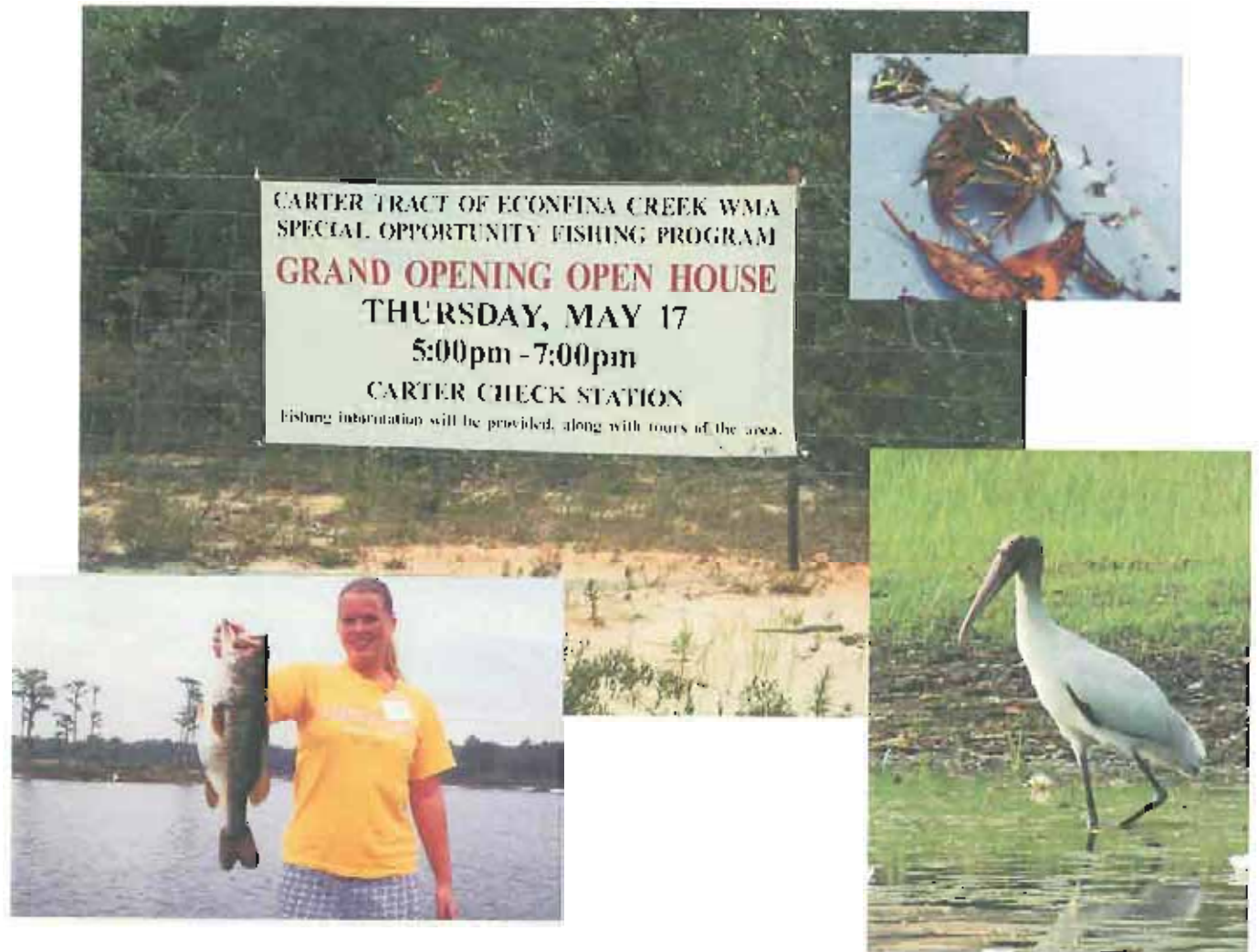


SANDHILL LAKES MITIGATION BANK (FITZHUGH CARTER TRACT) OF ECONFINA CREEK WILDLIFE MANAGEMENT AREA

ANNUAL REPORT 2006-2007



Prepared by Kelly Bunting, Wildlife Biologist
Florida Fish and Wildlife Conservation Commission



TABLE OF CONTENTS

LIST OF FIGURES.....	4
LIST OF TABLES.....	6
INTRODUCTION.....	7
History.....	7
HABITAT.....	10
Ecological and Land Cover Classification.....	10
Drought.....	12
Photo Plots.....	14
FISH AND WILDLIFE POPULATIONS.....	14
Freshwater Fish.....	15
Fish Population Assessment.....	15
Public Fishing.....	19
Public Fishing Rules, Regulations and Procedures.....	20
Results: May 2007 – Present.....	22
Wildlife Populations.....	25
White-tailed Deer.....	25
Management Objectives.....	25
Population Trends.....	25
Harvest and Hunting Pressure.....	27
Wild Turkey.....	29
Management Objectives.....	29
Harvest.....	29
Small Game.....	29
Waterfowl.....	29
Harvest.....	29
Wood Duck Nest Boxes.....	30
Birds.....	33
Wading Birds.....	33
Passerines.....	35
Mourning Dove Banding.....	39
Gopher Tortoise.....	41
Herpetofauna.....	42
Indigo Snake Surveys.....	45

MISCELLANEOUS MANAGEMENT ACTIVITIES.....	46
LAW ENFORCEMENT ACTIVITIES.....	47
LITERATURE CITED.....	48
Appendix I – 1960 <i>Florida Wildlife</i> article on fish camp at Carter Tract of Econfina Creek WMA.....	51
Appendix II - Percent Occurrence of Fish Species Sampled via Wegener Rings for Black and Green Ponds on the Carter Tract of Econfina Creek Wildlife Management Area, October – November 2006.....	56
Appendix III – Public brochure for Special Opportunity Fishing Program on Carter Tract of Econfina Creek WMA.....	57
Appendix IV – Econfina Creek WMA 2007-08 Regulations Summary, including Fitzhugh Carter Tract area-specific hunting regulations.....	59
Appendix V – Wood Duck nest box monitoring data sheet for Carter Tract of Econfina Creek WMA.....	63
Appendix VI – “Checklist of Birds” public brochure for Carter Tract of Econfina Creek WMA.....	64
Appendix VII – Wading bird nest monitoring data sheet for Carter Tract of Econfina Creek WMA.....	66
Appendix VIII - Songbird point count data sheet for Carter Tract of Econfina Creek WMA.....	67
Appendix IX - Herpetofaunal funnel trap monitoring survey form for Carter Tract of Econfina Creek WMA.....	68
Appendix X. 2006-2007 Annual Work Plan for the Carter Tract of Econfina Creek Wildlife Management Area.....	69

LIST OF FIGURES

Figure 1. 50 cypress boats were built and placed on various ponds for use by anglers at Mr. Fitzhugh Carter's fishing ranch, now the Carter Tract of Econfina Creek WMA.	9
Figure 2. Boat registration tags, issued by the Florida Game and Freshwater Fish Commission circa 1950 and 1953, removed from cypress boats used by anglers on Mr. Fitzhugh Carter's fishing ranch, now the Carter Tract of Econfina Creek WMA.	9
Figure 3. Upland sandhills sloping to a marsh on the Carter Tract of Econfina Creek Wildlife Management Area.	10
Figure 4. View of the Green Ponds on Carter Tract of Econfina Creek WMA. June 2006.	13
Figure 5. View of the Green Ponds on Carter Tract of Econfina Creek WMA. June 2007.	13
Figure 6. Photo plot documenting scrub oak removal on the Carter Tract of Econfina Creek WMA, April 2007.	14
Figure 7. Electrofishing on Black Pond on the Carter Tract of Econfina Creek WMA.	15
Figure 8. Fish sampling via Wegener Ring on Black Pond on the Carter Tract of Econfina Creek WMA.	16
Figure 9. Though largemouth bass were targeted, data on several other species (including this bluegill) were collected during a mark-recapture study on the Carter Tract of Econfina Creek WMA in spring 2007.	17
Figure 10. A grand opening was held on May 17, 2007 for the Special Opportunity Public Fishing Program on the Carter Tract of Econfina Creek WMA.	20
Figure 11. Anglers and recreational users are required to check in and out at the check station upon entering and exiting the Carter Tract of Econfina Creek WMA.	21
Figure 12. Creel kits are assigned to each angler, who is asked to collect species and length on each fish he/she catches. Rulers, pliers and safety equipment are also provided.	21
Figure 13. Eight 14-foot, 48-inch jonboats are currently available for use while fishing on the Carter Tract of Econfina Creek WMA.	22
Figure 14. A local angler caught this largemouth bass on Dry Pond at Carter Tract of Econfina Creek WMA on June 2, 2007. He reported it to weigh 11 pounds.	24
Figure 15. This young angler had a fine day of bluegill fishing on the Carter Tract of Econfina Creek WMA.	24
Figure 16. Distribution of deer survey routes established on the Carter Tract of Econfina Creek WMA, September 2006.	26

Figure 17. Trend in white-tailed deer density on the Carter Tract of Econfina Creek Wildlife Management Area, 2005-2006.....	27
Figure 18. This 5.5 year-old buck, weighing 170 pounds, was harvested from the Carter Tract of Econfina Creek WMA, January 20, 2007.....	28
Figure 19. Trend in man-days of hunting pressure per season by year on the Carter Tract of Econfina Creek WMA, 2005 – 2006.....	29
Figure 20. Wood Duck nest boxes were checked quarterly for use and cleaned and repaired in January 2007. Note drought conditions this past year.....	31
Figure 21. Female Wood Duck in nest box on the Carter Tract of Econfina Creek WMA, April 2006.....	31
Figure 22. Distribution of Wood Duck nest boxes across the Carter Tract of Econfina Creek WMA, December 2005 – January 2006. Boxes used by ducks in 2006 are denoted with a red star.....	32
Figure 23. This wading bird rookery was noted on Little Deep Edge Pond on the Carter Tract of Econfina Creek WMA. Six species and over 117 individuals were recorded on the rookery in April 2006.....	34
Figure 24. Wading bird rookery at Little Deep Edge Pond, Carter Tract of Econfina Creek WMA, June 2007.....	34
Figure 25. Great Blue Heron (<i>Ardea Herodias</i>) nesting on Dry Pond, Carter Tract of Econfina Creek WMA, June 2007.....	35
Figure 26. Locations of point count surveys on the Carter Tract of Econfina Creek WMA, May – June 2007.....	38
Figure 27. Percent of total detections for bird species identified during point counts on Carter Tract of Econfina Creek WMA, April 2007.....	39
Figure 28. In conjunction with national long-term banding efforts, the Carter Tract of Econfina Creek WMA is one of the sites participating in Florida’s statewide dove banding program.....	40
Figure 29. In preparation for banding of mourning doves, prebaiting using white millet seed was initiated in June 2007 at two sites on the Carter Tract of Econfina Creek WMA.....	41
Figure 30. Drift fence used in herpetofaunal surveys on the Carter Tract of Econfina Creek WMA, November 2006 – March 2007.....	43
Figure 31. Mole Salamander (<i>Ambystoma tadpoideum</i>), (left) and Eastern Spadefoot Toad (<i>Scaphiopus holbrookii holbrookii</i>), captured in funnel trap on Carter Tract of Econfina Creek WMA, December 2006.....	43
Figure 32. Location of drift fences for herpetofaunal surveys on the Carter Tract of Econfina Creek WMA, October 2006- May 2007.....	45

Figure 33. Numerous signs were placed on the Carter Tract of Econfina Creek WMA in Spring 2007 to help direct vehicles upon the opening of the area to public fishing in May 2007..... 46

Figure 34. Signs containing fishing rules and regulations were placed at designated angler parking areas on Carter Tract of Econfina Creek WMA in Spring 2007.. 47

LIST OF TABLES

Table 1. Existing land cover classifications as of 2005 on the Fitzhugh Carter Tract of Econfina Creek WMA, given by the Florida Land Use, Cover and Forms Classification System (FLUCCS)..... 12

Table 2. Water gauge levels from selected ponds on the Carter Tract of Econfina Creek WMA, January 2006 – present. Levels given are in feet..... 13

Table 3. Fish species identified from electrofishing and Wegner ring surveys conducted on major waterways within the Carter Tract of Econfina Creek WMA, 2006 - 2007 18

Table 4. Electrofishing results for sportfish sampled from Carter Tract, October – November 2006..... 18

Table 5. Modified Schnabel population estimate using Poisson distribution with 95% confidence interval for adult largemouth bass on Dry Pond, Carter Tract of Econfina Creek WMA, Spring 2007..... 18

Table 6. Total number of anglers and angler-reported total catch by water body on the Carter Tract of Econfina Creek WMA, May 18 – July 30, 2007..... 23

Table 7. Angler-reported average lengths for sportfish species by water body on the Carter Tract of Econfina Creek WMA, May 18 – July 30, 2007. N = total number of each species measured from each water body..... 23

Table 8. Harvest summary for the deer hunting seasons on the Carter Tract of Econfina Creek WMA, 2006-2007..... 28

Table 9. Summary of activity on wading bird rookery at Little Deep Edge Pond, Carter Tract of Econfina Creek WMA, April 2006..... 33

Table 10. Bird species and number of detections recorded from point counts on Carter Tract of Econfina Creek WMA, May – June 2007..... 37

Table 11. Herpetofaunal species captured in drift fences on the Carter Tract of Econfina Creek WMA, November 2006 - March 2007..... 44

INTRODUCTION

The Sand Hill Lakes Mitigation Bank property (referred to herein as the Carter Tract) is a 2,155 acre parcel located in south-central Washington County, approximately 5 miles north of State Road 20 and 1 mile west of State Road 77. The natural community within the Carter Tract is classified by the Florida Natural Areas Inventory (FNAI) as xeric upland sandhill (FNAI 1990). It is characterized by relatively high and rolling topography with sandy soils overlying limestone and with numerous small solution ponds. Much of the area's sandhill community, historically dominated by longleaf pine (*Pinus palustris*), has been harvested and converted to sand pine (*Pinus clausa*) or slash pine (*Pinus elliotti*) plantation or developed for home sites and small farms. The surrounding land uses are primarily pine plantation, undeveloped open lands, sod farms, small residential developments and a nearby Department of Corrections facility. There is increasing residential development in the vicinity, and there are plans to widen State Road 77. The parcel lies within the Choctawhatchee River Basin, near the watershed divide to the St. Andrews Bay Basin. Most surface water flows through the ponds and Pine Log Creek to the Choctawhatchee River, but much of the groundwater flow is toward the east into the Econfina Creek watershed of the St. Andrews Bay Basin.

The Carter Tract was purchased by the Northwest Florida Water Management District (NFWMD or the District) in October 2003, and established by the Florida Fish and Wildlife Conservation Commission (FWC) as a tract of Econfina Creek Wildlife Management Area (WMA). A mitigation bank permit from the Florida Department of Environmental Protection (DEP) was issued to the District in August 2005 to manage the property. Management objectives identified by the District include wetlands restoration, preservation and management, aquatic habitat preservation, erosion control and uplands restoration and management. In June 2005, FWC entered into a cost-share agreement with the District to develop and implement a comprehensive fisheries and wildlife management program for Carter Tract.

History

The Carter Tract has a rich history of public use and landowner manipulation. In 1941, Fitzhugh Carter began acquiring the land, beginning with 200 acres and eventually owning 2300 acres. After witnessing extremely high water in the area in 1940, Mr. Carter had the idea of connecting and holding water in all of the ponds, to prevent the

frequent water level fluctuations of individual ponds, and capture the excellent fishing opportunities of high water years. Using his own resources, he dug canals and ditches, and built dykes and dams, to connect most of the 30 ponds on the area by 1957. He also reestablished water flow to the Dry and Green Ponds which had previously been diverted to the Old Dykes Mill Pond. Perhaps his most ambitious achievement was plugging a sinkhole in Dry Pond using dynamite and a brave bulldozer operator. He vowed Dry Pond would never be dry again.

Mr. Carter charged \$1 per person to fish on his "fishing ranch", and built most of the 50 cypress boats which scattered the various ponds. Some of the boats have been uncovered during low water (Figure 1), and a few have produced the original Florida Game and Fish boat registration tags, dating back to 1949 (Figure 2). In 1951, Florida Game and Fish Commission biologists helped with stocking several of Mr. Carter's ponds with largemouth bass, bluegill and redear sunfish.

Mr. Carter's fishing ranch was highly successful, and his ingenuity with engineering and land manipulation won the praise of Game and Fish Commission biologists, who commended his success at creating a valuable recreational opportunity from lands otherwise seen as unproductive at this time. The area was featured in a 1960 issue of the *Florida Wildlife* magazine (Appendix I). After the fishing ranch closed, the area was leased as a hunt camp for several years. The District purchased the property in 2003. With the creation of a partnership between the District and FWC, and their combined restoration efforts, the Carter Tract will hopefully reclaim its old glory as a high quality recreational fishing area for years to come.



Figure 1. 50 cypress boats were built and placed on various ponds for use by anglers at Mr. Fitzhugh Carter's fishing ranch, now the Carter Tract of Econfina Creek WMA.



Figure 2. Boat registration tags, issued by the Florida Game and Freshwater Fish Commission circa 1950 and 1953, removed from cypress boats used by anglers on Mr. Fitzhugh Carter's fishing ranch, now the Carter Tract of Econfina Creek WMA.

HABITAT

Ecological and Land Cover Classification



Figure 3. Upland sandhills sloping to a marsh on the Carter Tract of Econfina Creek Wildlife Management Area.

The Carter Tract contains several distinct ecological communities. It contains a significant percentage of upland sandhill (approx. 1,150 acres) (Figure 3), historically logged for longleaf pine and re-planted as pine plantation or left to regenerate with pine (*Pinus* spp.), live oaks and scrub oaks (*Quercus* spp.). Interspersed within the uplands are approximately 850 acres of wetlands including cypress (*Taxodium* spp.) with emergent vegetation, degraded hydric pine flatwoods, bayhead wetlands, isolated depression marshes, seepage slopes, and other ecotonal wetland types. Approximately 150 acres are natural solution ponds (isolated, steep-sided karst ponds and shallow, gently-sloping lakes connected by streams and ditches). An expanded summary of the existing land cover classifications is shown in Table 1.

