 2006. (Final Report)

Use of Gopher Tortoises in Restoration of the Upland Longleaf Fauna on the Conecuh National Forest: The longleaf pine ecosystem is one of the world's most imperiled forest types. Many rare amphibian and reptile species are found in this forest, especially those that burrow in loose soils. For these reasons, restoration of longleaf pine forests is one of the most challenging conservation problems in North America. The Gopher Tortoise is a keystone species of the longleaf pine ecosystem, principally because of the burrows that this species creates. These holes assist in maintenance of an unusually rich flora and fauna. For these reasons, Gopher Tortoises are crucial to the success of conservation plans for the longleaf pine ecosystem. Thanks to 15 years of proactive management on the Conecuh National Forest (CNF), the habitat structure of a significant portion of the forest has moved closer to the aspect of old-growth longleaf pine forests. Despite success in improving habitat structure, Gopher Tortoise populations on the CNF have not recovered to densities observed in old-growth forests. The slow recovery of tortoises makes it difficult to create features that will allow recovery of missing species such as the Eastern Indigo Snake, Southern Hognose Snake, and Eastern Pocket Gophers. Therefore, implementation of active tortoise management to enhance populations on the CNF is vital for maintenance of the longleaf herpetofauna on this key property. This project will 1) work with staff at the CNF to develop a plan for implementing herpetofauna repatriation projects, 2) survey and map burrows of Gopher Tortoises on a large site selected for eventual release of Eastern Indigo Snakes and 3) establish five large penned sites for relocation of adult Gopher Tortoises and juvenile Eastern Indigo Snakes. Dr. Craig Guyer, AU. October 2007 - September 2008. (Final Report)

A Survey of Gopher Tortoise (*Gopherus polyphemus*) Burrows on Key Properties in Alabama: Gopher Tortoises (*Gopherus polyphemus*) are a keystone species of the southeastern Coastal Plains. Protection of this species through habitat conservation and restoration of longleaf pine forests will be vital to retaining the many sensitive species of this forest type and in preventing the need to list the Gopher Tortoise for protection under the Endangered Species Act throughout its geographic range. This project is designed to survey key state and federal properties in south Alabama to determine the current distribution of Gopher Tortoises and to

create a model of carrying capacity for the species. The results of this project will be comprehensive maps of burrows on three properties; a model that uses soil type, overstory vegetation structure, and understory vegetation cover to predict density of Gopher Tortoise burrows; and an assessment of where on these three properties conservation banks for Gopher Tortoises might be established. Craig Guyer, AU. October 2008 – September 2011. 400 acres surveyed on Florida national forests. No burrows reported.

UNITED STATES FISH AND WILDLIFE SERVICE

Egmont Key NWR – Dr. Peter Meylan, Professor of Natural Sciences in Eckerd College, assisted with data collection in the months of March and April. In FY 12 (months of March - August), 91 tortoises were captured in an opportunistic fashion. 74 tortoises were recaptured and 17 tortoises were first captures. Morphometric data for each individual was collected and recorder measurements such as maximum CL, PL, CW, weight, and gular length. Gender was determined by plastral concavity when possible, and observed activity was also recorded. New captures were permanently marked by drilling marginal scutes in a predetermined manner to give the tortoise a unique identification code. Following data collection, tortoises were immediately released and the latitude and longitude of its location was recorded. The goal was to collect this information for up to 100 individuals.

FLORIDA

Experimental Management of Coastal Scrub: Creating appropriate vegetative conditions for native wildlife species in scrub, particularly coastal scrub, presents challengers to land managers, and the methods for achieving desired conditions require further exploration. Coastal scrub on Guana River Wildlife Management Area (GRWMA) near St. Augustine, Florida, presents an excellent opportunity to explore different scrub management actions and the response from native wildlife in addition to vegetation. Historically, scrub on GRWMA has been mechanically treated with a complete heavy-duty mowing or roller chopping followed by a prescribed burn. This technique has been successful for resetting succession but it has promoted uniform vegetation heights and uniform plant distribution within management units. Scrub management guidelines for Florida scrub jays and other scrub associate species recommends variation in vegetation heights and patchiness in the distribution of open ground and scrub oaks. On GRWMA, it has been suggested that alternative methods of mechanical treatments (i.e., mowing in a checkerboard or mowing linear strips) should be used in concert with prescribed fire to produce more variability in oak vegetation heights, increase the amount and patchiness of open ground, and increase herbaceous plant species diversity. It is believed these actions will provide more suitable habitat for focal wildlife species like gopher tortoise.

FWC researchers and land managers experimentally treated 6 management units of coastal scrub using different mechanical treatments prior to the use of prescribed fire. Pre-treatment vegetation measurements (both composition and structural variables) were taken. The original intent was to do a pre-treatment baseline

tortoise survey and follow it up with surveys on an annual basis post-fire. However, inherent difficulties in detecting tortoise burrows in these thick scrub communities pre-treatment would have resulted in many burrows being missed. Because of this challenge, it was decided that the "baseline" tortoise survey would be completed quickly (e.g., 24-48 hours) post-fire when burrows could be more easily detected. This was deemed acceptable because the mechanical treatments would occur during the dormant season for tortoises and the fire was planned for 6-8 weeks later. Unfortunately, weather conditions prevented burning these 6 management units for 1+ year after mechanical treatment. As of July 2012, 4 of the 6 management units have been burned. Because of the delay in burning, there was an entire active season for tortoises to either exit or enter our treatment units. Therefore, "baseline" numbers of tortoises are not available before the treatments. The burned management units were immediately (e.g., within a week) surveyed post-fire, using a complete burrow survey and burrow scoping to obtain density and occupancy information. It is unclear how useful these tortoise data will be because they cannot be compared against any baseline conditions. However, post-fire vegetation measurements were collected during July-August 2012 and will provide valuable insights. Initial indications are that the treated areas have experienced a dramatic increase in the number of early successional herbaceous species, such as goldenrod (*Solidago odora*), winged sumac (*Rhus copallinum*) and bluestem grasses (*Andropogon* spp.). This may be a result of soil disturbance by mechanical equipment or an increase in sunlight availability following the removal of the shrub canopy. In addition, all three species of scrub oaks were mostly top-killed, but have re-sprouted vigorously in all treatments, including those that were treated with fire only.

GEORGIA

None to report.

SOUTH CAROLINA

Grosse, A.M., K.A., Buhlmann, B.B. Harris, B.A. DeGregorio, B.M. Moule, R.V. Horan, and T.D. Tuberville. 2012. Nest Guarding in the Gopher Tortoise (*Gopherus polyphemus*). Chelonian Conservation and Biology 11(1): 148-151.

Brett M. Moule, SCDNR, anticipates completing his doctoral research by summer 2013 which includes a chapter that looks at a side-by-side comparison of which cultural practice (prescribed fire, herbicide and mechanical mastication) provides the optimum forage for the gopher tortoise.

POARCH BAND OF CREEK INDIANS

NONE TO REPORT. AMERICAN FOREST FOUNDATION

None to report.

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

None to report.

SECTION III: RELEVANT ACTIVITIES TO LISTING FACTOR B (OVERUTILIZATION FOR COMMERCIAL, RECREATIONAL, SCIENTIFIC, OR EDUCATIONAL PURPOSES)

ARMY

a) Research – conducted by or supported by agency (if published, include citation)
None to report.

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

Fort Benning - None

Fort Gordon – Fort Gordon staff biologists conducted approximately 15 events throughout the year where gopher tortoise life history, habitat requirements, and conservation was explained. These events included VIP field trips, programs for school children, and wildlife related talks or displays at special events. The audience for these included children, military personnel, civilian personnel, and the general public. Fort Gordon maintains an Environmental Slow Go, Go map to include current gopher tortoise data. The map is provided to military units who conduct field training exercises on the installation. The units use the map to plan their training exercises, with consideration given to environmental conditions.

