

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
WILD TURKEY PERMIT PROGRAM
2007-2008 ANNUAL REPORT**

Abstract: This report documents activities of the Florida Fish and Wildlife Conservation Commission's (FWC) Wild Turkey Management Program (WTMP) and associated use of Wild Turkey Permit Funds during fiscal year 2007-2008. Permit fund revenues and expenditures totaled \$507,566.65 and \$503,792.32, respectively. Program activities encompassed management projects, turkey restoration monitoring, data analysis, technical assistance, and research and development. Funding for 40 management projects on 26 public wildlife management areas (WMAs) was cost-shared with the Florida Chapter of the National Wild Turkey Federation (FCNWTF). Data management functions included the continued analysis of Special-Opportunity Turkey Hunt mail surveys from 1998 through 2006 and the conduct and analysis of a spring turkey season harvest mail survey. Wild turkey monitoring of recently restored populations were continued in Holmes County and Guana River WMA. Research continued on Three Lakes WMA and initiated on the Longino Ranch to evaluate improvements to nesting and brood rearing habitat of wild turkeys through activities of the Upland Ecosystem Restoration Project (UERP), a landscape-scale habitat management effort designed to restore native uplands for the benefit of numerous wildlife species. A wild turkey biologist position funded cooperatively by the United States Forest Service (USFS), National Wild Turkey Federation (NWTF), and FWC was continued. A new three year contract between the Florida Division of Forestry (DOF), NWTF, and FWC funded a second wild turkey biologist position to work primarily on State Forests. Additionally, the WTMP provided technical assistance to various organizations, private citizens, the media, and agency personnel, including site visits to 11 WMAs.

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The public has a strong interest in wild turkey management and hunting. Particular interest is often given to the Osceola subspecies, which occurs only in peninsular Florida. Because the wild turkey occupies a wide variety of habitat on private and public lands in all 67 counties of Florida, a comprehensive program, involving management, restoration, technical assistance, data analysis, and research, is required. The FWC's WTMP coordinates these activities with other FWC programs and personnel, other state and federal agencies, conservation groups, private landowners, and the general public. The WTMP uses revenues primarily from the sale of turkey permits to accomplish this work.

Florida Statutes that became effective on June 1, 1986 requires all individuals hunting wild turkeys in Florida to purchase and possess either a turkey permit, or other license that includes this permit fee. Between June 1, 1986 and June 30, 2003, turkey permits were \$5 for resident and non-resident turkey hunters. Beginning July 1, 2003, the cost for a non-resident turkey permit increased to \$100. In 2007, the Florida Legislature appropriated additional budget for wild turkey management based on increased revenues from the sale of non-resident turkey hunting permits. The focus for expenditure of these additional funds is on management with particular consideration for partnering and cost-sharing opportunities with other agencies or organizations. All funds generated from turkey permits and associated licenses that provide this hunting privilege are to expand ongoing wild turkey management and research without detracting from other fish and wildlife programs.

Pursuant to statutory requirements, this report documents the revenues and expenditures associated with the turkey permit fund for fiscal year 2007-2008 and summarizes activities conducted by the WTMP through the use of these funds.

TURKEY PERMIT REVENUES AND PROGRAM EXPENDITURES

The Florida Wild Turkey Stamp Act requires that generated revenues be expended for wild turkey research and management, with no more than 5% of gross revenues to be expended for administrative costs. During fiscal year 2007-2008, 27,121 resident turkey permits (\$5 each), 463 five-year resident turkey permits (\$25 each) and 2,230 non-resident turkey permits (\$100 each) were sold. The revenues from these permit sales, plus those derived from the sale of other licenses that included turkey hunting privileges (e.g., sportsman's, gold sportsman's), totaled \$507,566.65. Total expenditures were \$503,792.32. Expenditures included \$162,202.90 for salaries and benefits and \$341,589.42 for management and research. In addition to wild turkey permit funds, the WTMP received \$50,000 in donated funds from the FCNWTF, a conservation organization dedicated to promoting wild turkey management, research, habitat protection, and hunting opportunities.