Historic communities have been disturbed by timber operations and suppression of natural fire regimes. However, most of the wetlands and some uplands retain their natural character. The hydrology is typical of a karst landscape and is characterized by both isolated ponds and those connected through streams. Pine Log Creek is the major stream flowing through Carter Tract.

These land cover types occur across several soil types, the composition of which are mostly sand. Swamp soils are the most common soil type, which are strongly acidic, mainly mineral soils containing large amounts of organic matter. Lakeland soils are also present, which are deep, well-drained, strongly acidic sandy and loamy soils. Blanton soils also occur, which are also sandy and acidic in nature. These soil types occur across the range of slopes found on Carter Tract.

Several distinct vegetative communities exist on Carter Tract, based mostly upon soils and topography (Table 1). Little of the historic longleaf pine/wiregrass (*Aristida* spp.) community remains at present. The essential element of maintaining this community, periodic prescribed fire, has been absent for many years. As a result, wiregrass has been replaced with shrubs and taller understory species, and longleaf pine has been outcompeted by hardwoods and other pine species on several of the Tract's parcels. The natural plant communities of the Florida Panhandle have been described in detail by Clewell (1981).

Table 1. Existing Land Cover Classifications as of 2005 on the Fitzhugh Carter Tract of Econfina Creek WMA, given by the Florida Land Use, Cover and Forms Classification System (FLUCCS).

Level II FLUCCS	Description	Acres	Level III FLUCCS / Notes	Acres
420	Upland Hardwood Forest	757.79	421 - Xeric Oak	526.13
			427 - Live Oak	231.66
440	Tree Plantation	395.10	441 - Sand Pine Plantation	296.83
			441 - Sand Pine Plantation (Hydric)	11.53
			441 - Slash Pine Plantation	86.66
520	Lake	170.79	Undifferentiated 520	170.78
610	Wetland Hardwood Forest	127.87	611 - Bay Swamp	41.70
			615 - Stream and Lake Swamp	3.15
			616 - Inland Ponds and Sloughs	7.70
			617 - Mixed Wetland Hardwoods	75.31
620	Wetland Coniferous Forest	605.67	621 - Cypress Swamp	454.50
			625 - Hydric Pine Flatwoods	146.68
			626 - Hydric Pine Savannah	4.49
630	Wetland Forested Mixed	5.21	Undifferentiated 630	5.21
640	Vegetated Non-Forested Wetland	92.658	Undifferentiated 640	2.85
			641 - Freshwater Marsh	31.01
			643 - Wet Prairie	1.70
			644 - Emergent Aquatic Vegetation	57.11
810/830	Transportation / Utilities	18.90	814 - Roads (Stream Crossings)	0.25
			832 - Power Line Right-of-Way	18.64
TOTAL		2173.89		2173.89

Drought

Water levels on the Carter Tract lakes and creeks have historically fluctuated in cycles lasting several years. Water gauges were installed on the Carter Tract by the District in 2005, and readings recorded monthly by FWC field staff beginning in January 2006. Steep declines in water levels have been documented over the past 18 months (Table 2). Lake levels have dropped considerably (Figures 4 and 5), interconnectedness between waterways has diminished, and several ponds and creeks have dried completely. Decreased water levels have affected all wildlife, especially wading birds and Wood Ducks (*Aix sponsa*), which nest over water, and freshwater fish. Management activities altered due to low water conditions include: wading bird rookery monitoring indicated no use in 2007; electrofishing surveys limited and/or halted; and public fishing angler quotas lowered.

Table 2. Water gauge levels from selected ponds on the Carter Tract of Econfina Creek WMA, January 2006 – present. Levels given are in feet.

	Dry Pond	Black Pond	Green Ponds
January 2006	4.18	3.60	3.60
July 2006	2.30	1.68	0.60
July 2007	below gauge	below gauge	below gauge



Figure 4. View of the Green Ponds on Carter Tract of Econfina Creek WMA, June 2006.



Figure 5. View of the Green Ponds on Carter Tract of Econfina Creek WMA, June 2007.

Photo Plots

Photo plots are photographs taken at established locations, facing a preset direction. They are used to provide visual documentation of changes to a natural area through time. Prompted by changes to many areas of the Carter Tract due to restoration efforts, management activities and drought conditions, 57 photo plots were established on the area in spring 2007 (Figure 6). The photographs document all habitat types found on the area, as well as water bodies, roads, bridges, pine stands and other locations undergoing significant alteration. Photos will be taken at each location annually.



Figure 6. Photo plot documenting scrub oak removal on the Carter Tract of Econfina Creek WMA, April 2007.

FISH AND WILDLIFE POPULATIONS

Working in cooperation with the District, the responsibilities of the FWC-Division of Habitat and Species Conservation on the Carter Tract are generally to conduct fish and wildlife population surveys/assessments, collect/analyze biological data, evaluate results, administer public fishing and hunting programs, provide recommendations for adjustments in harvest designed to optimize fish and wildlife populations and maximize recreational opportunities for the public. The following are management programs developed to address targeted species and public opportunities.

Freshwater Fish

Fish Population Assessment

Fish population assessments in fall 2006 revealed no new fish species except channel catfish (*Ictalurus punctatus*); the 25 species so far identified on the area are listed in Table 3. Due to bridge construction and low water levels caused by drought conditions, sportfish surveys were limited during fall 2006 and spring 2007. Shoreline electrofishing was conducted on Black Pond in fall 2006 (Figure 7). Sportfish abundance calculated from the electrofishing data is presented as the amount of fish sampled per minute (Table 4). In addition to the largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis macrochirus*), warmouth (*Lepomis gulosus*), flier (*Centrarchus macropterus*), spotted sunfish (*Lepomis punctatus*) and black crappie (*Pomoxis nigromaculatus*) were the other sportfish sampled, as well as yellow bullhead catfish (*Ameiurus catus*).



Figure 7. Electrofishing on Black Pond on the Carter Tract of Econfina Creek WMA.

Wegener Rings were also utilized at three different depths to sample the littoral zone for young-of-the-year (y-o-y) sportfish (Wegener et al. 1974) (Figure 8). The percent occurrence of all species sampled via Wegener Rings was determined for Black and Green Ponds in October - November 2006 (Appendix II). Sampling via shoreline electrofishing and Wegener ring sampling is scheduled to be repeated each spring and

fall. Fish survey data will be analyzed on five-year intervals, to evaluate fish population status and provide management recommendations.



Figure 8. Fish sampling via Wegener Ring on Black Pond on the Carter Tract of Econfina Creek WMA.

A mark-recapture study was conducted by FWC biologists on Dry Pond on 8 non-consecutive days in spring 2007 targeting largemouth bass (Figure 9). Data collected over this period provided a Schnabel population estimate (N). This population density estimate (modified for small sample size) is a conservative estimate of the population of a species in a given body of water (Table 5).



Figure 9. Though largemouth bass were targeted, data on several other species (including this bluegill) were collected during a mark-recapture study on the Carter Tract of Econfina Creek WMA in spring 2007.

Table 3. Fish species identified from electrofishing and Wegner ring surveys conducted on major waterways within the Carter Tract of Econfina Creek WMA, 2006 - 2007

Common name	Scientific name
Eastern starhead topminnow	<i>Fundulus escambiae</i>
Mosquitofish	<i>Gambusia holbrooki</i>
Lake chubsucker	<i>Erimyzon sucetta</i>
Pygmy sunfish	<i>Elassoma</i> sp.
Pygmy killifish	<i>Leptolucania ommata</i>
Warmouth	<i>Lepomis gulosus</i>
Bluespotted sunfish	<i>Eneacanthus gloriosus</i>
Tadpole madtom	<i>Noturus gyrinus</i>
Chain pickerel	<i>Esox niger</i>
Swamp darter	<i>Etheostoma fusiforme</i>
Bluegill	<i>Lepomis macrochirus</i>
Brook silverside	<i>Labidesthes sicculus</i>
Largemouth bass	<i>Micropterus salmoides</i>
Yellow bullhead	<i>Ameiurus natalis</i>
Dollar sunfish	<i>Lepomis marginatus</i>
Banded topminnow	<i>Fundulus cingulatus</i>
Pirate perch	<i>Aphredoderus sayanus</i>
Spotted gar	<i>Lepisosteus oculatus</i>
Bowfin	<i>Amia calva</i>
Bluefin killifish	<i>Lucania goodei</i>
Grass pickerel	<i>Esox americanus</i>
Flier	<i>Centrarchus macropterus</i>
Spotted Sunfish	<i>Lepomis punctatus</i>
Black Crappie	<i>Pomoxis nigromaculatus</i>
Channel Catfish	<i>Ictalurus punctatus</i>

Table 4. Electrofishing results for sportfish sampled from Carter Tract, October – November 2006.

Species	N ^a	Black Pond
		CPUE ^b
Largemouth Bass	17	0.25
Bluegill	19	0.28
Warmouth	11	0.16
Total	47	0.69

^a Number of fish sampled.

^b Catch per unit effort (CPUE) is measured in fish/min.

Table 5. Modified Schnabel population estimate using Poisson distribution with 95% confidence interval for adult largemouth bass on Dry Pond, Carter Tract of Econfina Creek WMA, Spring 2007.

Pond	N	95% CI
Dry	414	202 - 1036

Public Fishing

With a rich history of public fishing, the District and FWC envisioned reopening the Carter Tract to anglers with the creation of a Special Opportunity Fishing Program. Many local anglers have requested access, and several have fond memories of frequenting Mr. Carter's fishing ranch. However, because the area is under a mitigation bank agreement, special precautions must be taken to ensure public fishing would not be detrimental to the habitat. Our goal was to create a successful special opportunity public fishing program on the Carter Tract that would not impact the habitat yet provide high quality fishing for the public. A working group comprised of representatives from several stakeholder categories met on several occasions in 2006 and decided upon several key logistical issues regarding the daily operation of a public fishing program on the area. These included days and hours of operation, whether to allow reservations to be made, whether to remain open to fishing during hunting seasons, and how to incorporate other recreational users such as kayakers and hikers during fishing days. The working group was highly successful in discussing and reaching consensus on these issues, and provided a good starting point for establishing how our public fishing program would run.

On May 17, 2007, a grand opening was held at the Carter Tract to inform the public about this new fishing opportunity, and provide information about the unique rules, regulations and procedures on the area (Figure 10). Tours of the various lakes were provided by the District, and posters and fishing tackle were given away. The event was well-attended by local neighbors of the area, as well as members of the working group and the media. The Carter Tract officially opened to public fishing the following day, May 18, 2007. A public fishing brochure is given to each angler detailing all of the policies, procedures, rules and regulations for the area. The brochure also contains a map outlining the lakes and public roads (Appendix III). An overview of these policies and rules is given below.



Figure 10. A grand opening was held on May 17, 2007 for the Special Opportunity Public Fishing Program on the Carter Tract of Econfina Creek WMA.

Public Fishing Rules, Regulations and Procedures

There were many issues to consider when trying to balance a high quality public fishing opportunity with the special needs of a mitigation bank property such as the Carter Tract. It was determined by members of the Carter Tract public fishing working group, with guidance from the District and FWC, that the Carter Tract would be open to fishing Fridays through Mondays from 6am to 8pm March through October, and 6am to 5pm November through February. The area is to be closed to fishing during the days it would coincide with the limited hunts allowed on the area. Mitigation bank rules allow for 20 anglers on the area at one time; however, due to low water levels resulting from drought conditions, this quota was lowered to 16 anglers by FWC biologists. This quota will again be evaluated in fall 2007 if water levels are continuing to fall. Also due to low water levels and stressed fish stocks, all ponds except Black Pond, Dry Pond and Deep Edge Pond were closed indefinitely to public fishing. In order to accommodate local and non-local anglers, it was decided by the working group that ten of the 16 angler slots would be available to reserve ahead by calling the check station; the other six are held for the walk-in angler.

Check In/Out: Anglers are required to enter and exit only at the main entrance to the area, and remain on the designated public road. They are also required to check in and

out at the check station (Figure 11), which is manned at all times by a check station attendant. Anglers are issued a daily use permit, which they keep with them while on the area. For safety purposes, anglers are required to select one lake on which to fish and remain at this lake unless they check back in with attendant.



Figure 11. Anglers and recreational users are required to check in and out at the check station upon entering and exiting the Carter Tract of Econfina Creek WMA.

Anglers are asked to collect basic information on the fish they catch on Carter Tract. A creel kit is assigned to each angler containing a ruler, clipboard with datasheet, air horn and first aid kit, pencils and pliers (Figure 12). Anglers are asked to record the species and length of each fish caught, whether kept or released.



Figure 12. Creel kits are assigned to each angler, who is asked to collect species and length on each fish he/she catches. Rulers, pliers and safety equipment are also provided.

Boats: To prevent the introduction of exotic vegetation into Carter Tract water bodies, no trailered boats are allowed into the area. Twelve jonboats were purchased by the Water Management District and placed on the lakes open to public fishing (Figure 13). The boats are very durable and extra wide for safety. Sculling notches were installed on each boat. Kayaks and canoes on top of vehicles or in the back of trucks are allowed only upon visual inspection for vegetation by the check station attendant. Oars, life jackets and flotation cushions are also issued to each angler upon check in. At this time, the mitigation bank agreement does not allow the use of any motor, gas or electric, other than for biological or management purposes. Boats are chained and locked, and must remain on the lake on which they are placed.



Figure 13. Eight 14-foot long, 48-inch wide jonboats are currently available for use while fishing on the Carter Tract of Econfina Creek WMA.

Results: May 2007 – Present

The Special Opportunity Public Fishing Program on the Carter Tract of Econfina Creek WMA has been a spectacular success to date. Anglers have been courteous and accommodating to all of the special rules and regulations, and have willingly collected creel data. Public use of the area has been heavy since opening day (Table 6). The quota of 16 anglers at a time has nearly always reached, and several anglers have had to be turned away. Since opening day, angler use has increased, most likely by word of mouth. Catch began to drop off slightly after the first month, possibly due to fishing pressure and excessive heat. Anglers have overwhelmingly commented that this opportunity has been very rewarding and well worth the extra effort required by our special rules and

procedures. Table 7 provides average lengths of sportfish species caught between May 18 and July 30, based on angler-reported creel data.

Table 6. Total number of anglers and angler-reported total catch by water body on the Carter Tract of Econfina Creek WMA, May 18 – July 30, 2007.

	Dry Pond	Black Pond	Deep Edge Pond	Area Totals
ANGLERS	268	244	80	592
Largemouth bass	240	221	72	533
Panfish sp. - kept	379	375	199	953
Panfish sp. - released	277	135	149	561
Black crappie - kept	0	5	0	5
Black crappie - released	12	13	1	26
Warmouth - kept	0	25	1	26
Warmouth - released	3	15	6	24
Catfish sp. kept	0	5	12	17
Catfish sp. Released	1	2	5	8

Table 7. Angler-reported average lengths for sportfish species by water body on the Carter Tract of Econfina Creek WMA, May 18 – July 30, 2007. N = total number of each species measured from each water body.

	Black Pond			Dry Pond			Deep Edge Pond		
	N	Average	Range	N	Average	Range	N	Average	Range
Largemouth bass	203	12.5	5 - 25	236	14.1	6 - 26	43	12.25	4 - 23
Panfish sp.	473	8.25	3.5-11.5	348	8.4	2 - 11	97	8.5	3 - 11
Warmouth	17	5.5	2 - 5.5	2	7	6 - 8	3	5.3	5 - 6
Black crappie	13	10	6 - 13	-			-		



Figure 14. A local angler caught this largemouth bass on Dry Pond at Carter Tract of Econfina Creek WMA on June 2, 2007. He reported it to weigh 11 pounds.



Figure 15. This young angler had a fine day of bluegill fishing on the Carter Tract of Econfina Creek WMA.

Wildlife Populations

White-tailed Deer

Management objectives

The primary White-tailed deer (*Odocoileus virginianus*) management objective for the Carter Tract is to provide quality hunting opportunities while managing optimal herd health. Specific objectives are to attain a herd density of 16-26 deer/mi² (25-40 acres/deer). With limited hunting dates and a very conservative hunt format, our goal is to attain a harvest consisting of antlered deer predominantly in 3.5+ year classes. Besides offering quality buck harvest, we plan to bolster and maintain a high degree of hunter participation with the implementation of limited antlerless deer harvest in the future, dependent upon herd expansion. Achieving these objectives requires active monitoring and management of the population, as well as the habitat. Appendix IV provides the 2007-08 Econfina Creek WMA Hunting Regulations Summary, which includes Carter Tract area-specific hunting regulations.