Fort Rucker- Environmental and Natural Resources Facebook page and the Environmental and Natural Resources website are used to disseminate information.

Fort Stewart – Page 20 of the Fort Stewart Regulation that governs, Hunting, Fishing, and Recreational Use on the installation, revised 3 May 2012, states that - *"… damage to these burrows is prohibited, as well as "gassing" burrows for other snakes residing in these burrows. The introduction of any foreign object or material in these burrows is prohibited. The gopher tortoise is a state listed species and is protected from capture or harassment."* Environmental Compliance Officer (ECO) Course: Required training for Fort Stewart/Hunter Army Airfield Soldiers and contractors (03 Nov 2011, 26 Jan 2012, 29 Mar 2012, 07 Jun 2012, and 23 Aug 2012). Training includes a discussion of the Installation's obligation to manage wildlife, including the GT.

- Earth Day Celebrations: Fort Stewart (31 Mar 2012), Savannah (21 Apr 2012), and Hinesville (14 Apr 2012).
- Boy Scout presentations: Boy Scout Troop 935 (14 Mar 2012), 3/7 Cavalry Apache Troop (17 Apr 2012).

- School Events: Diamond Elementary (19 Oct 2011; 3rd grade), Brittin Elementary (13 Dec 2011; 3rd grade; 14 Sep 2012; Kindergarten), Button-Gwinnett Elementary (15 Aug 2012; 3rd grade), Back to School Fairs (FS - 26 Jul 12; HAAF - 08 Aug 2012).

- Community Outreach: Wildlife Jamboree – Club Stewart (07 Sep 2012), HAAF (28 Sep 2012); DNR Beach Week at Tybee beach (27 Jun 2012); Master Naturalist Class Presentation (16 May 2012).

Fort Stewart's Fish and Wildlife Branch website contains information pertaining to the GT and its habitat (http://www.stewart.army.mil/dpw/wildlife/Home%20page.htm)
Camp Blanding Joint Training Center – None

NAVY

a) Research – conducted by or supported by agency (if published, include citation): N/A

b) Education and outreach:
1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: **Earth Day (NAS Whiting Field), markers used for protection and education (NAS Pensacola/NAS Whiting Field). Caution signs installed along beach access road, informational signs on dune-crossovers, and education during base indoctrination briefings to new personnel (NS Mayport).**

AIR FORCE

a) Research – conducted by or supported by agency (if published, include citation):
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]:
Avon Park AFR: One paper published in Chelonian Conservation and Biology: Castellon, T.D., B. Rothermel, S. Nomani. 2012. Gopher Tortoise Burrow Densities in scrub and flatwoods habitats of peninsular Florida. 11(2) 153-161.
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: The 45 SW exhibited an educational display that included information regarding the gopher tortoise program at the Wing. The

display was set up 1/25/12 – 1/29/12 at the Space Coast Wildlife and Birding Festival; Titusville, FL; organized by Brevard Nature Alliance; audience is public nature/bird enthusiasts. In addition, 45 SW natural resource personnel conducted two tours of CCAFS natural and cultural resources, which included a talk on the biology of gopher tortoises and the Air Force's part in protecting them.
Tyndall AFB: None

UNITED STATES MARINE CORPS

a) Research – conducted by or supported by agency (if published, include citation)
None
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach] **None during this reporting period.**

UNITED STATES FOREST SERVICE

a) Research – conducted by or supported by agency (if published, include citation)
None during this reporting period.
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: **None during this reporting period.**

UNITED STATES FISH AND WILDLIFE SERVICE

a) Research – conducted by or supported by agency (if published, include citation) – **None during this reporting period.**
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]
Hobe Sound NWR – Updated messaging of sand pine scrub and hammock trail maps, newsletters, and web pages with references to gopher tortoises and their habitats. Ongoing educational field trips at the refuge for school groups and the general public organized by the Hobe Sound Nature Center.
Ding Darling – Informational poster created: "Gopher Tortoise – a protected species in Florida"
Okefenokee NWR – Filming of tortoises and indigo snakes for a nature show intended for worldwide broadcast.

FLORIDA

a) Research
None during this reporting period.
b) Education and Outreach
1) Publications (signage, brochures)

New outreach materials have been created which include an *Online Permit System* and *Commensal Species* factsheet that will be distributed to local governments and residents, and a *Captive Gopher Tortoise Care* factsheet that is being distributed to all wildlife rehabilitators and waif gopher tortoise permit holders. The poster "Got Gophers, Get Permits" is continuously distributed to planning councils, county and city building departments, and local permitting offices. These new fact sheets, along with all gopher tortoise publications, are available for free download on our website MyFWC.com/Gopher Tortoise and at each of FWC's Regional Offices.

Publication	Total Distributed	Publication Type
Living with Gopher Tortoises	9,984	Brochure
Spanish- Living With Gopher Tortoises	1,704	Brochure
Before You Build	4,199	Brochure
Permitting and Mitigation	1,611	Fact Sheet
Laws and Guidelines	1,589	Fact Sheet
Recipient Site	857	Fact Sheet
Waif Tortoises	226	Fact Sheet
Rehabber	535	Fact Sheet
The Gopher Tortoise	4,314	Activity Book
Encounters with Gopher Tortoises: Protection and Natural History	153	DVD
Got Gophers? Get Permits	196	Poster
Permitting Guidelines	12	Other
Gopher Tortoise Coloring Sheet	1,466	Other
Pine Ecosystem handbook (AFF)	1	Other
Gopher Tortoise Burrow Coloring Sheet	12	Other
Wildlife Matters	2	DVD

2) Workshops and Events (date, location, audience, organizer)

A series of six workshops were conducted in Orange, Hernando, St. Lucie, Gilchrist, Flagler and Palm Beach County in June, July, and August. The workshops were attended by over 100 representatives primarily from public organizations. Other attendees included local residents, law enforcement and environmental consultants.

Citizens were further engaged in gopher tortoise conservation through four stakeholder meetings held 3/30/2012, 5/11/12, 7/13/2012, and 11/1/2012 in Gainesville, Florida or via webinar. These meetings focused on the revisions to the Gopher Tortoise Management Plan (approved September 2012). Attendees included key members of the Gopher Tortoise Technical Assistance Group as well as a variety of representatives from gopher tortoise interest groups.

FWC gopher tortoise presentations and/or education booths were present at a variety of events. These events include: Riversink Elementary School (4 classes of second grade

students), Taylor County 4-H Agriculture Day (9 classes of elementary students), W.T. Moore Elementary School (5 classes of kindergarteners), Forgotten Coast Black Bear Festival, Department of Agriculture and Consumer Services Safety Fair (DACS employees), Waterworks Science Salon (adults), Wakulla County Senior Center, Magnolia School (alternative school K-8th grade), Wakulla Wildlife Festival, and the St. Marks Stone Crab Festival.

Additionally, two workshops were held with the purpose of educating the FWC Law Enforcement recruits. These workshops were attended by approximately 40 recruits prior to graduation from the academy. The workshops focused on the importance of the gopher tortoise, protection for the gopher tortoise, and identifying violations.

3) Public service broadcasts/announcements

To promote public input on the Gopher Tortoise Management Plan 2012 revisions, FWC developed a series of press releases to educate the public on how they could provide feedback and suggestions for the revision.

iv) Electronic media (website, Listserv, other internet based outreach)

A new webpage dedicated to commensal species was added to www.MyFWC.com. The new page provides pictures and descriptions of key commensal species as well as a link to a Flikr image gallery. Two new fact sheets were created and added to the gopher tortoise education webpage. These fact sheets address the topics of commensal species, and the online permit system. They are available online and printed copies are distributed at outreach events. Our gopher tortoise education material, including brochures, fact sheets, activity books, and curriculum is available online at www.MyFWC.com/education/wildlife/gopher-tortoise.