PROGRAM ACTIVITIES

The WTMP is charged with coordinating management and research activities across the state and providing a statewide approach to conservation and management of Florida's wild turkey populations. The goal, recently developed as part of the WTMP's strategic management plan, is to: "Ensure healthy and sustainable wild turkey populations throughout the state while providing and promoting compatible uses of the resource." Such a broad program requires involvement of WTMP personnel in activities generally encompassed within five categories: management projects, population restoration, data analysis, technical assistance, and project development and research.

Management Projects

With continuing changes in quality and quantity of wild turkey habitat in Florida, management efforts continue to be vital to the WTMP's objective of maintaining turkey distributions across the state. Management funded by the WTMP has primarily focused on the state's 5.8 million-acre WMA system because of the management opportunities they present, the recreational public-use of these lands, and their associated funding needs. Management activities, such as mowing, prescribed burning, planting, and the creation of wildlife openings, have enhanced habitat on these areas for wild turkeys and many other wildlife species.

During this past fiscal year, funds totaling \$267,142 were made available for 40 management projects on 28 WMAs (Table 1). Much of this management work has been accomplished through a cost-share program with the FCNWTF. In this regard, the FCNWTF donated \$50,000 to cost-share these WMA activities. The WTMP provided \$217,142 of turkey permit funds as the FWC's cost-share match. In many cases, FWC also provided equipment, personnel, and/or other funding for these WMA projects, resulting in a total cost-share program value of \$613,190. Moreover, volunteers from the FCNWTF assisted FWC personnel with projects on several WMAs. Thus, these projects generally provide substantial benefits for wild turkeys and other wildlife at a considerable cost savings relative to their overall value.

Wild Turkey Restoration

Florida essentially completed its turkey population restoration efforts in 1970; however, areas have been identified from time to time where "maintenance" restoration efforts have been warranted. In this regard, in 1997, the WTMP determined that turkey populations were low or non-existent in Holmes County. As a result, FWC closed the entire county to all turkey hunting and stocked of 121 turkeys at 8 release. The WTMP continues to monitor Holmes County for evidence of turkey population growth and expansion using annual bait-station surveys. No turkeys or turkey sign were observed at any of 29 bait stations in 1997, prior to stocking. However, use of the 28 established stations (1 station was discontinued due to landowner change) by wild turkeys increased from 3 in 2000 to 16 bait-stations visited in 2007.

As a result of the documented increase and expansion of the turkey population in Holmes County, FWC opened a 3-day spring turkey season (1 bird bag limit) in 2006. All indications were that the 2006, 2007, and 2008 spring turkey

hunts were quite successful, and a 16-day spring turkey season has now been approved for the 2009 spring season. Fall turkey hunting remains closed in Holmes County.

The 10,000-acre Guana River WMA in northeastern Florida historically supported turkeys, but indiscriminant hunting by individuals apparently disgruntled with the State's acquisition of this area, and habitat degradation due to lack of prescribed fire, are believed to have resulted in the population decline. Improved habitat management since state acquisition of the property has restored wild turkey habitat values on this area. Natural and man-made barriers (i.e., urban development) isolated this WMA from other wild turkey populations. Therefore, the chances were low for turkeys to repopulate the area by moving in from surrounding property. Consequently, in December 2002, FWC biologists and volunteers from the FCNWTF trapped 35 wild turkeys (15 males and 20 females) from nearby private lands and released them on Guana River WMA. Camera surveys and routine observations by FWC personnel, and other reliable sources, indicate successful reproduction and population increase. As a result, a limited hunt (6 quota permits for each of 2, 3-day hunts) has been approved for the 2009 spring turkey season. Monitoring of this turkey population will continue in order to ensure its well-being, particularly after reestablishment of limited hunting opportunities.

A turkey restoration project began in 2000 for the Everglades National Park at the request of the National Park Service (NPS) and the FCNWTF. The original release of 29 turkeys (7 males and 22 females) resulted in documented reproduction, but monitoring by the NPS suggested that while these turkeys survived, numbers were not increasing as desired. A supplemental stocking occurred in January 2006, which involved the release of 31 turkeys (11 males and 20 females). A Memorandum of Agreement between the FWC and the NPS called for improved monitoring by the NPS of these recently released birds. Preliminary results have documented successful reproduction for the past 3 springs. Monitoring will continue through the summer of 2009.