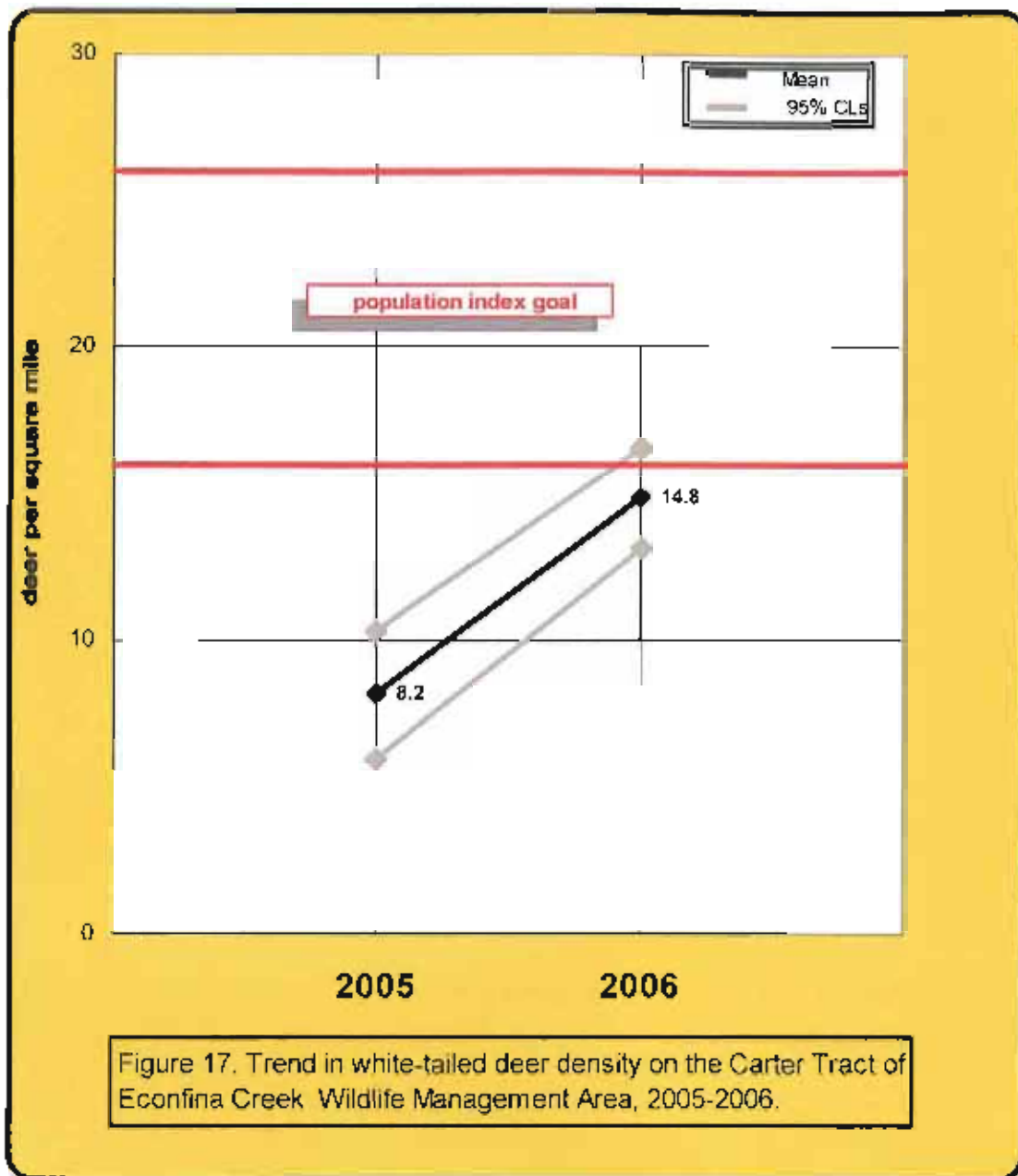
Population trends

Reliable annual indices of population size are fundamental to deer population management. Indices provide an estimate of relative abundance, rather than true population size. Thus the real value of the population surveys is to evaluate trends through time, since the specific relationship between the index and population density is not known. Inferences drawn from only two years of track count data are tenuous at best.

Operated along four separate 1-mile transects deer track count surveys were replicated 10 times in September 2006 (Figure 16). Due to road construction, one transect was relocated from 2005 surveys to a nearby road. Preseason deer density for 2005 was estimated at 14 deer/mi² (95% C.L. 13.1 – 16.5 deer/mi²). While this is an increase from last year's estimate of 8 deer/mi², the index still is below our population goal objective for deer on the area (Figure 17). Several more years of data will be required to produce a more accurate relative abundance, from which any assumption of trends in population size can be drawn.



Figure 16. Distribution of deer track count survey routes established on the Carter Tract of Econfina Creek WMA, September 2006.



Harvest and Hunting Pressure

Mandatory check stations were used to monitor hunter pressure and collect biological data from harvested deer. Deer harvest on the area this past year was relatively low. The 2006-2007 hunting season yielded a harvest of one 5.5 year-old antlered buck, weighing 170-pounds (Figure 18). Hunt success (buck harvest per man-days of hunting pressure) was estimated at 1 deer/82 man-days. The low harvest is most likely a result of the abbreviated hunt format (Table 8), as well as low hunter pressure during the different deer hunt seasons (Table 8). Between the 2005-06 and 2006-07 seasons, man-days of hunting pressure increased for the general gun season from 55 to 60 man-days, but dropped for both archery season (from 22 to 15) and muzzleloading gun season (from 11 to 7) (Figure 19). Obviously at present our full potential for deer hunting opportunities

on the Carter Tract has not been realized (Table 8). It is expected that hunter participation will improve over the next few years.



Figure 18. This 5.5 year-old buck, weighing 170 pounds, was harvested from the Carter Tract of Econfina Creek WMA, January 20, 2007.

Table 8. Harvest summary for the deer hunting seasons on the Carter Tract of Econfina Creek WMA, 2006-2007.

Hunt Season	Season Dates	Season Length (days)	Hunt Quota Per day	Potential Max. Hunt Man-Days	Hunt Man-Days	Deer Harvest		
						M	F	total
Archery	Oct. 14-20	7	15	105	8			0
Archery	Oct. 21-29	9	15	135	7			0
Muzzleloading Gun	Nov. 17-19	3	15	45	7			0
General Gun	Nov. 23-26	4	15	60	18			0
General Gun	Jan. 20-23	4	15	60	16	1		1
General Gun	Jan. 24-28	5	15	75	26			0

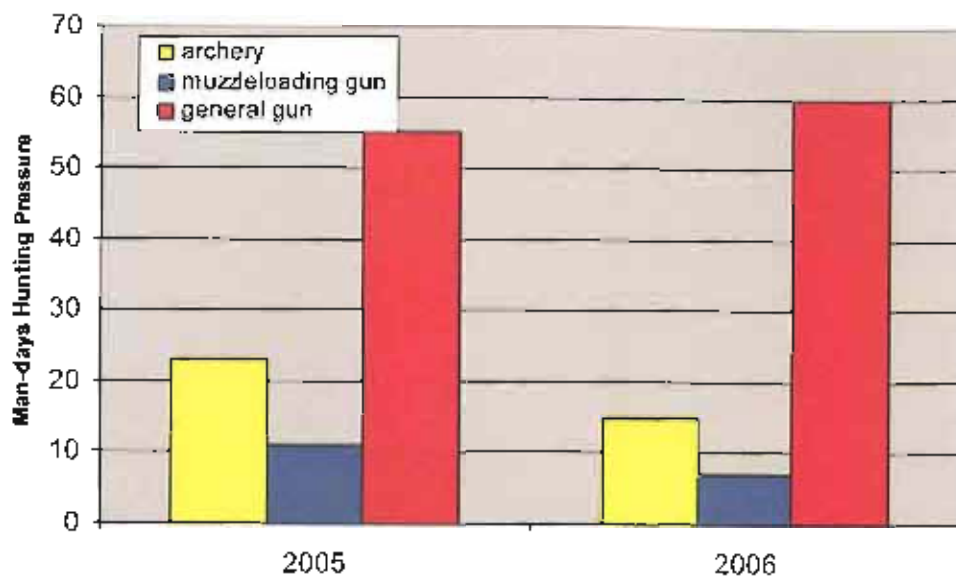


Figure 19. Trend in man-days of hunting pressure per season by year on the Carter Tract of Econfina Creek WMA, 2005-2006.

Wild Turkey

Management objectives

1. Encourage and maintain a population of wild turkeys (*Meleagris gallopavo*) that will provide a high quality hunting experience to the public.
2. Provide high quality habitat for wild turkeys (i.e. burning, and maintain forested openings).

Harvest

Spring turkey season on the area constituted three quota hunts, each three days in length plus one day prior to each hunt for scouting (March 16 - 19, March 29 - April 1, April 12 - 15). The 2006-07 season yielded a total of 14 man-days, with no gobblers harvested.

Small Game

The public's interest in utilizing small game resources on the area during the 16 day December season (December 2-17) has generally been low and opportunistic. This past season yielded no harvest with 2 man-days of hunting pressure.

Waterfowl

Harvest

Harvest of waterfowl on the area is minimal. The Carter Tract provided a special

early duck season September 23 - 27, which yielded a total of 6 man-days and a harvest of 5 Wood ducks (*Aix sponsa*) (3 juvenile drakes: 1 juvenile hen: 1 adult hen). The 2006-07 regular waterfowl season (November 18 - 26, December 9 - 17, and January 20 - 28) yielded a total of 13 man-days and a harvest of 8 wood ducks (4 drakes: 4 hens) and 8 ring-necked ducks (*Aythya collaris*) (6 drakes: 2 hens) for a hunting index of 0.8 hunter-days/duck.

Wood Duck Nest Boxes

Efforts to monitor and facilitate local breeding populations of wood ducks on the area began in September 2005 with the construction and installation of 50 cypress/cedar nest boxes. A maintenance schedule has been devised to quarterly inspect and evaluate each box (Appendix V). Boxes were labeled with an aluminum numbered tag, and coordinates of each box were taken using Garmin® GPSmap 76S units. Each box was checked quarterly, and cleaned and repaired as needed in January 2007. Due to drought conditions, almost all of the 50 boxes on the area are currently out of the water (Figure 20). In 2006, boxes were used by 6 Wood Ducks (Figure 21), and 5 boxes were used by an unknown species, suspected to be a Great Crested Flycatcher (*Myarchis tyrannulus*), due to the presence of a snake skin in each of the boxes. Locations of all nest boxes and those used in 2006 are shown in Figure 22.



Figure 20. Wood Duck nest boxes were checked quarterly for use and cleaned and repaired in January 2007. Note drought conditions this past year.



Figure 21. Female Wood Duck in nest box on the Carter Tract of Econfina Creek WMA, April 2006.



Figure 22. Distribution of Wood Duck nest boxes across the Carter Tract of Econfinia Creek WMA, December 2005 – January 2006. Boxes used by ducks in 2006 are denoted with a red star.

Birds

Ninety-nine species of birds have been documented as occurring on the Carter Tract. A "Checklist of Birds" brochure (Appendix VI) has been created and is available for the public at the Carter check station and FWC's Northwest regional office in Panama City.

Wading Birds

Most wading birds nest semi-colonially in groups called rookeries, usually along edges of lakes or creeks, or in trees or shrubs growing out of water bodies (Figure 23). The many wetlands and water bodies present on the Carter Tract provide excellent nesting habitat for the many species of wading bird found in the Florida panhandle. Protocols for surveying wading birds on their breeding sites vary from aerial surveys to shoreline visual surveys. On Carter Tract, water bodies and creeks were surveyed in spring 2006 by roadside visual surveys. One large rookery was found in Little Deep Edge Pond. Beginning in spring 2007, this rookery, along with all water bodies and creeks on the Carter Tract, was surveyed throughout the breeding season for possible wading bird nests. In 2006, this rookery was used by over 117 individuals from six species (Table 9). However, drought conditions have left the rookery without water (Figure 24). The rookery was surveyed on four occasions during Spring and Summer 2007, and no evidence of bird use was found. Although there were numerous sightings of wading birds foraging on area water bodies, only one Great Blue Heron (*Ardea Herodias*) nest was documented on Dry Pond (Figure 25). One rare sighting on the area were two Roseate Spoonbills (*Platulea ajaja*) sighted by an FWC biologist on September 4, 2006 in the Garrett Pond basin in a flock of egrets, herons and ibises. A standardized survey form for wading birds on the Carter Tract is provided in Appendix VII.

Table 9. Summary of activity on wading bird rookery at Little Deep Edge Pond, Carter Tract of Econfina Creek WMA, April 2006.

Species	Number present	Species on nest?
Great Egret (<i>Ardea alba</i>)	24	Yes
Snowy Egret (<i>Egretta thula</i>)	14	Yes
Cattle Egret (<i>Bubulcus ibis</i>)	30	Yes
Little Blue Heron (<i>Egretta caerulea</i>)	45	Yes
Tricolored Heron (<i>Egretta tricolor</i>)	2	Couldn't determine
Anhinga (<i>Anhinga anhinga</i>)	2	Couldn't determine
Total	117	



Figure 23. This wading bird rookery was noted on Little Deep Edge Pond on the Carter Tract of Econfina Creek WMA. Six species and over 117 individuals were recorded on the rookery in April 2006.



Figure 24. Wading bird rookery at Little Deep Edge Pond, Carter Tract of Econfina Creek WMA, June 2007.



Figure 25. Great Blue Heron (*Ardea Herodias*) nesting on Dry Pond, Carter Tract of Econfina Creek WMA, June 2007.

Passerines

In a continuing effort to monitor bird species present on the Carter Tract, point count surveys were conducted on the area in May and June 2007. The point count method of bird surveys has come to be widely used for counting songbirds in North America (Bibby et al. 1992). Point counts can be used for simple tasks such as assembling a list of species present in an area, as well as more complex tasks such as looking at relative abundances between habitat types (Bibby et al. 1992).

Eight initial point count locations were established and marked on the Carter Tract in April 2007 using Garmin® GPSmap 76S units (Figure 26). A tree or other object at each count location was marked with flagging, to ensure each count was conducted from exactly the same spot. A radius was marked with flagging twenty meters from this spot, to aid in estimating the distance from which each bird was seen and/or

heard (Hostetler and Martin 2001). Counts were conducted on four consecutive days during the second week of the month, during May and June 2007. Surveys were conducted early in the mornings, when bird activity is noted to be highest (Hostetler and Martin 2001). Counts started at dawn and ended by 0930. The order in which each count location was visited was alternated during the four survey days per month, to ensure counts were conducted at each location in earlier, mid- and later morning periods. This was to prevent any bias from birds calling more frequently at certain hours of the count period (Hostetler and Martin 2001). Once in place at each count location, observers remained still for two minutes prior to the start of the count. Counts lasted for ten minutes. During this period, all birds seen and/or heard were marked on a datasheet (Appendix VIII). Birds were counted as being inside or outside the premarked twenty-foot radius, as well as birds flying through or directly over the count location. Only birds positively identified were listed by species; other birds seen and/or heard were marked as "unknown", with any distinct plumage characteristics or call patterns being noted for possible later identification.

Initial point count locations targeted areas of pine plantation, in an effort to record species using the stands prior to timber cutting which commenced on the area in June 2007. Counts will be repeated at the same locations during May and June 2008, in order to identify changes in the bird community utilizing the habitat at different successional stages. Additional point count locations will be added in more habitat types starting in fall 2007, and surveys will be conducted at various times of year, in order to survey breeding, wintering and migrating species.

37 species were identified by FWC personnel while conducting point count surveys on the Carter Tract in May and June 2007 (Table 10). Species detected most frequently during this initial point count survey were Great Crested Flycatcher (*Myiarchus crinitus*) (14% of total detections), Northern Cardinal (*Cardinalis cardinalis*) (13% of total detections), Mourning Dove (*Zenaida macroura*) (10% of total detections), and Northern Parula (*Parula Americana*) (8% of total detections) (Figure 27).

Neotropical migrants are well known to use the Gulf Coast States as the first foraging spot after crossing the Gulf of Mexico in the spring and the last opportunity to build up fat reserves before embarking on the trans-Gulf flight in the fall (Moore et al. 1990). Although Washington County does not lie directly on the Gulf of Mexico, areas of the Carter Tract, particularly the combination of sandhills, wetlands and open water unique to the area, are well-suited foraging habitat for many neotropical migrant species in transit between their breeding and wintering grounds.

In 2005 and early 2006, mist-netting was utilized as a survey method for neotropical migrants and other songbirds on the Carter Tract. However, it was determined that utilizing point counts provides larger coverage of the area than mist-netting, and is more effective as a general survey method. Mist-netting may be resumed in the future as a supplemental survey method.

Table 10. Bird species and number of detections recorded from point counts on Carter Tract of Econfina Creek WMA, May – June 2007.

Species	# of detections
Great Crested Flycatcher (<i>Myiarchus crinitus</i>)	102
Northern Cardinal (<i>Cardinalis cardinalis</i>)	89
Mourning Dove (<i>Zenaida macroura</i>)	68
Northern Parula (<i>Parula americana</i>)	56
American Crow (<i>Corvus brachyrhynchos</i>)	47
Blue Jay (<i>Cyanocitta cristata</i>)	44
Red-bellied Woodpecker (<i>Melanerpes carolinus</i>)	41
Blue-gray Gnatcatcher (<i>Poliopitila caerulea</i>)	38
Red-winged Blackbird (<i>Agelaius phoeniceus</i>)	29
Eastern Towhee (<i>Pipilo erythrophthalmus</i>)	23
Carolina Wren (<i>Thryothorus ludovicianus</i>)	19
Carolina Chickadee (<i>Parus carolinensis</i>)	19
Brown Thrasher (<i>Toxostoma rufum</i>)	18
Northern Mockingbird (<i>Mimus polyglottos</i>)	11
Pileated Woodpecker (<i>Dryocopus pileatus</i>)	11
Common Nighthawk (<i>Chordeiles minor</i>)	11
Common Yellowthroat (<i>Geothlypis trichas</i>)	10
Chipping Sparrow (<i>Spizella passerine</i>)	9
Red-shouldered Hawk (<i>Buteo lineatus</i>)	9
Chimney Swift (<i>Chaetura pelagica</i>)	8
Wood Duck (<i>Aix sponsa</i>)	6
Fish Crow (<i>Corvus ossifragus</i>)	6
Northern Flicker (<i>Colaptes auratus</i>)	5
Pine Warbler (<i>Dendroica pinus</i>)	4
Eastern Bluebird (<i>Sialia sialis</i>)	4
Osprey (<i>Pandion haliaetus</i>)	3
Common Grackle (<i>Quiscalus quiscula</i>)	3
Northern Rough-winged Swallow (<i>Stelgidopteryx serripennis</i>)	3
Yellow-rumped Warbler (<i>Dendroica coronata</i>)	3
Barred Owl (<i>Strix varia</i>)	2
White-eyed Vireo (<i>Vireo griseus</i>)	2
Anhinga (<i>anhinga anhinga</i>)	2
Downy Woodpecker (<i>Picoides pubescens</i>)	1
Brown-headed Cowbird (<i>Molothrus ater</i>)	1
Double-crested Cormorant (<i>Phalacrocorax auritus</i>)	1
Red-eyed Vireo (<i>Vireo olivaceus</i>)	1
Tree Swallow (<i>Tachycineta bicolor</i>)	1



Figure 26. Locations of point count surveys on the Carter Tract of Leonfina Creek WMA, May - June 2007.