GEORGIA

a) Research – conducted by or supported by agency (if published, include citation)
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

Education and outreach programs by GA DNR-WRD staff involving gopher tortoises typically address multiple threats, but because habitat quality and management issues are likely the most significant, events, workshops, publications, etc. are reported in this section.

1. Jensen, J. B. 2012. Gopher Tortoise – Keystone Species. Out of the Woods – the Voice of the Southeastern Wood Producers Association. 22: 23-24.

2. Continuing Logger Education workshops include significant coverage on gopher tortoise conservation and management issues. Five were held during the reporting period reaching 184 loggers: Swainsboro (Feb. 14), Forsyth (May 22), Tifton (Aug. 14), Macon (Dec. 14), McRae (Sept. 19).

Georgia Association of Tax Officials conference, Athens, Ga. – 5/15-17/2012 – We have a booth at this popular conference involving county tax commissioners and tag office employees. For at least one day, we exhibit a gopher tortoise from Charlie Elliott Wildlife Center, discussing conservation issues regarding it and other native species.

Forestry for Wildlife Partnership field day, Charlie Elliott Wildlife Center, Mansfield, Ga. – 5/22/12 – DNR and U.S. Fish and Wildlife Service staff met with FWP partner representatives from Georgia Power, Plum Creek and Wells Timberland. Presentations included managing pine savanna, potential USFWS agreements for managing rare species on private lands, and a separate discussion on how partners could work with the DNR to conserve gopher tortoises.

Georgia Chapter of The Wildlife Society annual meeting, Athens, Ga. – 8/29/2012 – John Jensen gave a presentation entitled "Gopher Tortoise Conservation – In support of the Candidate Conservation Agreement."

3. None during this period
4. Georgia Wild e-newsletter (approx. 16,100 subscribers)

Articles:
"Feds, states team to keep gopher tortoises 'unlisted'" – 9/12/12 – Article by USFWS' Stacy Shelton about range-wide plan involving the service, Georgia and Florida. http://content.govdelivery.com/bulletins/gd/GADNR-52f88b

"Program promising for gopher tortoises" – 4/17/12 – Summarizes Working Lands for Wildlife program with ties to gopher tortoise conservation. http://content.govdelivery.com/bulletins/gd/GADNR-3c1787

News briefs:
Moody Forest tortoise survey – 9/26/12 – http://content.govdelivery.com/bulletins/gd/GADNR-54d1bd

Yuchi WMA gopher tortoise updates – 8/13/12 (http://content.govdelivery.com/bulletins/gd/GADNR-4e2e4e) and 7/12/12 (http://content.govdelivery.com/bulletins/gd/GADNR-48bd65)

Gopher Tortoise Council meeting – 7/12/12 – http://content.govdelivery.com/bulletins/gd/GADNR-48bd65

Working Lands for Wildlife targets gopher tortoises, six other species – 3/9/12 – http://content.govdelivery.com/bulletins/gd/GADNR-3279a3

Media and related releases (separate from e-newsletter):
"New conservation program promising for Georgia's gopher tortoises" – 4/20/12 – Highlighted Farm Bill Working Lands for Wildlife program and focus in Georgia on gopher tortoises. www.georgiawildlife.com/node/2998

Similar info sent 4/20 in an e-blast to 21,290 DNR Wildlife Resources Division update subscribers.

"Forestry for Wildlife partners making mark for conservation" – 6/1/12 – Highlighted recent Forestry for Wildlife Partnership field day, which included discussion of conserving gopher tortoises. www.georgiawildlife.com/node/3039

SOUTH CAROLINA

a) Research – conducted by or supported by agency (if published, include citation) **None during this reporting period.**
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]. **None during this reporting period.**

POARCH BAND OF CREEK INDIANS

a) Research – conducted by or supported by agency (if published, include citation) **None during this reporting period.**
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach] – **Performed by Alabama Forest Service Helen Mosely Memorial and award planned for Magnolia Branch.**

AMERICAN FOREST FOUNDATION

a) Research – conducted by or supported by agency (if published, include citation) **None during this reporting period.**
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]. **None during this reporting period.**

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

a) Research – conducted by or supported by agency (if published, include citation): None during this reporting period.

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: None during this reporting period.

SECTION IV: RELEVANT ACTIVITIES TO LISTING FACTOR C (DISEASE OR PREDATION)

ARMY

a) Disease and die-offs (date, property/location, cause if known, number of deaths)
Fort Benning - None
Fort Gordon –None
Fort Rucker- None
Fort Stewart – None
Camp Blanding Joint Training Center – None

b) Disease screening efforts
Fort Benning - None
Fort Gordon –None
Fort Rucker- None
Fort Stewart – None
Camp Blanding Joint Training Center – None

c) Predator control
Fort Benning – Feral Swine and coyote removals
Fort Gordon – 200 feral hogs, 70 coyotes trapped
Fort Rucker- None
Fort Stewart – Fort Stewart permits coyote hunting per Georgia DNR regulations and Reg 420-4.
Camp Blanding Joint Training Center – None

d) Research – conducted by or supported by agency (if published, include citation)
Fort Benning - None
Fort Gordon – See above research details
Fort Rucker- None
Fort Stewart – See above research details
Camp Blanding Joint Training Center – N/A

NAVY

a) Disease and die-offs (date, property/location, cause if known, number of deaths): N/A
b) Disease screening efforts: N/A
c) Predator control: **25 feral hogs and 5 coyotes removed**
d) Research – conducted by or supported by agency (if published, include citation): N/A

AIR FORCE

a) Disease and die-offs (date, property/location, cause if known, number of deaths):
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None

Tyndall AFB: None

b) Disease screening efforts:
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

c) Predator control:
Avon Park AFR: Approximately 300 hogs were removed.
Eglin AFB: 118 feral hogs and 3 coyotes were removed.
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: 90 feral hogs, 37 raccoons, and 6 coyotes were removed from CCAFS; 29 raccoons were removed from PAFB; 5 feral hogs were removed from Malabar Transmitter Annex.
Tyndall AFB: 30 coyotes were removed.
Research – conducted by or supported by agency (if published, include citation):
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

UNITED STATES MARINE CORPS

a) Disease and die-offs (date, property/location, cause if known, number of deaths) **None**
b) Disease screening efforts **None**
c) Predator control **None**
d) Research – conducted by or supported by agency (if published, include citation) **None**

UNITED STATES FOREST SERVICE

a) Disease and die-offs (date, property/location, cause if known, number of deaths) None have been recorded.
b) Disease screening efforts – None.
c) Predator control
Feral hog trapping and removal was conducted on approximately 500 acres.
d) Research – conducted by or supported by agency (if published, include citation)
Current research efforts are summarized above in the Land Conservation section.

UNITED STATES FISH AND WILDLIFE SERVICE

a) Disease and die-offs (date, property/location, cause if known, number of deaths) – none
b) Disease screening efforts – none
c) Predator control – none
d) Research – conducted by or supported by agency (if published, include citation) – none

FLORIDA

a) Disease and die-offs (date, property/location, cause if known, number of deaths)
Extreme mortality (>200 tortoises) has occurred on a research recipient site in central Florida, where tortoises were relocated into cattle pastures. Details are provided above, under Experimental Management of Coastal Scrub. At this point, the cause of the mortality is not understood; upper respiratory tract disease testing is being undertaken, and results should be available in spring 2013. Less extreme, but nevertheless worrisome, mortality has occurred on a second recipient site in northern Florida. No research is currently being conducted on this site; cursory surveys have revealed ca. 20+ shells, both residents and relocatees. FWC staff is discussing the possibility of conducting intensive burrow surveys next spring, bucket-trapping tortoises, and collecting blood and possibly nasal samples from captured individuals to try to determine the cause of this mortality.
b) Disease Screening Efforts
None during this reporting period.
c) Predator Control
Some permitted Gopher Tortoise Recipient Sites co-locate donkeys with gopher tortoise as an effective means to deter coyotes when predation is occurs.
d) Research
2012 publication: *A device for restraining gopher tortoises (Gopherus polyphemus) during blood extraction.* Joan E. Diemer Berish and Thomas J. Miller. Herpetological Review 43: 59-61.

