

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
WATERFOWL PERMIT PROGRAM
2010-2011 ANNUAL REPORT**

EXECUTIVE SUMMARY

Florida is visited by more than 20 species of migratory waterfowl each year. Four species of ducks regularly nest in the state during spring and summer. Waterfowl provide significant economic and recreational benefits to the citizens of Florida. This report documents efforts by the Florida Fish and Wildlife Conservation Commission (FWC) to manage Florida's waterfowl during fiscal year 2010-11.

Waterfowl management activities fall into two categories: population monitoring and habitat management. The Waterfowl Management Program (WMP) coordinated the banding of 882 mottled ducks and 549 wood ducks during 2010. Mottled ducks and wood ducks were captured at bait sites and by night-lighting. Reports of band encounters allow us to measure hunting pressure on these ducks. Hunters can dial 1-800-327-BAND (inscribed on the band) or visit www.reportband.gov to report band information.

A main concern for mottled duck conservation is hybridization between introduced domestic mallards and mottled ducks. The resulting genetic swamping of mottled ducks by mallards could lead to the loss of Florida's mottled duck as a distinct species. The WMP devoted substantial effort to this issue in 2010-11.

Providing appropriate waterfowl hunting opportunities for Florida's citizens is a primary mission of the WMP. Hunting seasons are established in Florida to maximize hunter opportunity within the constraints of sound resource stewardship and guidelines mandated by the U.S. Fish and Wildlife Service (USFWS). The WMP participated in the national process for setting waterfowl hunting regulations and developed recommendations for the FWC Commission concerning appropriate regulations in Florida.

Habitat management allows FWC to improve the habitat quality and quantity necessary to support Florida's waterfowl and other wetland wildlife. Waterfowl biologists provided technical assistance on wetland conservation and management issues around the state. FWC worked with many agencies, organizations, and private landowners to cooperatively manage wetlands.

INTRODUCTION

Waterfowl are among the most recognized and economically important wild animals in North America. In Florida, naturalists, bird watchers, and hunters spend countless hours enjoying these birds. As human impact on the environment has increased, negative impacts on waterfowl populations also have increased. The Florida Fish and Wildlife Conservation Commission's (FWC) Waterfowl Management Program (WMP) is charged with ensuring the continued well-being of these popular birds.

The passage of the Florida Duck Stamp Act in 1979 created the WMP and provided a mechanism for funding. This act requires that all Florida waterfowl hunters purchase a waterfowl permit. Beginning July 1, 2010, the Florida Legislature increased the fee for a

waterfowl permit from \$3.00 to \$5.00 for both resident and nonresident waterfowl hunters. The law stipulates that revenue generated from the sale of waterfowl permits or that pro rata portion of any license that includes waterfowl hunting privileges shall, be used for the conservation, research and management of waterfowl or to promote the cultural heritage of hunting. This new legislation allows the FWC to expend up to ten percent of permit revenues to promote hunting and sport fishing activities with an emphasis on youth participation.

During fiscal year 2010-11, 12,041 waterfowl permits (including 1,123 five-year permits) were sold. Sportsman's licenses also include a waterfowl permit, and 42,241 of these licenses were sold. Revenue from waterfowl permits and sportsman's licenses totaled \$172,956, of which \$2,328 was set aside to promote youth hunting programs in Florida (e.g. Beau Turner Youth Conservation Center, Florida Youth Hunting Program, Ocala Youth Conservation Camp, etc). The remainder of the revenues (\$163,628) supported 18% of the \$951,960 that was expended on the conservation, research, and management of waterfowl.

During fiscal year 2010-11, the WMP continued its efforts to increase public awareness of Florida's waterfowl resource through a web site, Florida's Waterfowl (www.MyFWC.com/duck). The web site provides information on Florida's resident and migrant waterfowl, habitat conservation, and waterfowl hunting, as well as results from waterfowl population surveys in Florida and links to other sites of interest to waterfowl enthusiasts.

The WMP worked cooperatively during the year with several important stakeholder groups, including Ducks Unlimited (DU), Delta Waterfowl (Delta) and United Waterfowlers of Florida (UW-F). UW-F is an organization dedicated to representing the interests of Florida's waterfowl hunters. WMP activities with these groups included coordinating cooperative projects and providing technical assistance on issues of mutual interest.

The Waterfowl Management Strategic Plan, approved for implementation by FWC Commissioners on February 6, 2008, continues to guide waterfowl management efforts. The plan has three goals: (1) conservation and enhancement of resident waterfowl populations and habitats, (2) leadership in the conservation and enhancement of continental waterfowl populations and habitats, and (3) recreational use and public support resulting in the enhancement and conservation of waterfowl populations and habitat.