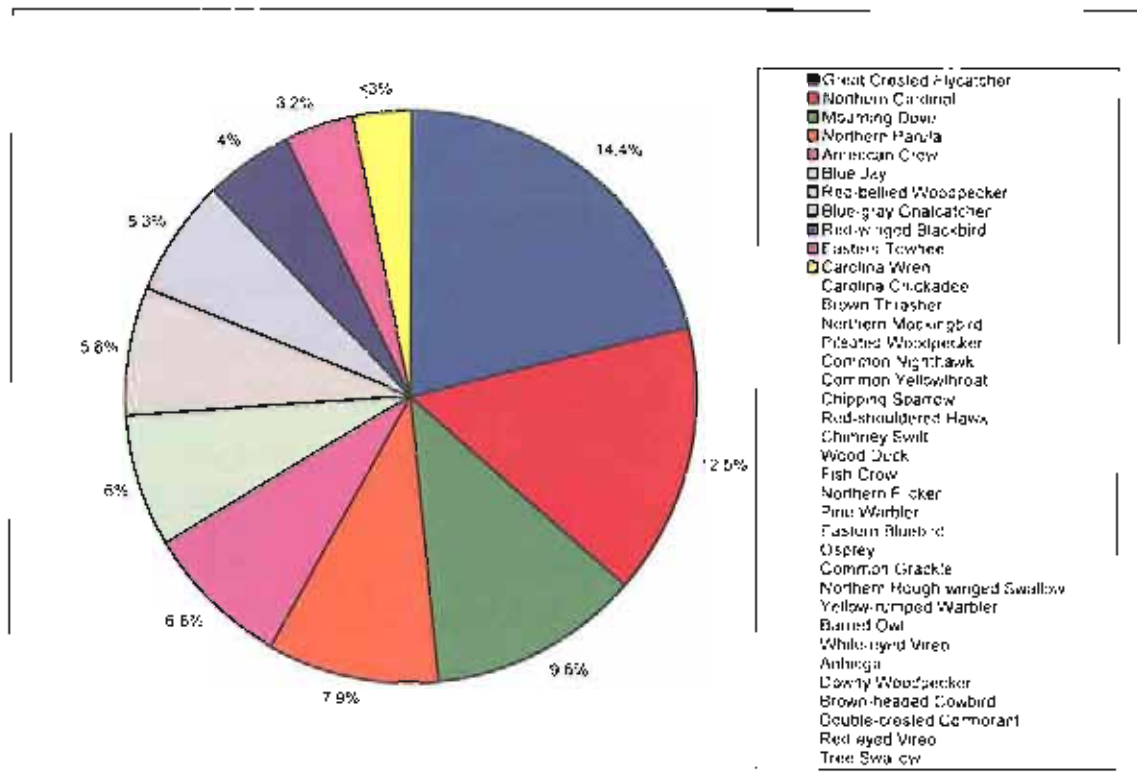


Figure 27. Percent of total detections for bird species identified during point counts on Carter Tract of Econfina Creek WMA, April 2007.

Mourning Dove Banding

Contemporary and statistically reliable estimates of harvest rates, survival rates, and geographical distribution and derivation of harvest throughout the United States are necessary to improve science-based harvest management of mourning doves. A 3-year national pilot banding program was initiated in 2003 to produce data for estimation of these demographic parameters. This cooperative effort between state wildlife agencies, the U.S. Fish and Wildlife Service (USFWS), and the U.S. Geological Survey Bird Banding Laboratory (BBL) resulted in much needed information for improvement of dove harvest management. The pilot study represented the only source of contemporary information available on a large-scale basis (26 states), as the last comprehensive banding program occurred from 1965-1975. Goals and objectives of this study included:

- o Estimate age-specific harvest rates and band reporting rates in a representative set of subregions in each of the 3 national dove harvest management units.
- o Estimate band reporting rates with the same subregions.
- o Establish protocols, training, and cost estimates for a future coordinated nationwide banding program designed to monitor harvest and survival rates.

- o Provide information on geographical distribution and derivation of harvest.
- o Provide initial estimates of annual survival and breeding site fidelity of subregion breeding populations.

The field protocols and sampling designs used and tested by the cooperating state agency field staffs, and the resultant parameter estimates generated from this pilot study, were critical in the design of a cooperative state and federal long-term operational banding program. As part of this national long-term banding program, FWC's Small Game Management Program solicited WMAs throughout the state to participate in this banding work. FWC on the Carter Tract has chosen to participate and contribute to Florida's statewide dove-banding project in cooperation with the USFWS and BBL (Figure 28). These efforts are integral components in the development and implementation of a long term national harvest management strategy for mourning doves. Hunters have an important role in the success of the program. They are encouraged to report leg bands at 1-800-327-BAND, or online at www.pwrc.usgs.gov (select "Birds", then "Bird Banding Lab").

Two sites on the Carter Tract were selected and prebaiting using white millet seed began June 1, 2007 (Figure 29). With subsequent trapping/banding efforts beginning on July 1, for consistency in reporting, results of the trapping/banding efforts will be compiled in next year's annual report (2007-08).

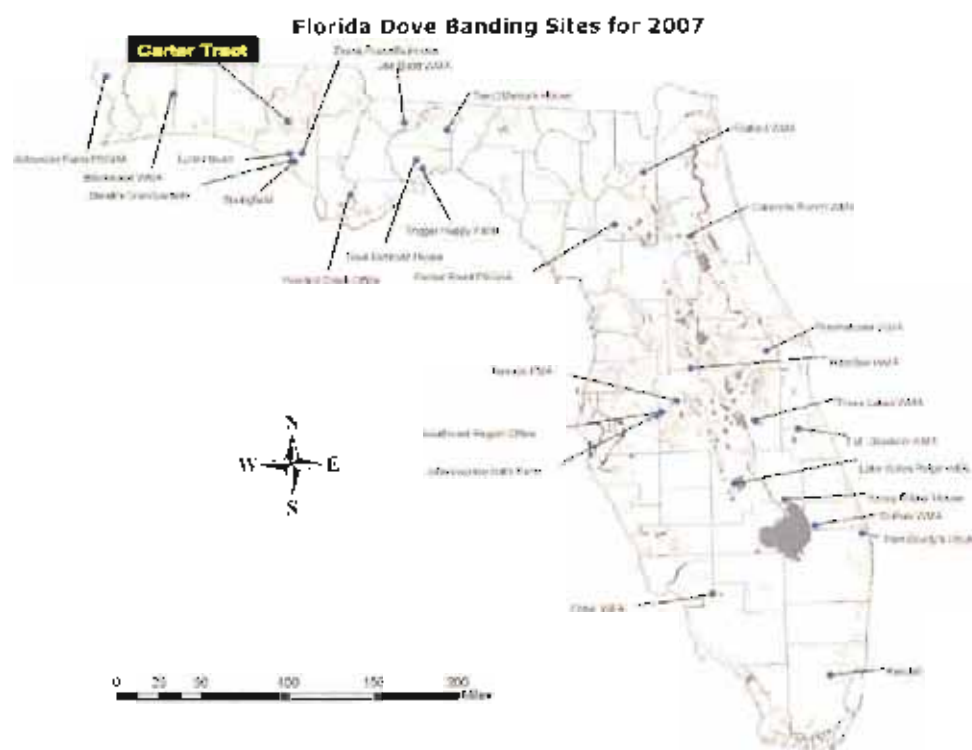


Figure 28. In conjunction with national long-term banding efforts, the Carter Tract of Econfina Creek WMA is one of the sites participating in Florida's statewide dove banding program.



Figure 29. In preparation for banding of mourning doves, prebaiting using white millet seed was initiated in June 2007 at two sites on the Carter Tract of Econfina Creek WMA.

Gopher Tortoise

Beginning with the 2006-07 annual progress report, gopher tortoise activity on the Carter Tract will be summarized in a separate report, to be released annually beginning in winter 2008. Several factors prompted this shift. Beginning in 2007, survey efforts on the area will be expanded, as increased amounts of potential habitat (due in large part to vigorous restoration efforts on the area by the District) will require larger survey efforts. Area surveys are expected to last into October. At the same time, the annual progress report for the Carter Tract is released in August of each year, in the midst of gopher tortoise surveys. Thus, rescheduling the release of the gopher tortoise portion of the annual progress report will allow more time for analysis and further field surveys. Also beginning in 2007, commencement of the survey season has moved from April to June due to increased bird monitoring on the area.

Herpetofauna

Drift fences were installed to intercept adult amphibians and reptiles entering and exiting ponds and wetlands. Drift fences were placed parallel to pond margins on breeding sites with a large amount of grassy ecotone and extensive herbaceous ground cover in the upland habitat.

Drift fences were constructed from standard 100ft x 3ft silt fencing. The bottom edge of the fence material was buried 6 inches into the ground to prevent salamanders from tunneling underneath the fences. The drift fences were supported by wooden stakes and staples. Repairs on drift fences were conducted when necessary.

Funnel traps were constructed from window screening and modeled after the size and schematics of Enge (1997). Traps were placed at each end and in the middle of both the inside and the outside of the fence, for a total of 6 funnel traps per fence. Surveys were conducted with respect to local weather. Traps were opened when rainy conditions were forecast and herpetofauna were expected to be moving. Soil ramps were placed in the mouth of the funnel to act as a natural surface leading up to trap entrance. Herbaceous vegetation was used to shade the funnel traps from direct exposure from the sun and intensive heat, and moistened sponges were placed inside traps. When in use, traps were checked each morning to ensure no trap-induced mortality occurred.

Eleven drift fences were constructed around potential herpetofaunal breeding ponds and wetland areas (Figures 30 and 32). Sixteen "fence nights" during November through March yielded 10 different species captured (Table 13) (Figure 31). The most frequently captured species (53% of total captures) was the Florida cricket frog (*Acris gryllus dorsalis*). A standardized survey form for herpetofauna is provided in Appendix IX.



Figure 30. Drift fence used in herpetofaunal surveys on the Carter Tract of Econfina Creek WMA, November 2006 – March 2007.



Figure 31. Mole Salamander (*Ambystoma tadpoideum*), (left) and Eastern Spadefoot Toad (*Scaphiopus holbrookii holbrookii*), captured in funnel trap on Carter Tract of Econfina Creek WMA, December 2006.

Table 11. Herpetofaunal species captured in drift fences on the Carter Tract of Econfina Creek WMA, November 2006 - March 2007.

Common name	Scientific Name	Frequency (Number of captures)
Ground skink	<i>Scincella lateralis</i>	10
Florida Cricket frog	<i>Acris gryllus dorsalis</i>	32
Mole salamander	<i>Ambystoma tadpoideum</i>	7
Southeastern Slimy salamander	<i>Plethodon grobmani</i>	2
Eastern Spadefoot toad	<i>Scaphiopus holbrookii holbrookii</i>	5
Southern Leopard frog	<i>Rana utricularia</i>	1
Bullfrog	<i>Rana catesbeiana</i>	1
Green Anole	<i>Anolis carolinensis</i>	1
Dwarf salamander	<i>Eurycea quadridigitata</i>	1
Central newt*	<i>Notophthalmus viridescens louisianensis</i>	18

* Central newts caught under coverboard at pond's edge adjacent to drift fence.

In addition to drift fence surveys, the following herpetofaunal species were identified by biologists on Carter Tract during the past year:

Common name	Scientific name
Pigmy Rattlesnake	<i>Sistrurus miliarius</i>
Southern Black Racer	<i>Coluber constrictor priapus</i>
Garter Snake	<i>Thamnophis sirtalis sirtalis</i>
Southern Fence Lizard	<i>Sceloporus undulatus undulatus</i>
Five-lined Skink	<i>Eumeces fasciatus</i>
Eastern Diamondback Rattlesnake	<i>Crotalus adamanteus</i>



Figure 32. Location of drift fences for herpetofaunal surveys on the Carter Tract of Econfinia Creek WMA, October 2006- May 2007.

Indigo Snake Surveys

38 gopher tortoise burrows were surveyed in February 2007 for presence of the Eastern Indigo snake (*Drymarchon corais couperi*), a species listed as threatened both federally and in the state of Florida. This species typically winters in gopher tortoise burrows in northwest Florida (Moler 1992). A specially designed gopher tortoise burrow camera was employed (Southern Ecosystems Research, Auburn, AL) which allows for viewing the entire length of the burrow. The camera uses infrared-emitting LEDs instead

of visible light. It is enclosed in watertight PVC housing attached to a flexible tube that allows it to be guided into a burrow; the unit is then attached to a monitor. No indigo snakes were found; however, eight gopher tortoises were identified in burrows.

Miscellaneous Management Activities

FWC personnel performed numerous tasks in maintaining and improving the Carter Tract. A glass display case was placed at the check station entrance to provide the public with more information about hunting and fishing rules and regulations, as well as a “bragging board” with pictures of anglers and their catches. Aerial photographs of the area are displayed with emphasis on public use roads and lakes. The large entrance sign which was damaged from the Chain Lake Road widening project was subsequently replaced and erected.

In anticipation of increased vehicular traffic with the opening of public fishing on the area, numerous directional signs were erected, directing vehicles to the appropriate lakes (Figure 33). Signs were also placed at designated angler parking areas, containing rules and regulations for fishing on the area (Figure 34). Work plans for Fiscal Year 2006-07 is contained in Appendix X.



Figure 33. Numerous signs were placed on the Carter Tract of Leonfina Creek WMA in Spring 2007 to help direct vehicles upon the opening of the area to public fishing in May 2007.



Figure 34. Signs containing fishing rules and regulations were placed at designated angler parking areas on Carter Tract of Econfina Creek WMA in Spring 2007.

Law Enforcement Activities

Wildlife Officers provided 129 hours of patrol in the Carter Tract during 2006. Few violations were found on the area. Officers wrote one warning and no citations. A few examples of some situations of a law enforcement nature that were dealt with on the area included responses to:

- a legally permitted hunter being locked in at the main gate
- two complaints of vehicles parked in a suspicious manner along area perimeters (SW and NW corners). No contact was made, vehicles gone on arrival and the suspected violation was unable to be confirmed.
- illegal baiting along the northern fence boundary. Incident and offender were located and a warning issued- hunter was on private land and most of the bait was on private property, with a some bait inside the WMA fence. Interestingly, the hunters response was that the corn was being spread inside the WMA fence "to feed yearlings who couldn't jump the fence."

Since January 2007, officers have supplied 25 hours of patrol and found no violations except an issue of a hunter catching a loose hunting dog on the area and taking it to the check station. Moreover, one Wildlife Officer's field headquarters is situated within the FWC office complex on the Carter Tract grounds. This Law Enforcement presence on the area is routine and is not included in the aforementioned patrol hours.

LITERATURE CITED

- Alford, R.A. 1980. Population structure of *Gopherus polyphemus* in northern Florida. *J. Herpetol.* 14:177-182.
- Auffenberg, W. and R. Franz. 1982. The status and distribution of the gopher tortoise (*Gopherus polyphemus*). Pp. 95-126 *In* R.B. Bury, ed. North American tortoises: conservation and ecology. USDI Fish and Wildlife Serv. Res. Rep. 12.
- _____ and J.B. Iverson. 1979. Demography of terrestrial turtles. Pp. 541-569. *In* M. Harless and N. Morlock, eds., *Turtles: Perspectives and Research*. Wiley International, New York.
- Bibby, C.J., N.D. Burgess, and D.A. Hill. 1992. Point Counts. Pp. 85-87 *In* Bird Census Techniques. Academic Press, London.
- Breining, D.R., P.A. Schmalzer and C.R. Hinkle. 1991. Estimating occupancy of gopher tortoise (*Gopherus polyphemus*) burrows in coastal scrub and slash pine flatwoods. *J. Herpet.* 25:317-321.
- Breining, D.R., P.A. Schmalzer, D.A. Rydenc and C.R. Hinkle. 1986. Burrow and habitat study of the gopher tortoise in scrub and flatwoods habitat types. Final Project Report, Project No. GFC-84-016. Florida Game and Fresh Water Fish Comm., Nongame Wildlife Program. 313pp.
- Clewell, A.F. 1981. Natural Setting and Vegetation of the Florida Panhandle: An Account of the Environments and Plant Communities of Northern Florida West of the Suwanee River. United States Army Corps of Engineers Contract No. DACN01-77-1-104. Mobile District, Alabama. 773pp.
- Cox, J., D. Inkley and R. Kautz. 1987. Ecology and Habitat protection needs of gopher tortoise (*Gopherus polyphemus*) populations found on land slated for large scale development in Florida. Nongame Wildlife Program Technical Report No. 4. Florida Game and Fresh Water Fish Comm., Tallahassee, FL. 64pp.
- Diemer, J.E. 1992. Demography of the tortoise *Gopherus polyphemus* in Northern Florida. *J. Herp.* 26:281-289.
- _____ and C.T. Moore. 1994. Reproduction of Gopher Tortoises in North-central Florida. Pp. 129-137 *In* Bury, R.B. and D.J. Germano, Eds. 1994. *Biology of North American Tortoises*. Fish and Wildlife Research 13. USDI, National Biological Survey, Washington, D.C. 204pp.
- Enge, Kevin M. 1997. A standardized protocol for drift-fence surveys. Florida Game and Freshwater Fish Commission Technical Report No. 14, Tallahassee, FL.
- Ernst, C.H. and R.W. Barbour. 1972. *Turtles of the United States*. The University Press of Kentucky, Lexington. 347pp.