GEORGIA

a) Disease and die-offs (date, property/location, cause if known, number of deaths)
None during the reporting period
b) Disease screening efforts
Tortoises relocated as reported in 6-a-I below were screened for both *Mycoplasma agassizii* and *M. testudineum*, with positive, negative, and suspect individuals found for both pathogens.
c) Predator control
None doing the reporting period
d) Research – conducted by or supported by agency (if published, include citation)

None during the reporting period

SOUTH CAROLINA

a) Disease and die-offs (date, property/location, cause if known, number of deaths)
Not applicable or none during this reporting period.
b) Disease screening efforts
Not applicable or none during this reporting period.
c) Predator control
Domesticated and/or feral dogs are becoming an issue at AGTHP. Several burrows and radio transmitters were damaged by canid. One gopher tortoise was found with canid damage to its right front claw. It was sent to GA Sea Turtle Center for surgery and recovery. Currently, wildlife cameras have been installed on the property to monitor and track canid. Also, animal control measures are being investigated to remove canid from the property.
d) Research – conducted by or supported by agency (if published, include citation)
Not applicable or none during this reporting period.

POARCH BAND OF CREEK INDIANS

a) Disease and die-offs (date, property/location, cause if known, number of deaths) – None
b) Disease screening efforts – **Done only by observation by staff of Magnolia Branch and NRCS staff**
c) Predator control – Observation performed daily by staff and corrections made if necessary.
d) Research – conducted by or supported by agency (if published, include citation) - None

AMERICAN FOREST FOUNDATION

a) Disease and die-offs (date, property/location, cause if known, number of deaths). n/a
b) Disease screening efforts. n/a
c) Predator control
d) Research – conducted by or supported by agency (if published, include citation)

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

a) Disease and die-offs (date, property/location, cause if known, number of deaths)
b) Disease screening efforts: **Most recent testing by J.L. McGuire (2009-2012) revealed that 92% of tortoises tested (n=136) were seropositive for exposure to Mycoplasma spp. Evidence of clinical disease is rare.**
c) Predator control: **Mesomammalian predators (raccoon, opossum, skunk, fox, bobcat, and coyote are excluded from 4 large-scale (90 ac) study plots to monitor effects on recruitment of gopher tortoises (see publication below).**

d) Research – conducted by or supported by agency (if published, include citation): 1) **Smith, L.L., D. A. Steen, L. M. Conner, and J. R. Rutledge. 2013. Effects of predator exclusion on nest and hatchling survival in the gopher tortoise. Journal of Wildlife Management, 77(2):xx-xx; 2) McGuire, J.L. 2013. A multifaceted approach to evaluating gopher tortoise (*Gopherus polyphemus*) population health at selected sites in Georgia. Ph.D. Dissertation, University of Georgia, Athens.**

SECTION V: RELEVANT ACTIVITIES TO LISTING FACTOR D (INADEQUACY OF EXISTING REGULATORY MECHANISMS)

ARMY

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations
   Fort Benning - N/A
   Fort Gordon –N/A
   Fort Rucker- N/A
   Fort Stewart – N/A
   Camp Blanding Joint Training Center – N/A
   ii) Agency policies/directives/compliance documents
   Fort Benning - None
   Fort Gordon –N/A
   Fort Rucker- N/A
   Fort Stewart – N/A
   Camp Blanding Joint Training Center – N/A
   iii) Permitted takes (property/location, number of takes permitted)
   Fort Benning - N/A
   Fort Gordon –N/A
   Fort Rucker- N/A
   Fort Stewart – N/A
   Camp Blanding Joint Training Center – N/A
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]
   Fort Benning - N/A
   Fort Gordon – See above Fort Gordon reference
   Fort Rucker- Environmental and Natural Resources Facebook page and the Environmental and Natural Resources website are used to disseminate information
   Fort Stewart – Page 20 of the Fort Stewart Regulation that governs, Hunting, Fishing, and Recreational Use on the installation, revised 3 May 2012, states that -

"… damage to these burrows is prohibited, as well as "gassing" burrows for other snakes residing in these burrows. The introduction of any foreign object or material in these burrows is prohibited. The gopher tortoise is a state listed species and is protected from capture or harassment."

- Workshops and events [date, location, audience, organizer]
- ECO Course: Required training for Fort Stewart/Hunter Army Airfield Soldiers and contractors (03 Nov 2011, 26 Jan 2012, 29 Mar 2012, 07 Jun 2012, and 23 Aug 2012). Training includes a discussion of the Installation's obligation to manage wildlife, including the GT.
- Earth Day Celebrations: Fort Stewart (31 Mar 2012), Savannah (21 Apr 2012), and Hinesville (14 Apr 2012).
- Boy Scout presentations: Boy Scout Troop 935 (14 Mar 2012), 3/7 Cavalry Apache Troop (17 Apr 2012).
- School Events: Diamond Elementary (19 Oct 2011; 3rd grade), Brittin Elementary (13 Dec 2011; 3rd grade; 14 Sep 2012 - Kindergarten), Button-Gwinnett Elementary (15 Aug 2012; 3rd grade), Back to School Fairs (FS - 26 Jul 12; HAAF - 08 Aug 2012).
- Community Outreach: Wildlife Jamboree – Club Stewart (07 Sep 2012), HAAF (28 Sep 2012); DNR Beach Week at Tybee beach (27 Jun 2012); Master Naturalist Class Presentation (16 May 2012).
- Public service broadcasts/announcements – N/A
- Electronic media [website, Listserv, other internet-based outreach] - Fort Stewart's Fish and Wildlife Branch website contains information pertaining to the GT and its habitat (http://www.stewart.army.mil/dpw/wildlife/Home%20page.htm).

Camp Blanding Joint Training Center – N/A

NAVY

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations: N/A
   ii) Agency policies/directives/compliance documents: **Translocation policies at all installations.**
   iii) Permitted takes (property/location, number of takes permitted): N/A
b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts / announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: N/A

AIR FORCE

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations:
   Avon Park AFR: None

Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

ii) Agency policies/directives/compliance documents:
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

iii) Permitted takes (property/location, number of takes permitted):
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]:
Avon Park AFR: One paper published, see above.
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

UNITED STATES MARINE CORPS

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat) **No new, revised, or expired legal protections**
   i) State laws, rules and regulations **No new, revised, or expired legal protections**
   ii) Agency policies/directives/compliance documents **No new, revised, or expired legal protections**
   iii) Permitted takes (property/location, number of takes permitted) **None**

Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach] **None**

UNITED STATES FOREST SERVICE

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations
   ii) Agency policies/directives/compliance documents

Forest Supervisor's Closure Order Banning the Gassing of Gopher Tortoise Burrows originated in 2002, reauthorized in 2007 and 2012. (Conecuh NF)

Clause in Timber Sale Contracts – CT6.24 – Site Specific Special Protection Measures: "*To protect gopher tortoise burrows, log decks and skid trails will be agreed upon in advance by the Forest Service and the Purchaser. Within the Sale Area, gopher tortoise burrows will be protected from damage by all motorized vehicles.*"

   iii) Permitted takes (property/location, number of takes permitted)
   None.

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

   Education and outreach is accomplished during annual presentations (public school groups, college/university classes and community groups) and expos. Almost all presentations are focused on longleaf restoration and management. Longleaf pine and associated wildlife species as gopher tortoises are always discussed at these venues.