Data Collection, Management, and Analysis

One role of the WTMP is to conduct an annual mail survey of spring turkey hunters. Through this process, a sample of eligible turkey hunters is surveyed to generate estimates of turkey harvest, hunter effort, and hunter satisfaction (Table 2). The WTMP also collects and maintains harvest data from WMAs with check stations. These data are used to determine area-specific hunter success rates. Harvest data and hunter success rates can, in some instances, be useful in evaluating trends as an indicator of the health of an area's wild turkey population or the quality of its turkey hunting opportunities.

Additionally, the WTMP, with primary assistance from the FWC's Fish and Wildlife Research Institute (FWRI), analyzed data from an annual survey (1998-2006) of hunters participating in Special-Opportunity Turkey Hunts. These hunts were created in 1997 to provide quality hunting opportunities and increase interest in hunting in Florida, particularly on public land. The analysis investigated elements affecting permit application rates, current trends in and determinants of

hunter satisfaction, and the relationship between hunter success and level of satisfaction. Taken as a whole, the goals established for the program were achieved during these first 10 years. The harvest index for this period averaged 8.7 hunter-days per turkey harvested, and the harvest was composed of greater than 89% adult gobblers. More than 90% of hunt participants were either satisfied or very satisfied with their experience. Hunter success rates for the 2008 Special-Opportunity Turkey Hunts are presented in Table 3.

Technical Assistance

The WTMP and other FWC personnel are often called upon to provide information to internal agency personnel, personnel with other agencies, various organizations, private landowners, the media, and the general public. Such assistance covers a wide range of topics including questions on wild turkey management, survey techniques, hunting information and opportunities, data collection, and research issues.

Agency Assistance -- FWC personnel frequently request assistance concerning turkey population surveys, turkey hunting management on WMAs, and funding for management projects. During 2007-2008, the WTMP and the Cooperative Wild Turkey Biologist visited 11 WMAs to provide input on wild turkey management or participate in turkey surveys. The WTMP continued to work cooperatively with the Northwest Florida Water Management District to maintain wildlife openings on the Choctawhatchee River WMA to provide positive public relation values and habitat benefits to the recently restored turkey population in Holmes County.

Public Assistance – The public frequently requests information on turkey hunting and management. The WTMP usually handles such requests by phone, e-mail, or regular mail service to distribute appropriate information. Sometimes requests are best addressed through personal contact and on-site visits. This fiscal year, WTMP personnel made 1 on-site visit to a private landowner to discuss how to reduce nuisance problems caused by wild turkeys. The WTMP also provided information to the public through various news releases and media contacts.

The WTMP gave presentations to the following groups: FWC Law Enforcement Officers at a Regional Law Enforcement meeting, children attending the Conservation Education Program at Plant City's Public Works Dept., attendees of the Society of Range Management's field tour of Longino Ranch, FWC/University of Florida field day in Milton, and students at Padgett Elementary school in Lakeland. The WTMP also gave a presentation and conducted a rocket net demonstration at the annual statewide NWTF JAKES event. JAKES stands for Juniors Acquiring Knowledge, Ethics and Sportsmanship. The NWTF started the JAKES program as a way to give kids the chance to explore their outdoor world through fun events held across North America. During these events, JAKES members get to learn skills that they can take to the field to stay safe and have fun.

The WTMP, as well as other FWC entities, work closely with the NWTF throughout the year. This relationship was highlighted at the February 2007 FWC Commissioner's meeting with the formal signing of a Memorandum of

Understanding among the FWC, the NWTF, and the FCNWTF. This document provides support to continue the many mutually beneficial interests and activities of each party. Some of the related activities in which the FWC participated included attendance at several FCNWTF board meetings, the FCNWTF Superfund subcommittee meeting, the annual NWTF Convention and Technical Committee meeting, and a NWTF Field Day Event for children.

The WTMP administers a wild turkey registry program, which awards certificates to hunters harvesting an outstanding gobbler. Depending on the area where the turkey was harvested, either an Osceola (Florida) subspecies or the Eastern subspecies Outstanding Gobbler certificate is awarded for gobblers meeting minimum standards (at least an 11-inch beard and 1 ¼-inch spurs). A certificate is also awarded for youth hunters who harvest their first gobbler. Since the program's inception in 2001, 325 Outstanding Osceola, 100 Outstanding Eastern, and 177 First Gobbler certificates have been awarded.