- Florida Natural Areas Inventory and Florida Department of Natural Resources. February 1990. Guide to the Natural Communities of Florida, p. 3-6.
- Hostetler, Mark E. and Martin B. Main. 2001. Florida Monitoring Program: Point Count Method to Survey Birds. Document WEC144, Institute of Food and Agricultural Sciences, Florida Cooperative Extension Service, University of Florida.
- Landers, J.L., W.A. MacRae, and J.A. Garner. 1982. Growth and maturity of the gopher tortoise in southwestern Georgia. Bull. Florida State Mus. Biol. Sci. 27(2):81-110.
- Mann, T. 1993. Gopher tortoise densities and burrow occupancy rates on selected sites in Mississippi. Mississippi Museum of Natural Science. Mississippi Department of Wildlife, Fisheries, and Parks. Jackson. 20pp.
- Martin, P.L. and J.N. Layne. 1987. Relationship of gopher tortoise body size to burrow size in a southcentral Florida population. Florida Scientist 50:264-267.
- McCoy, E.D. and H.R. Mushinsky. 1992. Studying a species in decline: changes in populations of the gopher tortoise on Federal lands in Florida. Fla. Scientist 55(2):116-125.
- Moler, Paul E. 1992. Amphibians and Reptiles. Vol. III of Rare and Endangered Biota of Florida. Ray E. Ashton Jr., ed. University Press of Florida.
- Moore, Frank R., P. Kerlinger and T.R. Simons. 1990. Stopover on a Gulf Coast barrier island by spring trans-gulf migrants. Wilson Bulletin 102(3): 487-500.
- Mushinsky, H.R. and L.A. Esman. 1994. Perceptions of gopher tortoise burrows over time. Fla. Field Nat. 22(1):1-7.
- Mushinsky, H.R., D.S. Wilson and E.D. McCoy. 1994. Growth and sexual dimorphism of *Gopherus polyphemus* in central Florida. Herpetologica 50(2):119-128.
- O'Meara, T.E. and M.J. Abbott. 1987. Gopher Tortoise Response to Summer Burning in Longleaf Pine/Turkey Oak Sandhills. Florida Game and Fresh Water Fish Commission, Nongame Wildlife Section Annual Performance Report, Tallahassee.
- Paxton, C.J., C.W. Hickey and F.E. Cross. 2005. Northwest Regional Office Freshwater Fisheries Management. Draft Completion Report: Deer Point Lake Angler Exploitation Study. Florida Fish and Wildlife Conservation Commission, Panama City, Florida, USA.
- Taylor, R.W., Jr. 1982. Human predation on the gopher tortoise (*Gopherus polyphemus*) in north-central Florida. Bull. Florida State Mus. Biol. Sci. 28:79-102.

- Wegener, W.D., O. Holcomb, and V. Williams. 1974. Sampling shallow water fish populations using the Wegener Ring. Proceedings of the Annual Conference Southeastern Association of Fish and Wildlife Agencies 27(1973): 663-673.
- Wilson, D.S. 1991. Estimates of survival for juvenile gopher tortoises, *Gopherus polyphemus*. J. Herp. 25(3):376-379.
- Witz, B.W., D.S. Wilson and M.D. Palmer. 1991. Distribution of *Gopherus polyphemus* and its vertebrate symbions in three burrow categories. Amer. Midl. Nat. 126:152-158.

Florida

SPECIAL 50-PAGE
SPRING FISHING ISSUE

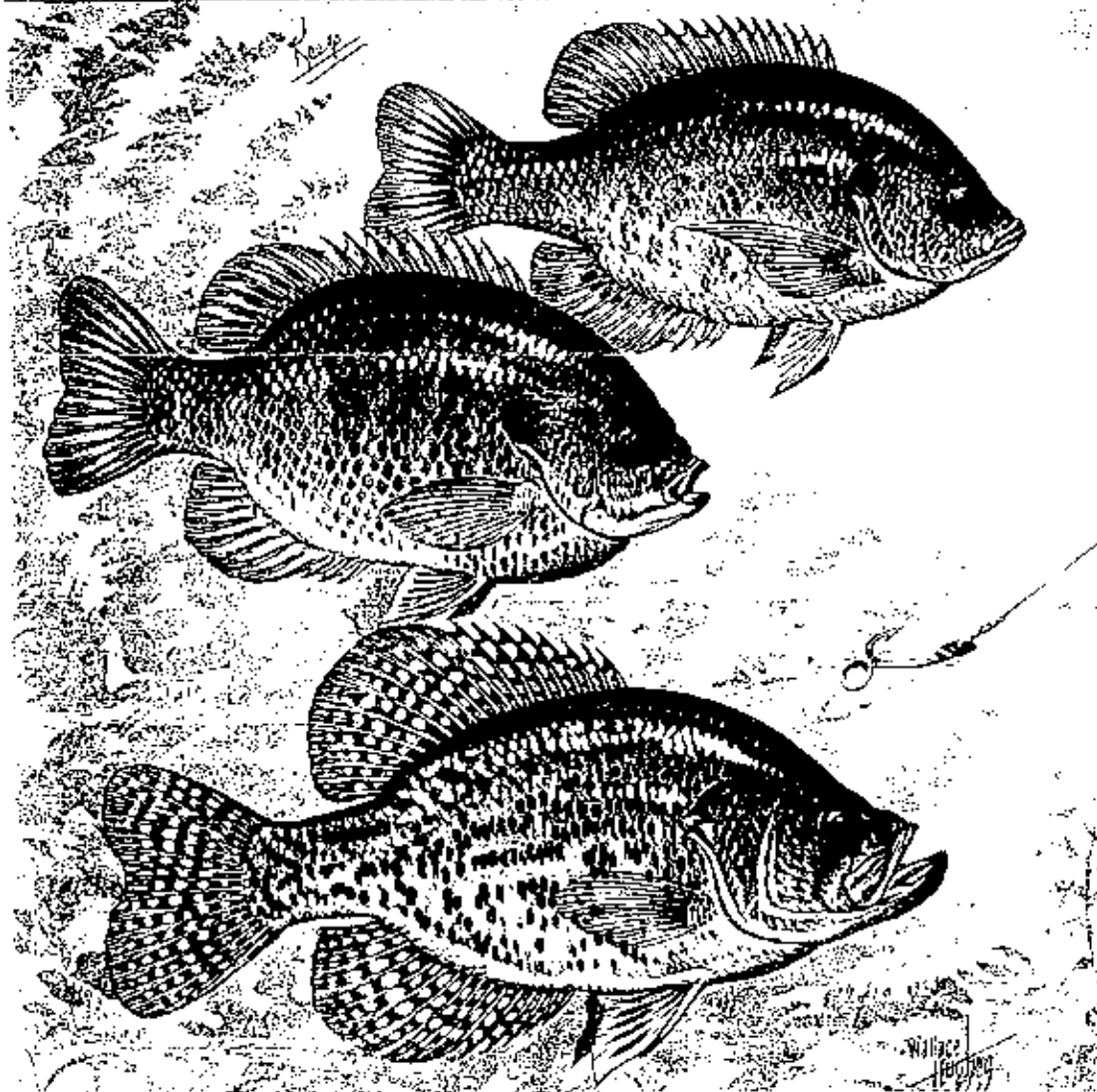
Fishing · Hunting
· Conservation ·

WILDLIFE

APRIL 1960

The Florida Magazine for all Sportsmen

25 CENTS





Although Carter's fishing camp is made up of 30 ponds spread out over 2000 acres.

SCHOOL TEACHERS AND FISHERMEN must have faith. They also must have patience, must be practical and not afraid of hard work.

Find a wannabe school teacher whose problem is to find the fishing he loves, and anything can happen. It can.

It's a 20-acre fishing camp made from some 30 ponds linked by, in all, only 10 miles of stream in Washington County.

It's the property and hobby-turned-quest of F. Hugh Carter, 37, who retired from teaching at Vernon High School in 1957.

Dry Pond is the largest and gave the most trouble. Its 1000 acres stretch for over a mile now taking in the 10 Green Ponds, partially lost among the sandhills.

The system is fed by Pineleg Creek and ultimately drains into the Chattahoochee River, 15 miles west.

The ex-schoolman charges fisher-

men \$1 each to fish in any of the ponds 5 a.m. until 8 p.m. They can also hunt geese in season at no extra charge. Of course they must have a valid Florida fishing or hunting license. Visitors may picnic free during the day but are not allowed to camp overnight.

If you should be so unfortunate as not to catch any fish, you get a 'rain-check' to try your luck again 'on the house.'

Miles of trails—Carter doesn't know how many—winding through the sand hills are marked with signs and arrows at intersections, but if you're not careful you can get lost.

For a small fee, you
have 30 ponds to
try your fishing luck on . . .

Florida's Fishing Ranch

By MEL TENNIS, JR.

At least that's the way it seemed to me.

I know my way around half a dozen big cities, but this fishing ranch in southern Washington County baffles me. Ponds pop it to view in the unlikeliest places, over a rise or around a bend, and they stretch back under the trees all over the place.

To link up all of the ponds, roads meander all over the place like a Venice in the sand hills laid out by Rube Goldberg the cartoonist.

This pioneer do-it-yourself conservationist readily admits that his fish
(Continued on Next Page)



If you don't like to catch any fish, you get a 'rain-check' and can try your luck some other time.

(Continued From Preceding Page)
ing ranch as a kind of crude, home-made job, but—what is strange and wonderful in these inflationary times as it's not financed. His 2,320 acres of land and water are not in back to some lending institution. Carter is a pay-as-you-go type. The only people off and on his payroll for the past ten years have been the drag-line man and the bulldozer operator. They'd be working long enough to use up his spare cash and would come around again the next month for more.

The canals, dikes, dams and spillways connecting and controlling the water in the ponds makes a bewildering pattern, but it works. The proof is in the fishing.

While we stood at the edge of Dry Pond, which Carter trusts will never be dry again—a couple of fishermen fishing from a boat held up a big bass that looked like it weighed seven or eight pounds. Carter said that it's nothing unusual to pull in five and six-pound bass and that the largest ever landed weighed 13½ pounds.

Other fish caught are blue gill, shellcrackers, crappie, warrmouth and jackfish. With the help of Jerry Hanks from the Game and Fresh Water Fish Commission's office in Panama City, Carter stocked his first pond in 1951 with bass, blue gill and shellcrackers. His procedure was to get the rough fish out and restock before any pond was connected to the system of ponds and canals.

First he would seine out all the fish he could in a lake then would poison to be sure they were all out.

Carter related that some biologists can tell a male bass from a female but that he didn't know how. As it turned out it didn't make a lot of difference. He'd put in two or three dozen adult fish and they knew who were males and females. It was no problem for the fish. The ex-school teacher gave them an "A" in multiplication.

He has set aside several small lakes as hatcheries to produce fingerlings for restocking any lake that gets low.



The 12 ponds are all linked by a series of canals.

"I fished with this 'cause I wanted to fish," he explained, adding that the high water in 1940 gave him the idea of holding all the water in the ponds.

Born a mile away he had watched the ponds wax and wane all his life. In the years after a rainy season the ponds would be brimming full and the fishing was good. Then the drought would come. The ponds would shrink to mere potholes and Carter would have to go far to indulge his favorite pastime.

Dry seasons particularly rendered Dry Pond and the Green Ponds wretched for fishing because their natural source of water, Pinehog Creek, had been diverted to supply Dykes Old Mill Pond ever since 1873.

As long as the ground remained full of water after heavy rains, the ponds would remain full. Once the sub-surface water drained away as happened during dry years, the water in Dry Pond would gurgle down a big sink hole as if someone had pulled the plug out of an enormous bathtub. The only way to keep Dry Pond permanently wet was to plug the hole.

In the 1940's Dykes grain mill shut down and the Old Mill Pond was abandoned. It was then that the

Vernon set of teachers decided to turn the creek back to its original course to nourish Dry Pond and the 12 Green Ponds.

The first step was to acquire land. Carter bought his first 200 acres of acre worthless land in 1942 at an Internal Improvement Fund auction. His top bid was 85 per acre. In buying 400 acres from his father, Carter had accumulated 2,320 acres by 1954.

There was a flood in 1948 but by November 1954, it looked like north Florida was well into a dry season, Carter recalled. Though Dry Pond and the Green Ponds were still full, there was no telling how much longer the underground waters would remain as a safeguard against Dry Pond suddenly draining into the earth.

Inevitably and silently one Thursday in November another nature pulled the plug on Dry Pond. The thousand acre pond began to sink from sight at the rate of one foot a day. By Sunday it had gone down four feet. Hurriedly Carter bulldozed an earthen dike across a narrow part of Dry Pond to hold the waters back from the creek, but that

was left a strategic retreat to gain time.

The bulldozer cautiously shoveled earth and sludge into the big hole but that did no good. Water could be seen seeping in the hole 15 feet down. And to make things more difficult, Carter couldn't find a dozer operator who was willing to take on the hazardous job of driving a 45-ton machine to the very edge of the big hole.

"The pump to fill it up if I have to haul rocks in with a wheelbarrow," Carter declared as he and Jerry Banks made plans to sheet the works.

Finally finding a grizzled veteran dozer operator who had gouged roads up and down the Rocky Mountains and who snorted his scorn of the sink hole, Carter and Banks decided to go for broke.

They got a case of dynamite, lit two long fuses, dumped it in the sink and ran for cover.

It went off with one hell of a bang! The whole swamp shook, they related, as 45 dead fish popped to the surface.

Thirteen and one-half hours later the Rocky Mountain bulldozer man

had scraped thousands of tons of earth and a kind of immediate go-fund-around-the-area-into-the-hole-again hole. He filled it in and for good measure triumphantly rode his machine back and forth on top of the hole to make sure the plug was tight.

Rental of the bulldozer was \$135, the best investment he ever made, Carter says.

With the hole plugged up Carter went ahead with diverting Pinebog Creek back to its original course to supply Dry Pond and the Green Ponds. To do this he put a dam with spillway and a dike between Dykes Old Mill Pond and Dry Pond.

To let his bulldozer man know how high to push up the dirt for the dam and dike, the backwoods engineer set off express exploders at the water's edge at the height he wanted. Then he stuck old empty oil cans on the sticks and all the dozer man had to do was shove the earth to the height of the cans.

Carter said that people called him "pond-crazy" for putting his life savings and most of his income into the project. However, he had no children, to do or not to do and he and Mrs.

Carter were thrifty in their habits as most of the people say.

Some of the canals cut 15 to 20 feet deep through the sand hills give the impression that much expensive digging work was done. Visitors shake their heads over how it was accomplished by one school teacher in his spare time.

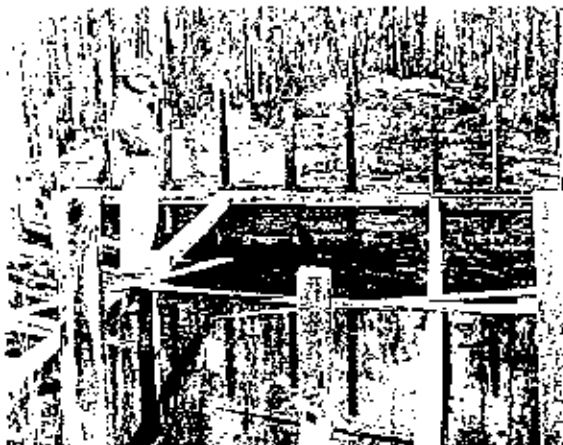
Carter said that it wasn't as difficult or as expensive as you might think. "The water level in one of the lakes would usually be higher than it was in the other. So we'd scratch the surface just enough to make the water flow and then the water itself would eat through the sand and do a lot of the work." Most of this kind of work would be done when the ponds were very full.

He made the water work in another way. Fully pads closed the 75-acre Dykes Old Mill Pond as thickly that fishing was impossible. With the aid of his dikes, dikes and spillways, Carter raised the water level in the pond a couple of feet over the big bonnets, killing them and making the surface clear once more.

Referring to his project as a
(Continued on Page 22)

Anglers sliding Eberden's sliding canal will find good quantities of bass, bluegill, shiner, crickets, crapple, warmouth, and catfish picketed.

An intricate system of dikes, dams, and spillways is used to maintain water levels.



large hole inside the container and used the improvised ball as a slowly retrieved casting plug. Both ideas added fish to his stringer.

Another enterprising angler who ran out of bait while pan-fishing, rolled small pieces of Kleanex into fairly firm balls, dipped them in the oil remaining in the sardine can from which he had just dined. Carefully pinned on the point of his hook, the oil-saturated bits of paper proved both attractive and tasty to several large bream.

When necessity has called for such action, successful baits also have been fashioned from empty cartridge cases, cigar butts, pipe cleaners, corks and rubber bands, fingers of old gloves, clothespins—and even a two-sided picture of a fish sandwiched between thin sheets of clear plastic!

Many fish have been taken on strips torn from fishermen's shirtsails, and rolled. As a substitute for natural eel baits and pork rind—

favorites for black bass—pre-cut pieces of chamois to desired shape, dye and stain in scented solution until needed.

For smook at night, try cutting out a fish-shaped piece of thin cardboard about three inches long and attaching it to the hook of a 1/4 ounce yellow jig. Fished around docks, piers and pilings, the combination is proving productive in the Marco area.

Fishing success often depends on how bait offerings are presented.

For wary fresh water fish by hiding a hook baited with live worms inside a mud ball, then let the fished baits work free naturally as the water softens the mud.

When still-fishing from an anchored boat, you might try removing float and sinker from your line and allow baits to gradually drift downstream. To keep baits down sufficiently long to interest bottom-feeders, you can add a soluble Alka-Seltzer tablet.

A somewhat similar idea for the

caster, who needs sinker weight to obtain casting distance, is the use of sinkers made from a water-dampened mixture of eight parts dry, sifted sand and two parts technical ammonium sulphate, and fitted with "line eyes" while still damp. Dried in a home oven, the sinkers will be as hard as stone, but will fall apart as soon as they hit the water, permitting a cast bait to perform thereafter without the drag of a sinker.

Many good fish have been lost by failure of dip nets to open up to full size during the netting operation. Placing a small lead sinker in the very bottom of a landing net will cause it to take proper shape immediately on being picked up.

Recently the nation's newspapers carried a dramatic story of a discouraged musician who committed suicide because he had reached the conclusion that songwriters had exhausted all the possibilities of the musical scale. Obviously, the fellow was never a fisherman. ●

FISH RANCH

(continued from page 25)

'cheap-type operation,' Carter listed his own tools as a sawmill, an old truck he picked up for \$50 and a jeep. He traded an old sugar cane mill for the saw mill and cut his own timber for dams, bridges, spillways, benches and boats.

Most of the 50 boats seen around the ponds he made himself. He doesn't rent boats and visitors use them at their own risk. Some sportsmen bring their own boats. It's possible to take a scenic fishing trip for miles from one end of the chain of lakes to the other via the canals.

By setting out a few thousand pines each winter, Carter has reforested about 200 acres in recent years. He anticipates that turkey, squirrel and quail will become more plentiful as natural cover increases.