UNITED STATES FISH AND WILDLIFE SERVICE

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations
   Okefenokee NWR – State ruling would allow USFWS to restrict private timber management on lands owned by USFWS but under long-term management agreement.
   ii) Agency policies/directives/compliance documents
   Hobe Sound NWR – ESA intra-service Section 7 Biological Evaluation concurrence (Ecological Services – Vero Beach office) of 5-year Pesticide Use Proposal
   Everglades Headwaters NWR – Comprehensive Conservation Plan (CCP)
   Pelican Island NWR – Comprehensive Conservation Plan (CCP)
   Lake Wales Ridge NWR – Comprehensive Conservation Plan (CCP)
   Archie Carr NWR – Comprehensive Conservation Plan (CCP) and draft Habitat Management Plan (HMP)
   iii) Permitted takes (property/location, number of takes permitted) – none

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts / an-

nouncements; or 4) Electronic media [website, Listserv, other internet-based outreach] – none

FLORIDA

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   I. State laws, rules and regulations
   II. Agency policies/directives/compliance documents

The Disturbed Site permit was implemented in November 2011 to provide an option for mitigation and relocation of tortoises when a development site has been prematurely clear prior to the relocation of gopher tortoises. .
The Permitting guidelines were revised in September 2012 to include interim guidelines for the limited relocation of commensal species. Priority commensals that do not require a separate permit will be authorized for limited relocation under FWC-issued gopher tortoise relocations permits. The FWC will work with stakeholders from the Gopher Tortoise Technical Assistance Group (GTTAG) and species experts to re-evaluate these guidelines once individual species management plans have been developed and approved by FWC's Commission.
A revised Gopher Tortoise Management Plan was approved by the Commission in September 2012. The revised goal and objectives shift the focus away from the regulation and permitting of gopher tortoises that was implemented under the 2007 draft of the plan to additional conservation actions emphasizing a non-regulatory approach to conserving this species. It includes a new chapter addressing the conservation of commensals and contains a suite of actions that help to conserve priority commensals and more than 350 other animal species that have been documented to use gopher tortoise burrows.

   iii) Permitted takes (property/location, number of takes permitted) **None during this reporting period.**

b) Education and Outreach
   None during this reporting period.

GEORGIA

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations: None during the reporting period
   ii) Agency policies/directives/compliance documents
   None during the reporting period
   iii) Permitted takes (property/location, number of takes permitted)
   Scientific collecting permits were provided to several consultants for on-site relocations of small numbers of tortoises. Incidental take of state listed species such as the gopher tortoise is not illegal, thus this type of take is not always reported to us. No permitted direct take other

than the on-site relocations mentioned above and legitimate, non-lethal scientific research took place during the reporting period.

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]
None during the reporting period

SOUTH CAROLINA

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations
   Not applicable or none during this reporting period.
   ii) Agency policies/directives/compliance documents
   Not applicable or none during this reporting period.
   iii) Permitted takes (property/location, number of takes permitted)
   Not applicable or none during this reporting period.

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: Not applicable or none during this reporting period.

POARCH BAND OF CREEK INDIANS

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat) – Maintained by Fish & Wildlife Staff governed T.C.
   i) State laws, rules and regulations – All state laws maintained.
   ii) Agency policies/directives/compliance documents - **Gopher Tortoise Conservation Agreement**
   iii) Permitted takes (property/location, number of takes permitted) – None

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach] – Visitor and media tours, live broadcast by local television.

AMERICAN FOREST FOUNDATION

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations
   ii) Agency policies/directives/compliance documents
   (1) AFF and partners, including World Resources Institute, Advanced Conservation Solutions and the Longleaf Alliance, was successful in working with a broad community of experts to develop an innovative and credible habitat evaluation model to calculate credits for the quality of a site as habitat for the gopher tortoise (*Gopherus*

***polyphemus*) in Georgia and Alabama. The model was also tested from an economic perspective to determine the costs of credit creation, tracking, monitoring, and assurance so that financial viability of the approach can be evaluated. It is ready for pilot testing in the Sandhill habitat area, and the concept of proactive conservation to preclude species listing under the Endangered Species Act is gaining more attention. Although no market for voluntary credits of this nature currently exists, project partners are part of a coalition working with the US Fish and Wildlife Service to figure out how they can provide the regulatory predictability that will enable proactive conservation strategies such as this to become effective tools for long term species viability and habitat protection.**

(2) Implementation of the habitat credit bank concept has been slowed by the lack of demand from buyers for these voluntary credits due to the absence of long-term assurances from the U.S. Fish and Wildlife Service as to their credibility and acceptance in case of future regulatory change. To address this, we are working in a coalition with the FWS to discuss and propose potential next steps on the advance notice of proposed rulemaking (ANPR) for candidate species. Project partners will participate in an upcoming workshop to focus on how the Service could use its existing authorities to create pre-listing conservation "pilot projects." These projects would enable the Service to recognize the benefits of conservation measures taken before a species is listed and allow those benefits to offset future adverse impacts to the species, with the requirement that the species experiences a net conservation benefit.

iii) Permitted takes (property/location, number of takes permitted)

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]. **None during this reporting period.**

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)
   i) State laws, rules and regulations
   ii) Agency policies/directives/compliance documents
   iii) Permitted takes (property/location, number of takes permitted)

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: **Item 2: The Jones Center hosted an open house in October 2012, where hundreds of local landowners were introduced to the**

management and conservation of the longleaf pine ecosystem, including flagship species such as the gopher tortoise.

SECTION VI: RELEVANT ACTIVITIES TO LISTING FACTOR E (OTHER NATURAL OR MANMADE FACTORS AFFECTING THE SPECIES CONTINUED EXISTENCE)

ARMY

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
(i)To permanently protected lands
Fort Benning - 0
Fort Gordon –0
Fort Rucker- 0
Fort Stewart – 0
Camp Blanding Joint Training Center – Fifteen adults (8 male, 7 female) and 3 juveniles were relocated to a permanently protected recipient site due to the rehabilitation of one range and the construction of two new ranges and one new building.
(ii) To short-term protected lands Fort Benning - 0
Fort Gordon –0
Fort Rucker- 0
Fort Stewart – 0
Camp Blanding Joint Training Center – 0
(iii) To unprotected lands
Fort Benning - 0
Fort Gordon – Four tortoises were captured and moved to suitable habitat approximately 3.1 miles away preceding a range improvement project that would have affected numerous active burrows. Three of these tortoises were fitted with radio transmitters to determine survival and dispersal after translocation (the fourth tortoise was a Gopher Tortoise CCA Annual report *(revised October 2012)* 7 juvenile). These tortoises all stayed within 1.4 miles of their release location . One of the translocated tortoises was found dead approximately four months after translocation of an unknown cause.
Fort Rucker- 0
Fort Stewart – 21 Sep 2012, GSU released 24 head-start GTs in Natural Resource Management Unit F19.2 on Fort Stewart. The area currently has GTs, however the area is below carrying capacity and was recently improved with midstory reduction via heavy duty mowing. Currently GSU is rearing 100 head-start GTs to be released FY 13 in their natal areas on Fort Stewart. All head-start GTs released onto Fort Stewart/HAAF occur in areas where GTs are present, albeit low density.
Camp Blanding Joint Training Center – 0

b) Research – Conducted by or supported by agency (if published, include citation)
Fort Benning - 0
Fort Gordon – See above reference
Fort Rucker- N/A
- Fort Stewart – Tuberville, T.D, K.M. Andrews, J.D. Westervelt, H.E. Balbach, J.N. Macey, and L. Carlile. 2012. Using Demographic Sensitivity Testing to Guide Management of Gopher Tortoise at Fort Stewart, Georgia: A Comparison of Individual-Based Modeling and Population Viability Analysis Approaches Pp. 109-131 *in* J.D Westervelt and G.L. Cohen, eds., Ecologist – Developed Spatially Explicit Dynamic Landscape Models. Springer, NY.
- Rostal, D. August 2012. Embryonic Development, Sex Determination and Egg Incubation in Turtles, presented at 2012 National Reptile Breeders Expo, Daytona, FL.
- GSU, Dave Rostal, PhD, and Matt Erickson. Ongoing research – artificial diet growth rates for captive rearing/head-starting GTs.
- GSU, Dave Rostal, PhD, currently head-starting 100 GTs to be released into natal areas in FY 13.