Research and Development

FWC has been conducting research to document wild turkey nesting and brood-rearing success and use associated with management treatments designed to improve "native range" vegetation in central and southern Florida. These management treatments, primarily prescribed burning, roller-chopping, or a combination of the two, are being applied at a landscape level as part of the Upland Ecosystem Restoration Project (UERP). The UERP is a large-scale initiative, involving numerous landowners and agencies, designed to improve upland habitat for northern bobwhites and other plant and wildlife species.

Another ongoing research project investigated wild turkey response to upland vegetation conditions and habitat restoration treatments on a 15,000-acre segment of Three Lakes WMA and for the first year on the Longino Ranch, a private ranch in northeast Sarasota County. Forty-three female turkeys (22 on Longino Ranch; 21 on Three Lakes WMA) were radio-tagged during December 2007 through early March 2008. Along with 6 hens surviving on Three Lakes from the previous year, these birds were monitored during the nesting and brood-rearing period to obtain habitat usage and home-range information. Additionally, researchers working in tandem collected simultaneous, close-range (≤ 250 m) telemetry locations of non-incubating hens. Researchers then sampled vegetation at these close-range locations and at all documented nest sites, as well as at an equal number of randomly selected comparison upland sites. Vegetation sampling included measurements of basal area, tree stem counts, lateral cover, palmetto canopy cover, other ground cover, and shrub height. These measurements will be used to determine characteristics of upland vegetation associated with use by wild turkeys.

In 1973 and 1977, the Game and Fresh Water Fish Commission (now the Fish and Wildlife Conservation Commission) conducted statewide assessments of wild turkey distributions. The WTMP initiated a similar survey during 2001. The completed distribution map, which indicates that turkeys still occur in all 67 counties of the state, has been made available to the public for viewing through the FWC's Internet web page and 300 posters of this distribution map were also printed for

public distribution as well. Additionally, the results of this project have been published in the Proceedings of the Ninth National Wild Turkey Symposium.

Currently, survey data is being modeled with additional data layers to relate turkey population distributions and relative abundance to vegetative communities, land ownership, harvest records, and other suitable information. When these prioritization models are completed, the WTMP will be able to focus management efforts on particular areas of the state that have suitable turkey habitat but low turkey populations.

PROGRAM DIRECTION

The FWC underwent a substantial reorganization effective July 1, 2004. This reorganization shifted two biologists from the WTMP to other agency programs, thus leaving a biological administrator and staff assistant as the primary program personnel. Considerable assistance has been provided, however, by FWRI, and others, with ongoing activities and program obligations. In addition, a new cooperative wild turkey biologist position was established through a 3-year partnership contract beginning in 2007 with the FWC, USFS, and NWTF. A similar cooperative contract has been executed between the FWC, DOF, and NWTF for another biologist, and efforts are underway to fill this position. The NWTF serves as the employer for both of these positions, but the partners coordinate closely on the development of an annual work plan and provide specific oversight for accomplishment of defined activities.

FWC's Wild Turkey Standing Team is composed of staff from several organizational units (i.e., Hunting and Game Management, Law Enforcement, FWRI, Habitat and Species Conservation, and Community Relations) and includes 2 associate members from the NWTF. This team provides input and assistance to ongoing program activities and emerging issues such that broad-based viewpoints from within the agency are represented and specific tasks are assigned as appropriate. In this regard, the team completed a 10-year wild turkey strategic management plan during fiscal year 2007-08. This plan will provide future direction for the WTMP and the management of Florida's wild turkey resource.

The WTMP embraces the goal of the new strategic plan, which is to "Ensure healthy and sustainable wild turkey populations throughout the state while providing and promoting compatible uses of the resource." Moreover, the WTMP will continue to provide excellent customer service, increase positive contacts with conservation organizations, develop additional partnerships, and provide quality hunting areas, all of which benefit wild turkeys in the State of Florida.

Table 1. Wildlife Management Area projects funded through the FWC/NWTF cost-share program during fiscal year 2007-2008.