The season is always closed on deer. The ones seen on the ranch are just passing through, he said, though the entire ranch is surrounded by 10 miles of fence which he put up.

Wild ducks and geese sometimes visit the area. To encourage them to make it a habit he plans to do some planting to supplement the natural food supply.

Other life in the ponds and canals and their tracks can be seen in numerous spots. The season is always closed on them. Carter has always been very fond of the little animals.

The Washington County fish rancher thanks State and U. S. wild-

life officers, the Soil Conservation Service, Agricultural Extension Service and other public agencies for their advice and help in planning the project. A number of those officials feel that he is pioneering a new way to make profitable use of unproductive lands and that his project might be duplicated in a number of areas in Florida.

Others question whether Carter's ponds will hold their water in a sustained drought when underground water is gone and porous limestone passages dissolve or fall away. Carter who knows the limestone sink country from long, hard, intimate experience is reasonably confident of the future. He is going ahead this year with stocking a new lake with fish and adding it to his collection.

He is betting his life savings against old mother nature who might have a trick or two up her sleeve. If she tries to put him out of business, he's sure he can counter punch with a few cases of dynamite and a bulldozer. ●



"Any luck?"

Appendix II. Percent Occurrence of Fish Species Sampled via Wegener Rings for Black and Green Ponds on the Carter Tract of Econfina Creek Wildlife Management Area, October - November 2006.

Percent occurrence of fish species on Green Pond South through Wegener ring sampling, Fall 2006.

Fish species	Shoreline	1/2 meter	1 meter	Total
E. Starhead Topminnow	0	0.41	1.64	0.42
Mosquitofish	3.21	13.55	0.82	8.19
Lake Chubsucker	0.29	0	0	0.11
Pygmy Sunfish	66.76	42.91	51.64	52.63
Pygmy Killifish	24.78	37.58	6.56	28.99
Warmouth	2.04	1.23	2.46	1.68
Bluespotted Sunfish	2.04	2.05	2.46	2.1
Swamp Darter	0.29	2.26	32.79	5.46
Bluegill	0.58	0	1.64	0.42

Percent occurrence of fish species on Black Pond through Wegener ring sampling, Fall 2006.

Fish species	Shoreline	1/2 meter	1 meter	Total
E. Starhead Topminnow	1.53	0	1.23	0.89
Mosquitofish	13.85	30.58	1.85	16.52
Lake Chubsucker	0	2.43	1.23	1.24
Pygmy Sunfish	20.5	33.98	19.14	25
Pygmy Killifish	43.59	17.47	22.22	27.87
Warmouth	10.77	3.88	8.02	7.46
Bluespotted Sunfish	5.64	3.88	12.35	6.93
Tadpole Madtom	1.03	1.46	0.62	1.06
Swamp Darter	2.05	5.34	16.05	7.28
Chain Pickerel	0	0.48	0.62	0.36
Bluegill	0	0.48	16.05	4.8
Dollar Sunfish	1.03	0	0.62	0.53

DAYS/HOURS: Fishing on the Carter Tract is open every Friday through Monday except days coinciding with area hunts, starting at 6:00 am. Gates close at 6:00 pm during the summer period (March through October), and 5:00 pm during the winter period (November through February).

RESERVATIONS: Only sixteen fishermen are allowed on the area at one time. Ten slots are available to reserve ahead by calling the check station at (850) 773-3631, the other six are first-come, first-serve. Reservations can be made for up to 4 days in a 30-day period, and can be made up to 60 days in advance. No more than 2 boats can be reserved per person.

BOATS: No outside boats will be allowed into the area. Eight boats are provided for use on the lakes. Oars, life jackets and flotation cushions are provided. Boats must be kept at the lake on which they are placed. For safety purposes, anglers are required to remain at the lake for which they have been issued the daily use permit. Angler must check back in at check station if he/she wishes to change lakes.

CHECK IN/OUT: All anglers are required to check in and check out at the Carter check station. Upon check in, each angler must leave his/her fishing license at the check station (unless otherwise instructed). A daily fishing permit will then be issued with a specific lake designation. Anglers will receive a creel kit that corresponds to his/her assigned boat. Anglers must fill out the creel information sheet completely and accurately, as well as comply with all regulations. Anglers must possess the daily fishing permit at all times. Fishing licenses may be picked up upon check out which must be no later than the designated check station closing time. Vehicles must remain only on public roads outlined in this brochure. Fishing hours and days are subject to change due to hunt seasons, management activity, infrastructure work, etc. by posted notice at the main entrance.

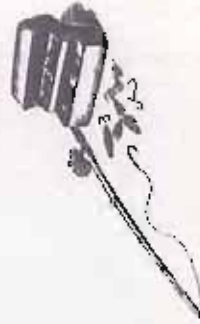
GENERAL REGULATIONS: This area is to be closed to the public (other than walk-in hiking) outside the approved fishing or hunting days and times. Fishing rules and regulations follow standards established by the Florida Fish and Wildlife Conservation Commission, and contain, but are not limited to, the following:

1. All anglers, except those exempt under Florida Statute 372.57, must have a valid freshwater fishing license (call 1-888-FISH-Florida; 347-4356).
2. Fishing is allowed Friday through Monday by daily use permit only. All anglers shall check in and out at the Carter check station and deposit their valid fishing license or other I.D. with the custodian unless otherwise instructed.
3. Anglers must be in possession of the Carter daily fishing permit badge at all times while fishing.
4. Fish may not be filleted, nor their heads or tail fins removed, until the angler has completed fishing for the day. (An angler has completed fishing for the day only after he/she has checked out at the Carter check station.)
5. Only boats provided on the area are allowed.
6. Panfish daily bag limit: 20
7. All bluegill and redear sunfish less than 8 inches total length must be released immediately.
8. Daily bag limit for channel catfish: 6
9. Daily bag limit for black crappie: 10
10. All black crappie less than 10" in total length must be released immediately.
9. All largemouth bass are catch and release only.
10. The use or possession of nets, seines, fish traps, trotlines, set lines, spears, gigs, stretch hooks, crossbow, bow and arrow or bush hooks is prohibited.
11. Public access is prohibited in areas posted as "Restricted" for protection of threatened or endangered species, or environmentally sensitive areas
12. Motor vehicles may be operated only on roads and parking areas designated on map and by signage on area.
13. Possession of alcoholic beverages or firearms, camping or open fires on the area is prohibited
14. Bicycling, all-terrain vehicle use and horseback riding are prohibited on the area
15. Other recreational uses, including canoeing, kayaking, hiking, and bird watching, are allowed on the area during the same days and hours as public fishing and subject to the same rules and regulations

FITZHUGH CARTER TRACT ECONFINA CREEK WMA

Special Opportunity Fishing Program

PUBLIC FISHING ACCESS RULES, REGULATIONS AND AREA MAP

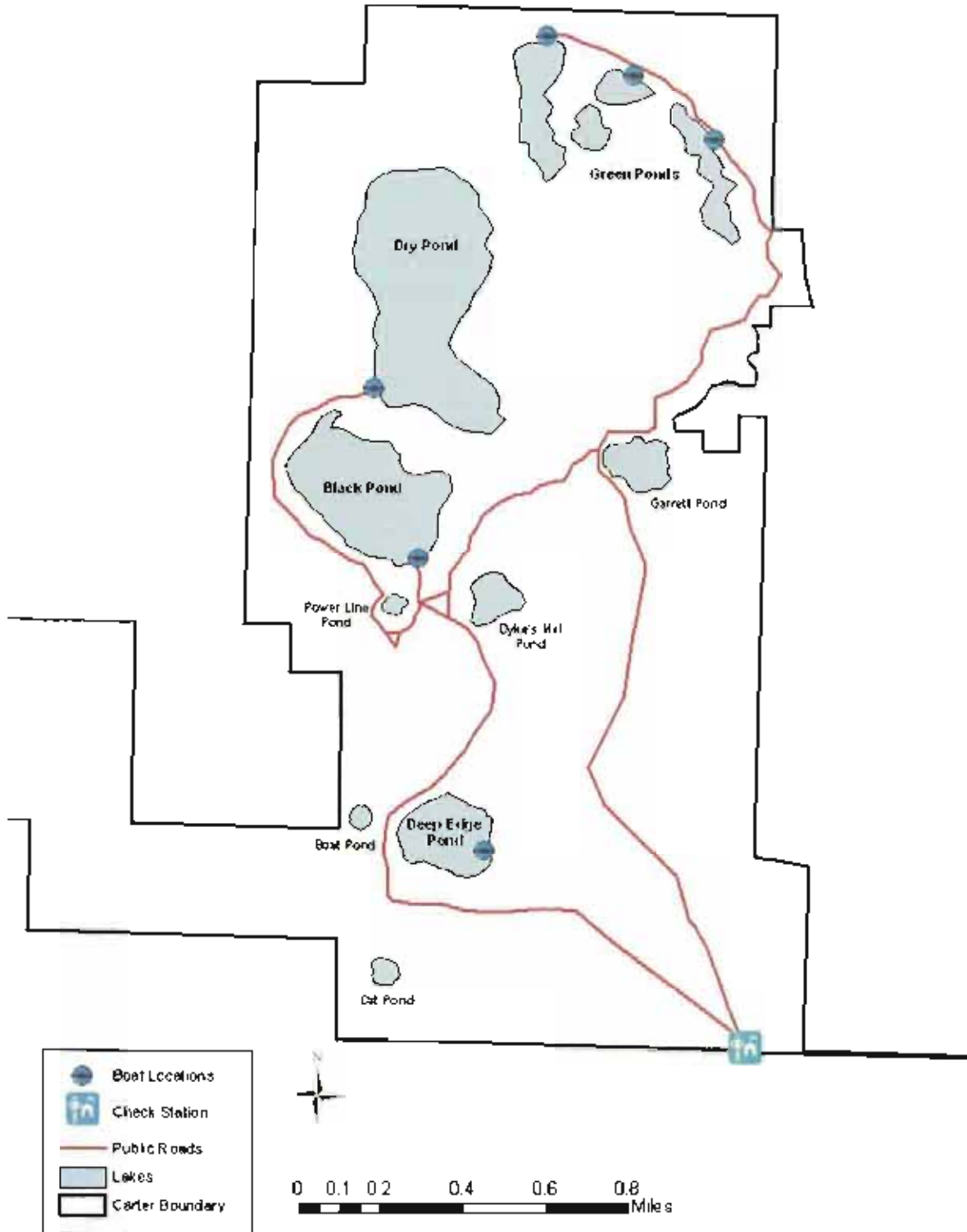


A PARTNERSHIP BETWEEN
THE NORTHWEST FLORIDA WATER
MANAGEMENT DISTRICT
AND
THE FLORIDA FISH & WILDLIFE
CONSERVATION COMMISSION



Fitzhugh Carter Tract
Econfina Creek WMA
2830 Chain Lake Road
Chipley, FL 32426
(850) 773-2831

Carter Tract Public Fishing Access





**ECONFINA
CREEK**

**WILDLIFE
MANAGEMENT AREA**

2007-08

**REGULATIONS SUMMARY
AND AREA MAP**

**A COOPERATIVE PUBLIC WILDLIFE
AND RECREATIONAL AREA
NORTHWEST FLORIDA
WATER MANAGEMENT DISTRICT
FLORIDA FISH AND WILDLIFE
CONSERVATION COMMISSION
An Equal Opportunity Agency
MyFWC.com**

This brochure is designed to provide the public with information and a summary of regulations pertaining to hunting and other recreational use on the Econfina Creek Wildlife Management Area. Regulations that are new or differ substantially from last year are shown in bold print. Area users should familiarize themselves with all regulations. For exact wording of the wildlife laws and regulations, see the Florida Fish and Wildlife Conservation Commission's wildlife code, on file with the Secretary of State and state libraries. This brochure, the Florida Hunting Regulations handbook, and quota permit worksheets should provide the information necessary for you to plan your hunting activities. These publications are available from any Commission office, county tax collector and at MyFWC.com.

Persons using wildlife management areas are required to have appropriate licenses, permits and stamps. The following persons are exempt from all license and permit requirements (except for quota permits when listed as "no exemptions"): recreational use permits and the Migratory Bird Hunting and Conservation Stamp (duck stamp); Florida residents who are 65 years of age or older; residents who possess a Florida Resident Disabled Person Hunting and Fishing Certificate; residents in the U.S. Armed Forces, not stationed in Florida, while home on leave for 30 days or less, upon submission of orders; and children under 16 years of age. Children under 16 years of age are exempt from the duck stamp.

Hunting, trapping and fishing licenses, and management area, archery, muzzleloading gun, wild turkey and shore waterfowl permits may be purchased from county tax collectors, license agents, the Internet at MyFWC.com/licenses or by telephone at 1-888-486-8356. A no-cost Migratory Bird Permit is available when purchasing a hunting license. Any waterfowl hunter 16 years of age or older must possess a duck stamp; available at most post offices or at duckstamp.com. Mobility-impaired certificate applications are available from regional offices of the Commission and at MyFWC.com.

QUOTA PERMIT INFORMATION:

- Archery (Cat Creek area) - 30, no-cost, quota permits for each of 2 hunts.
- Archery (Fitzhugh Carter area) - 15, no-cost, quota permits (no exemptions) for each of 2 hunts.
- Muzzleloading Gun (Cat Creek area) - 30, no-cost, quota permits.
- Muzzleloading Gun (Fitzhugh Carter area) - 15, no-cost, quota permits (no exemptions).
- General Gun (still hunt area) (first thirteen days) - 50, no-cost, quota permits.
- General Gun (dog hunt area) (first thirteen days) - 80, no-cost, quota permits.
- General Gun (Cat Creek area) - 30, no-cost, quota permits for each of 3 hunts.
- General Gun (Fitzhugh Carter area) - 15, no-cost, quota permits (no exemptions) for each of 3 hunts.
- Mobility-impaired General Gun - 20, no-cost, quota permits (no exemptions) for each of 5 hunts.
- Spring Turkey (still hunt and dog hunt area) (first nine days) - 25, no-cost, quota permits.
- Spring Turkey (Cat Creek area) - 5, no-cost, quota permits for each of 3 hunts.

Spring Turkey (Fitzhugh Carter area) - 5, no-cost, quota permits (no exemptions) for each of 3 hunts.

Permit applications: Hunters must submit electronic applications for recreational use, quota and special-opportunity permits to a license agent, county tax collector's office or online at MyFWC.com. Most quota and special-opportunity permits are issued during a random drawing, which includes all applications submitted during the times and dates listed below. Any remaining permits are issued first-come, first-served.

A worksheet with a list of available permits may be obtained 1 - 2 weeks before each application period from FWC offices, tax collectors, license agents and online at MyFWC.com. Application for random drawings begins 10:00 a.m. eastern time on the first day of the application period and ends midnight eastern time on the last day. Archery/Muzzleloading Gun and General Gun quota permit applications may be submitted June 3 - 11. Mobility-impaired Persons quota permit applications may be submitted June 19 - July 6. Spring Turkey quota permit applications may be submitted October 30 - November 8.

Youth exemption: For those seasons listed as "no exemptions", one youth younger than 16 years of age may accompany a person 18 years of age or older who holds a valid quota permit (except special-opportunity) and participate in the hunt, provided that the permittee and youth collectively may take only one daily bag limit.

Transfer of permit: Quota permits are transferable. Quota permits issued to exempt hunters are transferable only to another person with the same type of exemption, except permits marked "exempt senior" may be transferred to a youth younger than 16 years of age. Any mobility-impaired quota permit is transferable only to another person who has been issued a mobility-impaired certificate by the Commission. The sale or purchase of any quota hunt permit is prohibited.

GENERAL AREA REGULATIONS:

All general laws and regulations relating to wild animal life or freshwater aquatic life shall apply unless specifically exempted for this area. Hunting or the taking of wildlife or fish on this area shall be allowed only during the open seasons, and in accordance with the following regulations:

1. Any person hunting deer or accompanying another person hunting deer shall wear at least 500 square inches of daylight fluorescent-orange material as an outer garment, above the waistline. This is not required during an archery-only season.
2. Taking of spotted fawn, swimming deer or roasted turkey is prohibited. Species legal to take are listed under each season.
3. It is illegal to hunt over bait or place any bait or other food for wildlife on this area.
4. Driving a metal object into any tree, or hunting from a tree into which a metal object has been driven, is prohibited.
5. No person shall cut, damage, or remove any natural, man-made or cultural resource without written authorization of the landowner or primary land manager.

6. Taking or attempting to take any game with the aid of live decoys, recorded game calls or sounds, set guns, artificial light, net, trap, snare, drug or poison is prohibited.
7. The wanton and willful waste of wildlife is prohibited.
8. Hunting, fishing or trapping is prohibited on any portion of the area posted as "CLOSED" to those activities.
9. People, dogs, vehicles and other recreational equipment are prohibited in areas posted as "Closed to Public Access" by FWC administrative action.
10. Taking or leading wildlife from any motorized vehicle, aircraft or boat, which is under power is prohibited until power, and movement from that power, has ceased.
11. Most game may be hunted from one-half hour before sunrise until one-half hour after sunset (see exceptions for each season).
12. The release of any animal is prohibited, without written authorization of the landowner or primary land manager.
13. The head and evidence of sex may not be removed from the carcass of any deer or turkey on the area.
14. The planting or introduction of any non-native plant is prohibited, without written authorization of the landowner or primary land manager.
15. Wild hogs may not be transported alive.
16. It is unlawful for any person to leave any garbage or refuse, or in any way litter in the area.
17. It is unlawful to set fire to any forest, grass or woodlands.
18. A Fish and Wildlife Conservation Commission Law Enforcement Officer may search any camp, vehicle or boat in accordance with law.
19. The possession or consumption of intoxicating beverages is prohibited.
20. The Cat Creek area is located south of State Road 20 and north of County Road 388. The Fitzhugh Carter area is located west of State Road 77 and the mobility-impaired area is located south of County Road 388.