Camp Blanding Joint Training Center – N/A

c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: See above reference

NAVY

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
i) To permanently protected lands: 0
ii) To short-term protected lands: 0
iii) To unprotected lands: 0

b) Research – Conducted by or supported by agency (if published, include citation): N/A

c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts /announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: N/A

AIR FORCE

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
i) To permanently protected lands:
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None

Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

ii) To short-term protected lands:
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

iii) To unprotected lands:
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

iv) *To lands without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise:*
Avon Park AFR: None
Eglin AFB: A single tortoise was relocated from a construction site to an established relocation release site on Eglin property.
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: 15 tortoises relocated; all on CCAFS. Air Field Clearing – project to expand the current clear zone around the entire airfield; project is being phased over five years; six tortoises relocated during this phase; all burrows were backhoed. Provide Landfill Cover – project provided dirt cover to bring landfill into permit requirements; one tortoise relocated; burrow was bucket trapped. Installation of Communications Ductbank – two tortoises relocated; burrows backhoed. Closure of Burrow Under Facility – project required because burrow was compromising integrity of small antenna support facility; one tortoise relocated; burrow bucket trapped. Expansion of Facility 1777 – one tortoise relocated; burrow was backhoed. Installation of Potable Water Line – two tortoises relocated; burrows were backhoed. Trench Burn – project supported excavation of trench to burn vegetative debris; one tortoise relocated; burrow was backhoed. Contaminated Soil Remediation – project removed several acres of contaminated soil; one tortoise relocated; tortoise was picked up wandering on-site. Note: this project began in FY12 and continued into FY13. The remainder of tortoise data will be provided in the FY13 annual report.
Tyndall AFB: None

b) Research – Conducted by or supported by agency (if published, include citation):
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None

Patrick-Cape Canaveral: None
Tyndall AFB: None

c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/ announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]:
Avon Park AFR: None
Eglin AFB: January 2012 – Air Armament Academy class open to all Eglin personnel. Two hour threatened and endangered species class which included a section on gopher tortoises.
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

UNITED STATES MARINE CORPS

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises) **None**
i) To permanently protected lands **None**
ii) To short-term protected lands **None**
iii) To unprotected lands **None**

b) Research – Conducted by or supported by agency (if published, include citation) **None**

c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach] **None**

UNITED STATES FOREST SERVICE

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises) None.
i) To permanently protected lands
ii) To short-term protected lands
iii) To unprotected lands

b) Research – Conducted by or supported by agency (if published, include citation)
Current research efforts were summarized above in the Land Conservation section.

c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: Current education and outreach efforts were summarized above in the Relevant Activities section.

UNITED STATES FISH AND WILDLIFE SERVICE

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
   i) To permanently protected lands – none
   ii) To short-term protected lands – none
   iii) To unprotected lands – none
b) Research – Conducted by or supported by agency (if published, include citation) – none
c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

   Lower Suwannee/Cedar Keys NWRs – 2 new Rx fire kiosks detail fire benefits to habitat; 10 new "drive-by" Rx fire signs indicating habitat benefit.

   St. Marks NWR – St. Marks NWR refuge quarterly newsletter. Article highlighting refuge efforts to conduct baseline survey in June-July 2011. Distribution approx. 3,000.

   38th Annual Natural Areas Conference (Tallahassee, FL) presentation and field trip, November 2011:

   A 45-minute technical presentation was given at the conference attended by participants from around the U.S, entitled, "TECHNOLOGY, TEAMWORK AND TORTOISES: AN APPLICATION OF LINE TRANSECT DISTANCE SAMPLING TO ESTIMATE A LOW-DENSITY GOPHER TORTOISE POPULATION ON A LARGE MANAGED AREA". The abstract for the presentation can be found at: http://www.naturalarea.org/ 11conference/docs/NAC2011-Abstracts.pdf.

   An on-site day-long field trip highlighting refuge management activities in priority gopher tortoise habitat was conducted for approximately 25 participants of the 2011 Natural Areas Conference.

   A 30-minute technical presentation was given at a regional North Florida – South Georgia sandhills working group meeting providing initial results of LTDS.

   A poster presentation entitled, "Defining the sampling frame: Using available GIS data to model potential gopher tortoise habitat for an application of line transect distance sampling on a large managed area", highlighting preliminary results of St. Marks NWR LTDS tortoise population estimation was given at the 33rd annual Gopher Tortoise Council Meeting held in Orlando, FL.

FLORIDA

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)

Relocation

A total of **2,166** tortoises were relocated during the reporting period. The summary table is listed below.

i) To permanently protected lands (number of tortoises): **2,042**

Most of the tortoises relocated from development sites during this reporting period went to long-term protected sites. These sites are all permitted by the FWC and include a perpetual conservation easement to FWC. A total of 2,042 tortoises were relocated to sites with this designation.

ii) To short-term protected lands: **8**

iii) To unprotected lands: **108**

All 108 tortoises relocated were on-site for development projects (from the 10 or Fewer Burrows permit).

iv) Onto or off of habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise: **8**

A total of 8 tortoises were relocated to the Apalachicola National Forest during the reporting period. This area is designated as a research recipient site but meets this definition for this report.

Summary of relocation activities

FWC permit type	i) Relocated to Long-term Protected Lands	ii) Relocated to Short-term Protected Lands	iii) Relocated to Unprotected Lands	Relocated to Areas with No Designated Status
10 or Fewer Burrows permit	179	8	108	5
Conservation permit	1,863	0	0	3
TOTALS	**2,042**	**8**	**108**	**8**

Translocation:

i) To permanently protected lands: **None during this reporting period.**

ii) To short-term protected lands: **None during this reporting period.**

iii) To unprotected lands: **None during this reporting period.**

iv) Onto or off of habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise: **None during this reporting period.**

Repatriation:

A total of **69** tortoises were repatriated during the reporting period.

"Guidelines for Restocking Public Conservation Lands" was added to the permitting guidelines under Appendix 12 in November 2011. FWC is working to develop waif recipient site guidelines to add to the Permitting Guidelines. One waif recipient site was permitted during this reporting period.

i) To permanently protected lands: **69**

A total of 69 waif tortoises were relocated in an effort to reintroduce tortoises to habitat they once occupied. Sixty-six waifs went to the Aiken Gopher Tortoise Heritage Preserve in South Carolina and 3 captive waifs were relocated to the City of Oakland Park waif recipient site, permitted under Scientific Collecting.

ii) To short-term protected lands **None during this reporting period.**

iii) To unprotected lands **None during this reporting period.**

iv) Onto or off of habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise – **None during this reporting period.**

Head Starting:

To permanently protected lands **- None during this reporting period.**
To short-term protected lands **None during this reporting period.**
To unprotected lands**None during this reporting period.**
Onto or off of habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise - **done during this reporting period.**

b) Research

Are Tortoises Compatible with Cows? *(Ongoing)* Little is known regarding the impacts, beneficial or detrimental, of cattle grazing on gopher tortoise populations. In past assessments of gopher tortoise status in Florida, livestock grazing was not deemed to be a major problem for gopher tortoises. Tortoises co-exist with cattle on portions of the southern dry prairies and in pine plantations in northern Florida. Tortoise burrow entrances are occasionally occluded by cattle activity, but are later reopened by the occupants. In the past, the once free-ranging cattle and "let burn" policies were considered important in retaining the proper open areas for tortoises.