Wildlife Management Area	Project Description	Project Cost
<i>Southwest Region</i>		
Green Swamp	Roller-chopping overgrown vegetation	\$13,000
Kissimmee River PUA	Roller-chopping thick palmetto	\$10,000
KICCO	Roller-chopping of palmetto/wax myrtle	\$10,000
Chassowitzka	Mechanical clearing of thick vegetation	\$9,998
Green Swamp West	Mowing of openings & road shoulders	\$2,600
Green Swamp West	Infrared camera turkey survey	\$1,000
<i>South Region</i>		
Fisheating Creek	Herbicide treatment of exotic plants	\$10,000
Fisheating Creek	Mowing wax myrtle & prescribed burning	\$10,000
Hungryland	Planting native trees and shrubs	\$10,000
Corbett	Planting native trees and shrubs	\$7,000
Corbett	Prescribed burning	\$7,000
Corbett	Maintenance & planting wildlife openings	\$7,000
Fisheating Creek	Planting of firebreaks	\$3,000
OK Slough	Purchase infrared cameras for surveys	\$2,000
<i>North Central Region</i>		
Big Bend	“Daylighting” roads & planted openings	\$10,000
Osceola National Forest	Planting wildlife openings	\$10,000
Raiford	Third row mowing of pine stands	\$10,000
Citrus	Planting wildlife openings	\$10,000
Twin Rivers	Third row mowing of pine stands	\$10,000
Homosassa	Mowing of wildlife openings	\$7,000
Richloam Baird Unit	Planting wildlife openings	\$7,000
Camp Blanding	Planting wildlife openings	\$3,600
Big Bend	Planting wildlife openings & closed roads	\$3,500
Twin Rivers	Planting wildlife openings	\$3,500
Raiford	Planting wildlife openings	\$3,000
Camp Blanding	Bait-station turkey survey	\$2,000
Camp Blanding	Prescribed burning	\$1,500
<i>Northwest Region</i>		
Apalachicola National Forest	Gas pipeline right-of-way planting	\$10,000
Apalachicola National Forest	Progress Energy right-of-way planting	\$10,000
Blackwater Hutton Unit	Planting wildlife openings	\$10,000
Blackwater	Planting wildlife openings	\$9,869
Apalachee	Planting wildlife openings	\$9,830
Pine Log	Planting wildlife openings & mowing	\$6,965
Joe Budd	Planting wildlife openings	\$6,000
Robert Brent	Prescribed burning	\$5,000
Apalachicola River WEA	Planting native trees and shrubs	\$4,820
Blue Water Creek	Planting wildlife openings	\$4,165
Box R	Planting wildlife openings	\$3,170
Apalachicola Bradwell Unit	Mowing wildlife openings & road edges	\$2,350
Blackwater	Energy for wildlife right-of-way planting	\$1,275

Table 2. Spring turkey season harvest estimates and 95% confidence limits for available mail survey data analyzed since 1988.

Year	Estimated Harvest	95% Confidence Limits
1988	15,774	12,249 - 19,298
1989	17,245	15,518 - 18,972
1990	16,173	14,463 - 17,883
1991	15,675	11,647 - 19,701
1992	10,897	9,786 - 12,007
1993	12,569	10,938 - 14,201
1994	14,237	12,487 - 15,988
1995 ^a	na	na
1996	15,067	13,624 - 16,510
1997	19,358	18,185 - 20,531
1998	23,419	21,546 - 25,291
1999	21,613	19,687 - 23,538
2000 ^b	15,446	14,749 - 16,144
2001	14,214	13,571 - 14,856
2002	15,495	14,814 - 16,176
2003	15,509	14,752 - 16,265
2004	17,241	16,529 - 17,953
2005	25,057	23,521 - 26,593
2006	21,507	20,366 - 22,648
2007	24,353	23,391 - 25,315

^a Mail survey was not conducted.

^b The survey instrument was substantially changed, thus the harvest estimate is not readily comparable to previous years. Additionally, inconsistencies with the license database have likely contributed to the observed fluctuations in estimates.

Table 3. Harvest, hunter pressure (total man-days of effort), and hunter success (number of days of effort per turkey harvested) for Special-Opportunity Turkey Hunts for the 2008 spring turkey season.

Wildlife Management Area	Harvest	Hunter Pressure	Hunter Success
Triple N Ranch WMA	9	46	5.1
Ft. Drum WMA	5	14	2.8
Lake Panasoffkee WMA	13	66	5.1
Dexter/Mary Farms WMA	14	67	4.8
Homosassa WMA	6	35	5.8
Fisheating Creek WMA	14	69	4.9
Green Swamp West WMA	41	304	7.4
Overall	102	601	5.9