PUBLIC ACCESS AND VEHICLES:

1. Open to public access year-round.
2. All persons entering or exiting the Fitzhugh Carter area may do so only at a designated entrance (see map).
3. Parked vehicles may not obstruct a road, gate or firelane.
4. No motor vehicle shall be operated on any part of any wildlife management area that has been designated as closed to vehicular traffic.
5. Vehicles may be operated only on named or numbered roads except in the mobility-impaired area by persons possessing mobility-impaired certificates.
6. The use of all-terrain vehicles (ATVs) is prohibited except in the mobility-impaired area by persons possessing mobility-impaired certificates.
7. Horses are allowed on designated horse trails only (the use of horses is prohibited in the Fitzhugh Carter area).

HUNTERS AND CHECK STATIONS:

1. Hunters and anglers shall check in and out at the check station when entering and exiting the Fitzhugh Carter area and shall check all game and fish taken.
2. Hunting equipment and dogs may be taken onto the WMA after 8 a.m. the day before the opening of a season and shall be removed by 6 p.m. one day after the end of the season.

GUNS:

1. Possession of a gun is allowed only during periods when hunting with a gun is permitted, except a person in possession of a valid Concealed Weapon or Firearm License may carry concealed handguns.
2. Taking of wildlife by use of a gun on or from rights-of-way of Thomas Road, Rattlesnake Road, Strickland Road, Porter Pond Road, Duma Jack/Anderson Road, Greenhead Road, Hampshire Boulevard, Cat Creek Road, Entinger Road, S.R. 20, or C.R. 388 is prohibited.
3. Hunting with a gun and light is prohibited.
4. Muzzleloading guns used for taking deer must be .40 caliber or larger if firing a single bullet, or be 20 gauge or larger if firing two or more balls.
5. Possession of a loaded, capped or primed firearm, or discharge of a firearm on, from or across any campsite or check station is prohibited.
6. Children under the age of 16 may not be in possession of a firearm unless in the presence of a supervising adult.
7. No person shall have a gun under his control while under the influence of alcohol or drugs.
8. For taking non-migratory game, only shotguns, rifles, pistols, longbows (including compound and recurve bows), crossbows (during the general gun season or by permit only) or falconry may be used.
9. For taking migratory game, only shotguns, bow and arrow (not crossbows), and falconry may be used. Shotguns shall not be larger than 10 gauge and shall be incapable of holding more than three shells in the magazine and chamber combined.
10. Firearms using rimfire or non-expanding, full metal jacket (military ball) ammunition are prohibited for taking deer.

11. Fully automatic or silencer-equipped firearms, centerfire semi-automatic rifles having a magazine capable of holding more than five rounds, explosive or drug-injecting devices and seguns are prohibited.

DOGS:

1. Hunting with dogs, other than bird dogs or retrievers, is prohibited in the designated wild land and mobility-impaired areas, except dogs may be used to take raccoons (except in the mobility-impaired areas).
2. No person shall allow any dog to pursue or molest any wildlife during any period in which the taking of wildlife by the use of dogs is prohibited.
3. Dogs on leashes may be used for training wounded game.
4. For purposes other than hunting, dogs are allowed, but must be kept under physical restraint at all times.

CAMPING:

1. Camping is permitted only at designated sites or by permit from the Northwest Florida Water Management District. For additional information, call the Northwest Florida Water Management District at (850) 539-5999.

BAG AND POSSESSION LIMITS:

1. Deer - Daily limit 2, possession limit 4 (see legal to take for each season).
2. Wild hog - No size or bag limit.
3. Turkey - Daily limit 1, season limit 2, possession limit 2.
4. Gray squirrel, quail and rabbit - Daily limit 12, possession limit 24 for each game species.
5. Raccoon, opossum, armadillo, beaver, coyote, skunk and nutria - No bag limits.
6. Bobcat and otter - Possession limit 1 unless in possession of a Trapping License.
7. Migratory birds - See Migratory Bird Hunting Regulations pamphlet.

ARCHERY:

October 13 through November 11 (except in the Cat Creek, Fitzhugh Carter and Mobility-Impaired areas).

October 13 - 10 and 20 - 28 (Cat Creek and Fitzhugh Carter areas).

Permit, Stamp and License Requirements - Quota permit (if hunting in the Cat Creek or Fitzhugh Carter areas), hunting license, management area permit, archery permit, wild turkey permit (if hunting wild turkey), and migratory bird permit (if hunting migratory birds).

Legal to Take - Any deer (except spotted fawn), wild hog, turkey of either sex, gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season.

Regulations Unique to the Archery Season - In addition to these regulations, all General Area Regulations shall apply.

1. Possession of firearms or crossbows is prohibited, except that centerfire shotguns are permitted for hunting migratory birds when one or more species are legal to take (see Migratory Bird section and the current Migratory Bird Hunting Regulations pamphlet).
2. Hunting is prohibited in the Mobility-Impaired area.

SMALL GAME:

November 10 through March 2 (except in the Cat Creek, Fitzhugh Carter and Mobility-Impaired areas).

December 1 - 16 (Cat Creek and Fitzhugh Carter areas).

Permit, Stamp and License Requirements - Quota permit (if hunting during any quota period), hunting license, management area permit, migratory bird permit (if hunting migratory birds), and state waterfowl permit and duck stamp (if hunting waterfowl).

Legal to Take - Wild hog, gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season. Bobcat and otter December 1 until March 1.

Regulations Unique to the Small Game Season - In addition to these regulations, all General Area Regulations shall apply.

1. Possession of centerfire rifles is prohibited, except during general gun season.
2. Hunting is prohibited in the Mobility-Impaired area.

MUZZLELOADING GUN:

November 16 - 18 (except in the Mobility-Impaired area).

Permit, Stamp and License Requirements - Quota permit (if hunting in the Cat Creek or Fitzhugh Carter areas), hunting license, management area permit, muzzleloading gun permit, migratory bird permit (if hunting migratory birds) and state waterfowl permit and duck stamp (if hunting waterfowl).

Legal to Take - Deer with at least one antler 5 inches or more in length, wild hog, gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season.

Regulations Unique to the Muzzleloading Gun Season - In addition to these regulations, all General Area Regulations shall apply.

1. Only muzzleloading guns are allowed, except that centerfire shotguns are permitted for hunting during the small game season and for hunting migratory birds when one or more species are legal to take (see Migratory Bird section and the current Migratory Bird Hunting Regulations pamphlet)
2. Hunting is prohibited in the Mobility-Impaired area

GENERAL GUN:

November 23 - 25 and December 8 through January 30 (except in the Cat Creek, Fitzhugh Carter and Mobility-Impaired areas)

November 22 - 25, January 19 - 22 and 23 - 27 (Cat Creek and Fitzhugh Carter areas)

November 23 - 25, January 11 - 13, 18 - 20, 25 - 27 and January 30 through February 1 (Mobility-Impaired area)

Permit, Stamp and License Requirements - Quota permit (if hunting in the Cat Creek, Fitzhugh Carter or Mobility-Impaired areas and if hunting before December 17 in the remainder of the area, unless accompanying a person possessing a mobility-impaired quota hunt permit), hunting license, management area permit, migratory bird permit (if hunting migratory birds), and state waterfowl permit and duck stamp (if hunting waterfowl).

Legal to Take - Deer with at least one antler 5 inches or more in length, antlerless deer (which includes does and bucks with antlers less than 5 inches in length, but not spotted fawns) in the Mobility-Impaired area by mobility-impaired hunters only (limit 2 per quota permit, daily limit 1), wild hog, gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season. Bobcat and otter beginning December 1.

Regulations Unique to the General Gun Season - In addition to these regulations, all General Area Regulations shall apply.

1. One additional person per mobility-impaired quota permit holder may participate in the hunt.
2. Only one mobility-impaired quota hunt permit may be utilized per individual per hunt.
3. Only mobility-impaired hunters may take antlerless deer (daily limit 1).

ARCHERY/MUZZLELOADING GUN:

February 14 - 24 (except in the Cat Creek, Fitzhugh Carter and Mobility-Impaired areas)

Permit, Stamp and License Requirements - Hunting license, management area permit, archery permit (if hunting with archery equipment), muzzleloading gun permit (if hunting with a muzzleloading gun), migratory bird permit (if hunting migratory birds), and state waterfowl permit and duck stamp (if hunting waterfowl)

Legal to Take - Deer with at least one antler 5 inches or more in length, wild hog, gray squirrel, quail, rabbit, raccoon, opossum, armadillo, beaver, coyote, skunk, nutria and migratory birds in season.

Regulations Unique to the Archery/Muzzleloading Gun Season - In addition to these regulations, all General Area Regulations shall apply. Only bows and muzzleloading guns are allowed, except that centerfire shotguns are permitted for hunting migratory birds when one or more species are legal to take (see Migratory Bird section and the current Migratory Bird Hunting Regulations pamphlet)

SPRING TURKEY:

March 15 through April 20 (except in the Cat Creek, Fitzhugh Carter and Mobility-Impaired areas)

March 15 - 17, 24 - 30 and April 11 - 13 (Cat Creek and Fitzhugh Carter areas)

March 15 - 16, 21 - 23, 28 - 30, April 4 - 6, 11 - 13 and 18 - 20 (Mobility-Impaired area)

Permit, Stamp and License Requirements - Quota permit (if hunting in the Cat Creek or Fitzhugh Carter areas or before March 24 in the remainder of the area), mobility-impaired certificate (if hunting in the Mobility-Impaired area unless accompanying a person possessing a mobility-impaired certificate), hunting license, management area permit and wild turkey permit.

Legal to Take - Bearded turkeys or gobblers.

Regulations Unique to the Spring Turkey Season - In addition to these regulations, all General Area Regulations shall apply.

1. Legal shooting hours are one-half hour before sunrise until 1 p.m.
2. The taking of any other animal is prohibited.
3. One additional person per mobility-impaired person may participate in the hunt.

RACCOON:

November 10 through March 14 and April 21 through July 31 (except in the Cat Creek, Fitzhugh Carter and Mobility-Impaired hunt areas)

Permit, Stamp and License Requirements - Quota permit (if hunting during the quota hunt period of the general gun season), hunting license and management area permit.

Legal to Take - Raccoon

Regulations Unique to the Raccoon Season - In addition to these regulations, all General Area Regulations shall apply.

TRAPPING: Prohibited.

MIGRATORY BIRDS:

Rails, common moorhens, mourning doves, white winged doves, snipe, ducks, geese, coots, woodcock and crows may be hunted during seasons established by the Commission for these species except in the Cat Creek, Fitzhugh Carter and Mobility-Impaired areas where these species may be taken only during seasons that coincide with the archery, muzzleloading gun, general gun or small game season. Waterfowl may be taken on the Fitzhugh Carter area during the special September waterfowl duck season.

Permit, Stamp and License Requirements - Quota permit (if hunting during any quota period), mobility-impaired certificate (if hunting in the mobility-impaired area unless accompanying a person possessing a mobility-impaired certificate), hunting license, management area permit, migratory bird permit, and state waterfowl permit and duck stamp (if hunting waterfowl).

Legal to Take - See Migratory Bird Hunting Regulations pamphlet.

Regulations Unique to Migratory Birds - In addition to these regulations, all General Area Regulations shall apply.

1. The use of lead shot for taking ducks, geese and coots is prohibited.
2. Centerfire shotguns are permitted during established area seasons when one or more migratory birds are legal to take.

FISHING AND FROGGING:

Permitted year-round (except in the Fitzhugh Carter area).

Permit, Stamp and License Requirements - Fishing license (not required when frogging).

Legal to Take - See Florida's Freshwater Fishing Regulations Summary.

Regulations Unique to Fishing and Frogging - All General Area Regulations and General Freshwater Fishing Regulations shall apply.

1. Anglers shall check in and out at the check station when entering and exiting the Fitzhugh Carter area and shall check all fish taken.
2. On all Fitzhugh Carter area lakes and water bodies fishing is allowed only by permit issued by the Commission. Days and hours of operation, fish bag and size limits, angler quotas and other related rules shall be as designated by the Commission and posted at the area headquarters (check station).

GENERAL INFORMATION:

1. Anyone born on or after June 1, 1973 must have passed a Commission-approved hunter-safety course prior to being issued a hunting license.
2. If you have any questions about this material, please call the Fish and Wildlife Conservation Commission at (850) 265-1676 (TDD 800-955-8771).

COOPERATION REQUESTED:

If you see law violators or suspicious activities, contact your nearest Commission regional office or call 1-888-404-FWCC. You may qualify for a cash reward from the Wildlife Alert Reward Association.

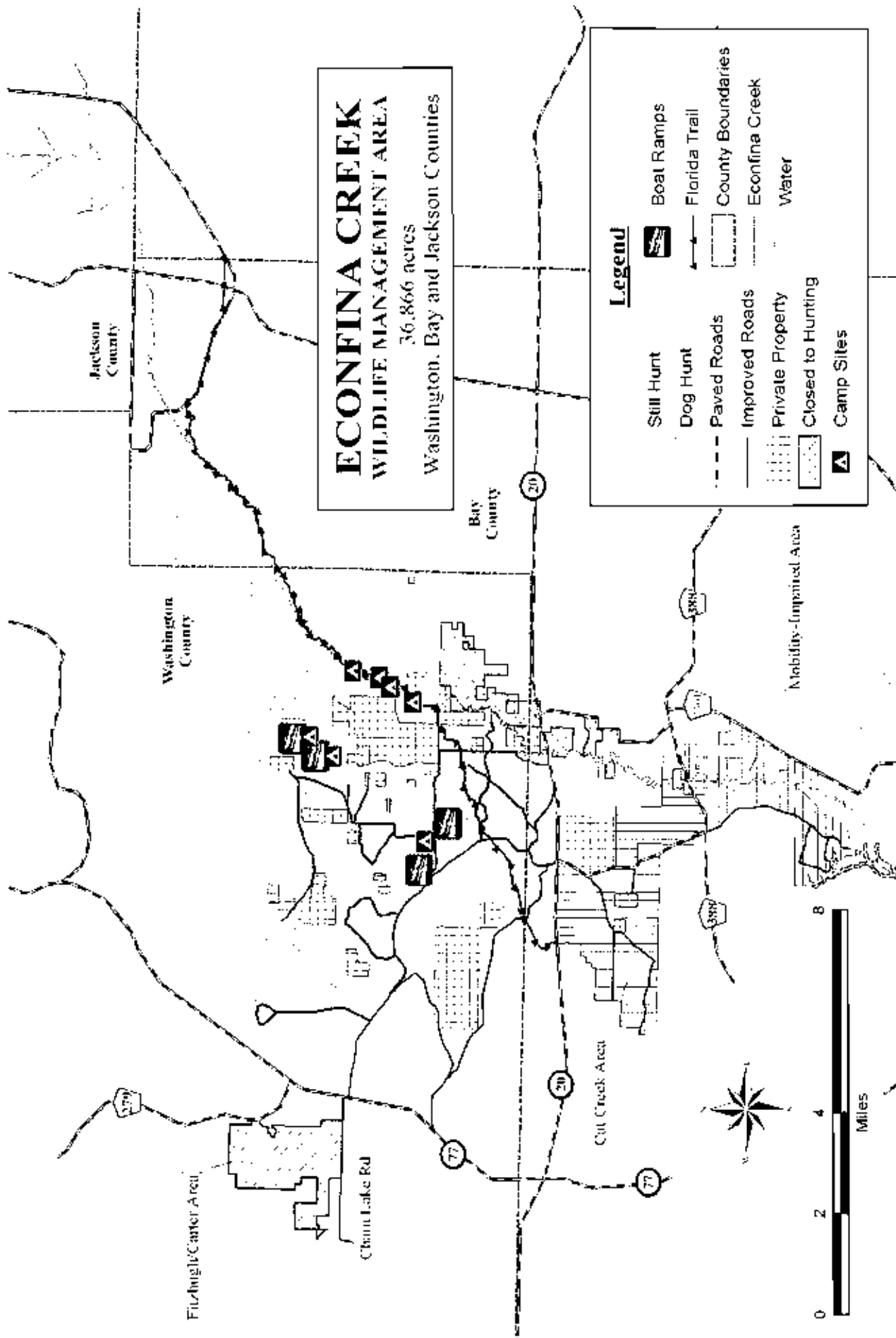
The U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, sex or handicap. If you believe that you have been discriminated against in any program, activity or facility as described above, or if you desire further information, please write to: The Office for Human Resources, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

The project described in this publication is part of a program funded by federal dollars under the Wildlife Restoration Act. Federal funds pay for 20 percent of the cost of the program.

When you spot law violators or suspicious activities,
contact your nearest Commission regional office or
call

1-888-404-FWCC

You may qualify for a cash reward from the
Wildlife Alert Reward Association.



Appendix V. Wood Duck nest box monitoring data sheet for Carter Tract of Econfina Creek WMA.



Wood Duck Box Nest Survey Form

Box # _____

Year: _____ WMA: Carter Tract of Econfina

Box Location: _____

Winter (January/February) - service date - repair boxes remove or add shavings

Observer(s): _____ Date: _____

Box Condition: good fair poor

Predator guard? Yes no

Predation signs on pole or in area? _____

Predation signs on or in box? _____

Box use: yes no hatched

[] Yes Species last seen: Wood Duck Hooded Merganser other species
 Item found: captured banded flushed
 band number in appropriate: _____

Eggs last seen: warm cold neither
 # eggs found: _____ # old eggs _____ # new eggs _____

[] Hatched Species: Wood Duck Hooded Merganser other species
 # eggs last checked _____ # membranes found _____ # unbanded eggs _____
 # eggs missing _____ # dead ducklings _____
 # of ducklings estimated to have left the box _____

Comment/remarks: _____

Spring (late March/early April) - to record nest starts clutch size etc

Observer(s): _____ Date: _____

Box Condition: good fair poor

Predator guard? Yes no

Predation signs on pole or in area? _____

Predation signs on or in box? _____

Box use: yes no hatched

[] Yes Species last seen: Wood Duck Hooded Merganser other species
 Item found: captured banded flushed
 band number in appropriate: _____

Eggs last seen: warm cold neither
 # eggs found: _____ # old eggs _____ # new eggs _____

[] Hatched Species: Wood Duck Hooded Merganser other species
 # eggs last checked _____ # membranes found _____ # unbanded eggs _____
 # eggs missing _____ # dead ducklings _____
 # of ducklings estimated to have left the box _____

Comment/remarks: _____

Summer (late July) - to record late-nesting ducks nest late, etc...