The need for this study was prompted by inquiries from FWC gopher tortoise permitting biologists who are charged with assessing gopher tortoise stocking densities on FWC-approved tortoise recipient sites where cattle production is one of the primary land uses. Because tortoise carrying capacity is still rather poorly understood, adding the variable of cow/calf grazing operations complicates determination of stocking density for a particular site, i.e., assuring that tortoises will have sufficient forage and that their burrowing activity and habitat will not be unduly compromised by potential cattle trampling. Either or both effects (i.e., on forage and burrowing locations) could cause tortoises to emigrate from their designated recipient area or could otherwise adversely impinge on their well-being. Thus, the objective of this study is to evaluate the potential use of active cattle pastures and rangelands as recipient sites for gopher tortoises.

All research was conducted on a large cattle ranch north of Tampa, FL. The habitat within the research site is predominately well-maintained bahiagrass (*Paspalum notatum*) pasture areas of mixed oak hammocks dominated by live oak (*Quercus laurifolia*) with 40-80% canopy closure. Seven adjoining pastures (treatment plots) ranging in size from 37 to 80 acres were enclosed with silt fence; an additional electric fence also was placed approximately 2 feet interior and adjacent to the silt fence in 4 plots as a means to prevent trampling from grazing cattle and mischievous calves. Within 3 of the treatment plots, 10-acre cow enclosures also were constructed. When gopher tortoises became available from development sites, they were released into the designated treatment plot; however, the sluggish economy has reduced the number of available relocated tortoises. Burrow and vegetation surveys, as well as evaluations of tortoise body condition, growth, and recruitment, have been undertaken. Unfortunately, communication problems with the rancher, inferior silt fencing initially, and fence destruction by cattle and winds have

greatly compromised this study. A final report is expected this winter, but preliminary results are disturbing. Recruitment is minimal and the recipient site is being abandoned by adult tortoises that can escape the enclosures; relatively high mortality (211 tortoises to date, comprised of relocated individuals, resident relocatees from past releases, and true residents) is occurring when tortoises are confined to these pastures. The problem appears to be the habitat per se and not necessarily the cattle. Blood, nasal samples, and ticks have been collected from ca. 30 tortoises and will be analyzed in the near future to try to determine the cause(s) of the extreme mortality.

2012 Publication: *Long-term population dynamics of gopher tortoises (Gopherus polyphemus) in a pine plantation in northern Florida.* Joan E. Diemer Berish, Richard A. Kiltie, and Travis M. Thomas. Chelonian Conservation and Biology 1:50-58.

c) Education and outreach
None during this reporting period.

GEORGIA

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
   i) To permanently protected lands
   19 tortoises (14 from three different sites slated for development; four from captivity; one waif) were relocated to Yuchi WMA, placed in an acclimation pen where they currently remain to date, and will be liberated Spring 2013. This pen is immediately adjacent to the pen where 18 other tortoises were relocated to previously (reported in 2011 GTT CCA Annual Report) and liberated from in 18 June 2012.
   ii) To short-term protected lands
   None during the reporting period
   iii) To unprotected lands
   None during the reporting period

b) Research – Conducted by or supported by agency (if published, include citation)
GA DNR-WRD contracted to The Orianne Society a study entitled "A Comparison of Home Range Size, Habitat Use, and Body Condition between Translocated and Resident Gopher Tortoises (*Gopherus polyphemus*) at the Orianne Indigo Snake Preserve and Yuchi Wildlife Management Area, Georgia". The project is in progress.

Additionally, GA DNR-WRD contracted to the University of Georgia and St. Catherines Island Foundation a study entitled "Fine-scale spatial ecology and activity of juvenile gopher tortoises (*Gopherus polyphemus*)". The project is in progress.

c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

Reported in GA DNR_WRD's Georgia Wild e-newsletter (approx. 16,100 subscribers): "Study keys on keeping relocated tortoises put" – 6/29/12 – Profiles Yuchi WMA relocation project. Related media invited to see the project included: "Secretive gopher tortoise has devoted fan club" – 6/11/12 – The Augusta Chronicle. http://chronicle.augusta.com/news/metro/2012-06-11/secretive-gopher-tortoise-has-devoted-fan-club

SOUTH CAROLINA

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
   i) To permanently protected lands
      The AGTHP received 60 waif gopher tortoises in 2011. Seven hatchlings are been head-started and over-wintered at the Savannah River Ecology Laboratory and will be released onto AGTHP in late spring 2013.
   ii) To short-term protected lands
      Not applicable or none during this reporting period.
   iii) To unprotected lands
      Not applicable or none during this reporting period.
b) Research – Conducted by or supported by agency (if published, include citation)
   Efforts are being made to gather data to produce future peer reviewed publications on the translocation/augmentation project at AGTHP.
   Grosse, A.M., K.A., Buhlmann, B.B. Harris, B.A. DeGregorio, B.M. Moule, R.V. Horan, and T.D. Tuberville. 2012. Nest Guarding in the Gopher Tortoise (*Gopherus polyphemus*). Chelonian Conservation and Biology 11(1): 148-151.

   Brett M. Moule, SCDNR, anticipates completing his doctoral research by summer 2013 which includes a chapter that looks at a side-by-side comparison of which cultural practice (prescribed fire, herbicide and mechanical mastication) provides the optimum forage for the gopher tortoise.
c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]: Not applicable or none during this reporting period.

POARCH BAND OF CREEK INDIANS

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
   i) To permanently protected lands – None during this period.
   ii) To short-term protected lands - None during this period.
   iii) To unprotected lands – None during this period
b) Research – Conducted by or supported by agency (if published, include citation)- None
c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events date, location, audience, organizer]; 3) Public service broadcasts/ announcements; or 4)Electronic media [website, Listserv, other internet-based

outreach] – Broadcast from area by live TV media which covers Northwest Florida, South Alabama audiences.

AMERICAN FOREST FOUNDATION

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises) n/a
   i) To permanently protected lands
   ii) To short-term protected lands
   iii) To unprotected lands
b) Research – Conducted by or supported by agency (if published, include citation) n/a
c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach] n/a

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)
   i) To permanently protected lands: **N/A**
   ii) To short-term protected lands: **N/A**
   iii) To unprotected lands: **N/A**
b) Research – Conducted by or supported by agency (if published, include citation)
c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

SECTION VII: CCA AGENCY CONSERVATION STRATEGY (SEE CCA SECTION 10.2)

ARMY

a) Deviations from CCA Agency Conservation Strategy
   Fort Benning - None
   Fort Gordon –None
   Fort Rucker- None
   Fort Stewart – None
   Camp Blanding Joint Training Center – N/A
b) New goals and strategies not included under the CCA Agency Conservation Strategy
   Fort Benning - None
   Fort Gordon –None
   Fort Rucker- None
   Fort Stewart – None

Camp Blanding Joint Training Center – None

NAVY

a) Deviations from CCA Agency Conservation Strategy: N/A
b) New goals and strategies not included under the CCA Agency Conservation Strategy: N/A

AIR FORCE

a) Deviations from CCA Agency Conservation Strategy:
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None
b) New goals and strategies not included under the CCA Agency Conservation Strategy:
Avon Park AFR: None
Eglin AFB: None
MacDill AFB: None
Moody AFB: None
Patrick-Cape Canaveral: None
Tyndall AFB: None

UNITED STATES MARINE CORPS

a) Deviations from CCA Agency Conservation Strategy **None**
b) New goals and strategies not included under the CCA Agency Conservation Strategy **As stated in the 2011 Marine Corps Gopher Tortoise Report, MCSF BI relocated all gopher tortoises to a location off of the installation. Therefore, the Marine Corps officially requests via this report to remove MCSF BI from the Gopher Tortoise CCA.**

UNITED STATES FOREST SERVICE

a) Deviations from CCA Agency Conservation Strategy: None
b) New goals and strategies not included under the CCA Agency Conservation Strategy None

UNITED STATES FISH AND WILDLIFE SERVICE

a) Deviations from CCA Agency Conservation Strategy – none
b) New goals and strategies not included under the CCA Agency Conservation Strategy – none

FLORIDA

a) Deviations from CCA Agency Conservation Strategy. None.
b) New goals and strategies not included under the CCA Agency Conservation Strategy. None.