Observer(s): _____ Date: _____

Box Condition: good fair poor

Predator guard? Yes no

Predation signs on pole or in area? _____

Predation signs on or in box? _____

Box use: yes no hatched

[] Yes Species last seen: Wood Duck Hooded Merganser other species
 Item found: captured banded flushed
 band number in appropriate: _____

Eggs last seen: warm cold neither
 # eggs found: _____ # old eggs _____ # new eggs _____

[] Hatched Species: Wood Duck Hooded Merganser other species
 # eggs last checked _____ # membranes found _____ # unbanded eggs _____
 # eggs missing _____ # dead ducklings _____
 # of ducklings estimated to have left the box _____

Comment/remarks: _____

Fall (September) - to record hatch of late nesters

Observer(s): _____ Date: _____

Box Condition: good fair poor

Predator guard? Yes no

Predation signs on pole or in area? _____

Predation signs on or in box? _____

Box use: yes no hatched

[] Yes Species last seen: Wood Duck Hooded Merganser other species
 Item found: captured banded flushed
 band number in appropriate: _____

Eggs last seen: warm cold neither
 # eggs found: _____ # old eggs _____ # new eggs _____

[] Hatched Species: Wood Duck Hooded Merganser other species
 # eggs last checked _____ # membranes found _____ # unbanded eggs _____
 # eggs missing _____ # dead ducklings _____
 # of ducklings estimated to have left the box _____

Comment/remarks: _____

Appendix VI. "Checklist of Birds" public brochure for Carter Tract of Econfina Creek WMA.

Carter Tract of Econfina Creek WMA

Checklist of Birds



Florida Fish and Wildlife
Conservation Commission
2830 Chain Lake Road
Chapley, FL 32428

	Sp	Su	F	W	Su	F	W
— Cliff Swallow	U	R	U	R	U	U	R
— Northern Rough-winged Swallow	U	O	U	R	U	U	O
— Bank Swallow	U	R	U	R	U	U	U
— Tree Swallow	O	U	O	O	U	U	R
— Purple Martin	U	O	U	R	U	U	R
CHICKADEES & TITMICE: Pileated							
— Carolina Chickadee	C	C	C	C	U	U	R
— Tufted Titmouse	O	O	O	O	U	U	R
NUTHATCHES: Striped							
— White-breasted Nuthatch	U	U	U	U	U	U	R
— Red-breasted Nuthatch	R	R	R	U	U	U	R
— Brown-headed Nuthatch	U	U	U	U	U	U	R
CHIPPERS: Creeper							
— Bay-winged Creeper	U	R	U	U	U	U	R
WREN: Troglodytidae							
— Carolina Wren	C	C	C	C	U	U	R
— House Wren	R	R	R	U	U	U	R
— Winter Wren	R	R	R	U	U	U	R
— Sedge Wren	R	R	R	U	U	U	R
— Marsh Wren	R	R	R	U	U	U	R
KINGLETS: Regalidae							
— Ruby-crowned Kinglet	U	R	U	O	U	U	O
— Golden-crowned Kinglet	U	R	U	O	U	U	O
GNATCATCHERS: Sylviidae							
— Blue-gray Gnatcatcher	O	O	O	O	U	U	R
THRUSHES: Turdidae							
— Eastern Bluebird	O	O	O	O	U	U	R
— Swainson's Thrush	R	R	R	R	U	U	R
— Veery	R	R	R	R	U	U	R
— Wood Thrush	U	R	U	O	U	U	O
— Hermit Thrush	U	R	U	O	U	U	O
— American Robin	C	U	O	C	U	U	R
MOCKINGBIRDS & THRASHERS: Mimidae							
— Gray Catbird	O	O	O	O	U	U	R
— Northern Mockingbird	C	C	C	C	U	U	R
— Hermit Thrasher	O	O	O	O	U	U	R
WAXWINGS: Boscopsittidae							
— Cedar Waxwing	U	R	U	U	U	U	R
WOOD WARBLERS: Parulidae							
— Tennessee Warbler	U	R	U	R	U	U	R
— Orange-crowned Warbler	U	R	U	R	U	U	R
— Blue-winged Warbler	U	R	U	R	U	U	R
— Golden-winged Warbler	U	R	U	R	U	U	R
— Northern Parula	O	C	O	U	U	U	R
— Yellow Warbler	C	U	U	R	U	U	R
— Yellow-throated Warbler	O	U	O	C	U	U	R
— Pewee Warbler	O	U	O	C	U	U	R

— Prairie Warbler	U	U	U	U	U	U	R
— Palm Warbler	U	U	U	U	U	U	R
— Yellow-throated Warbler	U	U	U	U	U	U	R
— Black-and-white Warbler	U	U	U	U	U	U	R
— Prothonotary Warbler	U	U	U	U	U	U	R
— Ovenbird	U	U	U	U	U	U	R
— Louisiana Waterthrush	U	U	U	U	U	U	R
— Common Yellowthroat	O	C	C	O	U	U	R
— Hooded Warbler	U	U	U	U	U	U	R
— Yellow-breasted Chat	U	U	U	U	U	U	R
TANAGERS: Troglidae							
— Summer Tanager	U	U	U	U	U	U	R
— Scarlet Tanager	U	R	U	R	U	U	R
TOWHEES & SPARROWS: Emberizidae							
— Eastern Towhee	C	C	C	C	U	U	R
— Dickcissel Sparrow	U	U	U	U	U	U	R
— Chipping Sparrow	O	O	O	O	U	U	R
— Song Sparrow	U	R	U	O	U	U	R
— Savannah Sparrow	U	R	U	O	U	U	R
— Swamp Sparrow	U	R	U	O	U	U	R
— White-throated Sparrow	U	R	U	O	U	U	R
— White-crowned Sparrow	U	R	U	O	U	U	R
— Dark-eyed Junco	U	R	U	O	U	U	R
CARDINALS AND ALLIES: Cardinalidae							
— Northern Cardinal	C	C	C	C	U	U	R
— Blue Grosbeak	U	U	U	U	U	U	R
— Indigo Bunting	U	U	U	U	U	U	R
BLACKBIRDS: Icteriidae							
— Orchard Oriole	U	U	U	R	U	U	R
— Red-winged Blackbird	C	C	C	C	U	U	R
— Eastern Meadowlark	U	U	U	U	U	U	R
— Common Grackle	C	C	C	C	U	U	R
— Brown-headed Cowbird	U	U	U	U	U	U	R











WADING BIRD SURVEY FORM

MANAGEMENT AREA: _____
LOCATION: _____
DATE/TIME: _____
OBSERVER(S): _____
1. SPECIES: _____
NUMBER OBSERVED: MALE: _____ FEMALE: _____ JUVENILE: _____
BIRDS ON NEST: _____
CHICKS OBSERVED: _____
COMMENTS: _____
_____ 2. SPECIES: _____

OBSERVED: MALE: _____ FEMALE: _____ JUVENILE: _____
BIRDS ON NEST: _____
CHICKS OBSERVED: _____
COMMENTS: _____
3. SPECIES: _____ # OBSERVED: MALE: _____ FEMALE: _____
JUVENILE: _____
BIRDS ON NEST: _____
CHICKS OBSERVED: _____
COMMENTS: _____

4. SPECIES: _____
OBSERVED: MALE: _____ FEMALE: _____
JUVENILE: _____
BIRDS ON NEST: _____
CHICKS OBSERVED: _____
COMMENTS: _____

5. SPECIES: _____
OBSERVED: MALE: _____ FEMALE: _____
JUVENILE: _____
BIRDS ON NEST: _____
CHICKS OBSERVED: _____
COMMENTS: _____

6. SPECIES: _____
OBSERVED: MALE: _____ FEMALE: _____
JUVENILE: _____
BIRDS ON NEST: _____

DRIFT FENCE SURVEY

WMA _____	Weather conditions last night (circle one)
Date _____	Precipitation _____ Wind _____ Temperature _____
Observer _____	clear no wind <32°F cloudy no rain breeze 32.50°F + light rain moderate 51.70°F hard rain strong >70°F

DRIFT FENCE NUMBER _____

Species	Species	Comments

DRIFT FENCE NUMBER _____

Species	Species	Comments

DRIFT FENCE NUMBER _____

Species	Species	Comments

DRIFT FENCE NUMBER _____

Species	Species	Comments

DRIFT FENCE NUMBER _____

Species	Species	Comments

Appendix X. 2006-2007 Annual Work Plan for the Carter Tract of Econfina Creek Wildlife Management Area.

FY 2006-07

Project 7281 - NW FLORIDA WATER MANAGEMENT DISTRICT LANDS

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
Species 9100 - All freshwater fish							
Activity - 140	Report writing/editing/manuscript preparation						
	3.00	\$546.00	\$39.72	\$0.00	\$585.72	0	Prepare fisheries reports and proposals as needed. N/A.
Activity - 221	Animal surveys						
	12.00	\$2,184.00	\$158.88	\$4,000.00	\$6,342.88	0	Conduct sampling of fish populations via electroshocking, gill netting, block netting, and/or using rotenone as needed to assess population demographics (101920/19 = \$2,000 for supplies and equipment) (100340/29 = \$2,000 for supplies and equipment). N/A.
Activity - 250	Monitoring and assessments						
	10.00	\$1,820.00	\$132.40	\$1,000.00	\$2,952.40	0	Population monitoring and assessment of aquatic resources. Comprehensive sportfish population assessment (101920/19 = \$1,000 misc. materials and supplies). N/A.
Activity - 287	Stocking enhancements/population augmentation						
	2.00	\$364.00	\$26.48	\$0.00	\$390.48	0	Restocking of native fish into selected water bodies as needed. N/A.
Activity - 320	Outreach and education						
	2.00	\$364.00	\$26.48	\$0.00	\$390.48	0	Coordinate and/or administer special fishing events such

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments as kids fishing days. N/A.	
Activity - 342	Public use administration (non-hunting)							
	3.00	\$546.00	\$39.72	\$11,069.00	\$11,654.72	0	Conduct creel surveys at check stations. Administer public fishing events (101920/19 = \$8,069 for OPS check station operators) (100340/29 = \$3,000 misc. materials and supplies). N/A.	
Species 9100 Total	32.00	\$5,824.00	\$423.68	\$16,069.00	\$22,316.68			
Species 9200 - All wildlife								
Activity - 100	Administration							
	3.00	\$546.00	\$39.72	\$0.00	\$585.72	0	General supervisory, clerical and administrative duties.	
Activity - 101	Project inspection							
	9.00	\$1,638.00	\$119.16	\$0.00	\$1,757.16	0	Inspect area projects and activities. Field orientation of land boundaries, features and habitats.	
Activity - 103	Meetings							
	10.00	\$1,820.00	\$132.40	\$2,000.00	\$3,952.40	0	Attend landowner, cooperator, scientific and agency meetings (101920/19 = \$2,000 misc. materials and supplies).	
Activity - 128	New Vehicle and Equipment Purchases							
	0.00	\$0.00	\$0.00	\$5,125.00	\$5,125.00	0	Purchase one MACOM radio for area (100340/29 = \$5,125 for radio).	
Activity - 140	Report writing/editing/manuscript preparation							
	7.00	\$1,274.00	\$92.68	\$1,000.00	\$2,366.68	0	Prepare annual and wildlife management reports and proposals as needed (100340/29 = \$1,000 for copies and	

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments (binding).
Activity - 150	Personnel management 5.00	\$910.00	\$66.20	\$22,891.00	\$23,867.20	0	Supervise volunteer activities. Recruit, hire and supervise OPS. (101920/19 = \$22,391 for OPS Field Technician) (100340/29 = \$500 misc. materials and supplies).
Activity - 182	Data management 6.00	\$1,092.00	\$79.44	\$2,000.00	\$3,171.44	0	Digitize habitat features for use in GIS database. Incorporate all data into GIS database. Analyze and summarize WMA databases and pertinent information (100340/29 = \$2,000 misc. materials, equipment and supplies).
Activity - 200	Resource Management 5.00	\$910.00	\$66.20	\$3,000.00	\$3,976.20	0	Routine planning, paperwork, purchases and correspondences dealing with daily operations of the WMA (100340/29 = \$3,000 misc. materials and supplies).
Activity - 204	Resource planning 10.00	\$1,820.00	\$132.40	\$3,000.00	\$4,952.40	0	Coordination of work projects related to management activities. Prepare written work plans and proposals (100340/29 = \$3,000 misc. materials and supplies).
Activity - 276	Commission rule development and review 1.00	\$182.00	\$13.24	\$0.00	\$195.24	0	Develop and submit area rule changes, includes preparation, review.

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
							advertisement, promulgation and publishing. N/A.
Activity - 281	Technical assistance						
	5.00	\$910.00	\$66.20	\$0.00	\$976.20	0	Provide technical information and assistance to cooperators or other state agencies regarding wildlife management and habitat.
Activity - 294	Program coordination and implementation						
	5.00	\$910.00	\$66.20	\$0.00	\$976.20	0	Intra and interagency coordination.
Activity - 312	Informational signs						
	3.00	\$546.00	\$39.72	\$1,000.00	\$1,585.72	0	Erect and maintain informational signs and kiosks as needed (100340/29 = \$1,000 for materials and supplies)
Activity - 320	Outreach and education						
	5.00	\$910.00	\$66.20	\$500.00	\$1,476.20	0	Make wildlife management presentations to elementary schools and general public (100340/29 = \$500 misc. materials and supplies).
Activity - 350	Customer service support						
	5.00	\$910.00	\$66.20	\$0.00	\$976.20	0	Provide information to callers regarding fish and wildlife-based recreation opportunities and area regulations.
Activity - 920	FEM -- buildings/structures						
	5.00	\$910.00	\$66.20	\$2,000.00	\$2,976.20	1	Maintain and repair area office as needed (100340/29 = \$2,000 misc. materials and supplies)
Activity - 923	FEM -- vehicles/equipment						
	3.00	\$546.00	\$39.72	\$6,000.00	\$6,585.72	0	Repair and maintain vehicles, boats, ATVs and associated

	Man Days	Salary	FuelCost	Other	Total Units	Accomplishments
						equipment (100340/29 = \$5,000 misc. materials and supplies) (101920/19 = \$1,000 misc. materials and supplies).
Activity - 926	FEM -- roads/bridges 2.00	\$364.00	\$26.48	\$0.00	\$390.48	0 Make minor repairs to access roads as needed.
Activity - 928	FEM -- fences 1.00	\$182.00	\$13.24	\$0.00	\$195.24	0 Maintain and erect gates and fences as needed on access roads and boundaries.
Species 9200 Total	90.00	\$16,380.00	\$1,191.60	\$48,516.00	\$66,087.60	
Species 9210 - Game wildlife						
Activity - 140	Report writing/editing/manuscript preparation 3.00	\$546.00	\$39.72	\$0.00	\$585.72	0 Prepare deer and game management recommendations and harvest reports as needed.
Activity - 182	Data management 5.00	\$910.00	\$66.20	\$0.00	\$976.20	0 Analyze data collected from biological samples from harvested game, surveys and inventories.
Activity - 221	Animal surveys 11.00	\$2,002.00	\$145.64	\$2,000.00	\$4,147.64	0 Conduct deer surveys and other game surveys as needed (101920/19 = \$1,000 misc. materials and supplies) (100340/29 = \$1,000 misc. materials and supplies).
Activity - 285	Nest structures 10.00	\$1,820.00	\$132.40	\$500.00	\$2,452.40	0 Install and maintain wood duck nest

	Man Days	Salary	Fuel/Cost	Other	Total	Units	Accomplishments	
							boxes (100340/29 = \$500 misc. materials and supplies).	
Activity - 295	Biological data collection, analysis, and reporting							
	10.00	\$1,820.00	\$132.40	\$2,000.00	\$3,952.40	0	Collect biological data and samples from harvested game at check station (101920/19 = \$1,000 for supplies/equipment) (100340/29 = \$1,000 misc. materials and supplies).	
Activity - 341	Public use administration (hunting)							
	12.00	\$2,184.00	\$158.88	\$8,266.00	\$10,608.88	0	Review area hunt maps and brochures. Compile weekly harvest reports and hunter pressure. Administer public hunts (101920/19 = \$8,266 for OPS check station operators).	
Species 9210 Total	\$1.00	\$9,282.00	\$675.24	\$12,766.00	\$22,723.24			
Species 9240 - Nongame wildlife								
Activity - 140	Report writing/editing/manuscript preparation							
	2.00	\$364.00	\$26.48	\$0.00	\$390.48	0	Prepare herptofauna survey progress reports. NFA.	
Activity - 221	Animal surveys							
	18.00	\$3,276.00	\$238.32	\$3,000.00	\$6,514.32	0	Conduct wading bird surveys and monitoring. Conduct herptofauna surveys and monitoring. Install and monitor drift fence arrays (101920/19 = \$1,000 misc. materials and supplies) (100340/29 = \$2,000 for supplies and equipment). NFA.	
Species 9240 Total	20.00	\$3,640.00	\$264.80	\$3,000.00	\$6,904.80			

	Man Days	Salary	FuelCost	Other	Total	Units	Accomplishments
Species 9280 - All threatened and endangered wildlife							
Activity - 140	Report writing/editing/manuscript preparation						
	2.00	\$364.00	\$26.48	\$0.00	\$390.48	0	Prepare gopher tortoise survey and monitoring progress report. NFA.
Activity - 182	Data management						
	2.00	\$364.00	\$26.48	\$0.00	\$390.48	0	Analyze and summarize gopher tortoise survey data. NFA.
Activity - 221	Animal surveys						
	13.00	\$2,366.00	\$172.12	\$3,000.00	\$5,538.12	0	Coordinate and conduct gopher tortoise survey and monitoring (101920/19 = \$1,000 misc. materials and supplies) (100340/29 = \$2,000 for supplies and equipment). NFA.
Species 9280 Total	17.00	\$3,094.00	\$225.08	\$3,000.00	\$6,319.08		
Project 7281 Total	210.00	\$38,220.00	\$2,780.40	\$83,351.00	\$124,351.40		

ORG - Category Breakdown

ORG	EO	Category	Total
77352030100	19	101920	\$48,726.00
77352030100	29	100340	\$34,625.00