GEORGIA

a) Deviations from CCA Agency Conservation Strategy
None during the reporting period
b) New goals and strategies not included under the CCA Agency Conservation Strategy
With the assistance and support of GA DNR-WRD, the Evans County Wildlife Club switched from the Claxton Rattlesnake Roundup to the Claxton Rattlesnake and Wildlife Festival. Starting in 2012, the event no longer is based on the collection of rattlesnakes from the wild, often by gassing gopher tortoise burrows, but rather on display of captive snakes and accompanying wildlife educational programs. GA DNR-WRD will continue to provide assistance and support to this event to further protection of the gopher tortoises and other burrow associates.

SOUTH CAROLINA

a) Deviations from CCA Agency Conservation Strategy
Not applicable or none during this reporting period.
b) New goals and strategies not included under the CCA Agency Conservation Strategy
Not applicable or none during this reporting period.

POARCH BAND OF CREEK INDIANS

a) Deviations from CCA Agency Conservation Strategy – None
b) New goals and strategies not included under the CCA Agency Conservation Strategy-None

AMERICAN FOREST FOUNDATION

a) Deviations from CCA Agency Conservation Strategy
b) New goals and strategies not included under the CCA Agency Conservation Strategy:
AFF's work with family forest owners to conserve gopher tortoise and their habitat has changed from a strategy focused on educational field days and direct technical assistance to one aimed at policy. We believe that an effective pre-compliance mitigation program that incentivizes habitat conservation and management through credit creation for landowners and provides regulatory predictability for potential buyers (e.g. DoD, DoT) would be a powerful tool not only for gopher tortoise but for other at-risk species around the country.

JOSEPH W. JONES ECOLOGICAL RESEARCH CENTER

a) Deviations from CCA Agency Conservation Strategy: **None**
b) New goals and strategies not included under the CCA Agency Conservation Strategy: **None**

APPENDIX I: GOPHER TORTOISE CCA REPORT FORM

Gopher Tortoise Candidate Conservation Agreement (GTCCA)

Reporting Period: October 1, 2011 – September 30, 2012
Report due to the CCA Gopher Tortoise Team (GTT) Chair: January 31, 2013
Annual Assessment Report for: _____

Organization/Agency name

Submitted by: _____ **Email:** _____ **Phone:** _____

Organization/Agency contact name

The Candidate Conservation Agreement for the Gopher Tortoise (GTCCA) was signed and implemented in December 2008. The Agreement requires an annual assessment report from each party to the agreement to document conservation activities occurring within the gopher tortoise' non-federally listed range. To facilitate the compilation of information, this report format should be followed by all CCA partners. The assessment report should include activities completed on an annual basis for the period covering October 1 – September 30. Not all sections included below will be applicable to each organization. If sections of this report are not applicable to your organization's gopher tortoise conservation activities or are not applicable for the current reporting period, please indicate so.

The annual assessment report will be submitted to the Gopher Tortoise Team Chair by December 1 of each calendar year. The final CCA Annual report will be compiled and submitted by the Gopher Tortoise Team Chair to the *Southeast Regional Partnership for Planning and Sustainability (*SERPPAS) Steering Committee and Principals Group no later than January 30 each calendar year. An announcement that details the progress made to date on implementation of conservation actions described in the GTCCA will then be placed on the official SERPPAS website after concurrence by the SERPPAS Principals.

1) Executive Summary

Brief summary of activities included in the report

2) Relevant Activities to Listing Factor A (The present or threatened destruction, modification, or curtailment of the species habitat or range)

b) Properties or Area Covered

i) Total estimated acreage of **long-term** protected tortoise habitat (either by public ownership or by easement)

ii) Total estimated acreage of **short-term** protected tortoise habitat (either by public ownership or by easement)

iii) Total estimated acreage of **unprotected** tortoise habitat

iv) Total estimated acreage tortoise habitat without a designated special protection status, but included in a management plan that provides for the conservation of the gopher tortoise

c) Land Management

i) Acres of gopher tortoise habitat restored or improved

ii) Acres of gopher tortoise habitat maintained

iii) Acres of gopher tortoise habitat burned

(1) Acres burned during dormant season (% of total acres burned)

(2) Acres burned during growing season (% of total acres burned)

iv) Acres of invasive species treated/eradicated (include species involved)

v) Other land management activities

d) Land Conservation

i) Acquisitions, easements and other long-term conservation protection

ii) Land/habitat loss due to development activities or habitat degradation (identify cause of loss and if permanent/non-permanent)

e) Gopher tortoise burrow survey date(s), methodology, results by property, and comparisons to previous surveys

f) Research – conducted by or supported by agency (if published, include citation)

3) Relevant Activities to Listing Factor B (Overutilization for commercial, recreational, scientific, or educational purposes)

a) Research – conducted by or supported by agency (if published, include citation)

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

4) Relevant Activities to Listing Factor C (Disease or predation)

a) Disease and die-offs (date, property/location, cause if known, number of deaths)

b) Disease screening efforts

c) Predator control

d) Research – conducted by or supported by agency (if published, include citation)

5) Relevant Activities to Listing Factor D (Inadequacy of existing regulatory mechanisms)

a) Legal protection measures (new, revised or expired legal protections that impact tortoises and/or their habitat)

i) State laws, rules and regulations

ii) Agency policies/directives/compliance documents

iii) Permitted takes (property/location, number of takes permitted)

b) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

6) Relevant Activities to Listing Factor E (Other natural or manmade factors affecting the species continued existence)

a) Relocation/translocation/repatriation/head-starting (describe project/action and number of tortoises)

i) To permanently protected lands

ii) To short-term protected lands

iii) To unprotected lands

b) Research – Conducted by or supported by agency (if published, include citation)

c) Education and outreach: 1) publications [signage, brochures]; 2) Workshops and events [date, location, audience, organizer]; 3) Public service broadcasts/announcements; or 4) Electronic media [website, Listserv, other internet-based outreach]

7) CCA Agency Conservation Strategy (see CCA Section 10.2)

a) Deviations from CCA Agency Conservation Strategy

b) New goals and strategies not included under the CCA Agency Conservation Strategy

APPENDIX II: DEFINITIONS (please see the GTCCA for a full list of definitions):

Habitat without a designated special protection status – applies to lands that are included in a management plan: this could consist of state public lands under a state management plan; Department of Defense installations (with a signed/approved Integrated Natural Resources Management Plan - INRMP).

Integrated Natural Resources Management Plan (INRMP) - a document that supports the military mission by combining a series of component plans into an ecosystem management approach and is the primary tool for managing species and their habitat on military installations.

Long-term protection (habitat) – applies to either privately owned lands placed under a perpetual (i.e., endless duration) conservation easement, or publicly owned lands purchased for conservation purposes where either restrictions on the acquisition funding source or government commitment (through ordinances or other regulations) would prevent or prohibit the eventual sale or development of the property.

Protected (habitat) – applies to any land that is protected from any future development (i.e. take of habitat).

Short-term protection (habitat) – applies to either privately or publicly owned lands that have some enforceable protection commitment, but those commitments do not meet the definition of "long-term protection."

Unprotected Site (habitat) – applies to lands that do not have any enforceable protection commitments or use restrictions that would prevent them from being modified and made unsuitable for tortoises.

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