The WMP participated in disease surveillance efforts during fiscal year 2010-11 to monitor for highly pathogenic avian influenza (HPAI). FWC assisted in efforts to monitor for HPAI in Florida as part of the national early detection system for Asian H5N1 in migratory birds. WMP staff coordinated collection of samples from live-captured mottled ducks and wood ducks and samples from hunter-harvested waterfowl at several waterfowl check stations throughout the state. FWC's overall sampling efforts also included birds found dead of unknown causes. FWC worked closely with the U.S. Department of Agriculture-Wildlife Services (USDA-WS) to assist in a combined collection effort of 739 samples from all sources combined. Nationwide, the HPAI sampling effort totaled 40,863, comprised of samples from both migratory and resident birds and environmental samples. The Asian H5N1 strain of HPAI was not identified in North America during 2010-11 surveillance efforts. The national early detection system for Asian H5N1 will be

discontinued in 2011; however, the WMP will continue to work with other state and federal agencies in disease surveillance efforts as needed.

The remaining waterfowl management programs are best understood if grouped biologically. Florida wetlands support breeding (resident) and migrant (wintering) waterfowl, and FWC management targets the populations and habitats of these birds.

POPULATION AND HABITAT MANAGEMENT

Population monitoring allows the agency to track the number of ducks over time. Annual population estimates and other population parameters help to manage for maximum hunting opportunity while sustaining healthy waterfowl populations. Moreover, accurate population information provides a basis for directing waterfowl conservation efforts where they are most needed and effective.

Habitat management helps to provide the greatest quantity and highest quality habitat possible to support Florida's waterfowl and other wetland-dependant wildlife. Without a large habitat base that includes breeding, migration, and wintering areas, waterfowl populations will decline. Habitat management and conservation have importance beyond their value to waterfowl because wetlands benefit many other plant and wildlife species.

Two external programs enhance FWC's ability to conserve and manage wetland habitat for both resident and migratory waterfowl. DU provides matching money to help states acquire and enhance wetland habitat. FWC's matching funds for these projects in Florida are budgeted through the Legislature. Since this program's inception, FWC's projects completed by partnering with DU have helped restore and enhance more than 16,000 acres of wetland habitat in Florida. Florida is part of the Atlantic Coast Joint Venture (ACJV) of the North American Waterfowl Management Plan. Joint ventures create partnerships to plan, fund, and implement wetland habitat projects within their respective geographic areas. The ACJV, like the other joint ventures, serves to implement wetland habitat management objectives and establish and maintain waterfowl population goals identified in the plan. ACJV partnerships will provide substantial benefits to Florida's fish and wildlife resources. The WMP provides input on ACJV activities in Florida.

RESIDENT SPECIES

The four species of ducks that regularly breed in Florida are the mottled duck, wood duck, fulvous whistling duck, and black-bellied whistling duck. All four species nest during spring and summer. Mottled ducks remain in Florida throughout the year. Many wood ducks and fulvous whistling ducks remain year-round as well, but some of these birds migrate from Florida for part of the year. Black-bellied whistling ducks also occur in Florida year-round, but there is no information on seasonal movement patterns. Current management for mottled ducks is guided by FWC's mottled duck conservation plan (A Conservation Plan for the Florida Mottled Duck, 2004-2009).

Florida's Mottled Duck

The Florida mottled duck is one of approximately 25 closely related, mallard-type species worldwide. This subspecies occurs only in Florida and does not migrate from the state; therefore, management and protection of Florida's mottled ducks are primarily the responsibilities of the State of Florida. Hunters favor this bird because of its large size and palatability. Florida hunters harvested an estimated 13,882 mottled ducks during the 2010-11 hunting season, which accounted for approximately 6% of the statewide harvest of ducks. FWC remains concerned about the long-term status of Florida's mottled duck population throughout its range because low reproduction and survival have been documented, important habitat in Florida continues to be altered or lost, and hybridization with feral mallards continues. Because of these concerns, the conservative daily bag limit for the harvest of this species remains at one.

Mottled Duck Population Monitoring and Management – Annual mottled duck population monitoring includes banding and a March aerial survey of the breeding population. During the summer of 2010, 882 mottled ducks were captured and marked with leg bands. Over the past ten years, 6,550 mottled ducks have been banded (Figure 1). Periodically, staff analyzes the band recovery data to estimate annual survival rates and the proportion of the population that is harvested, as well as to monitor movements.

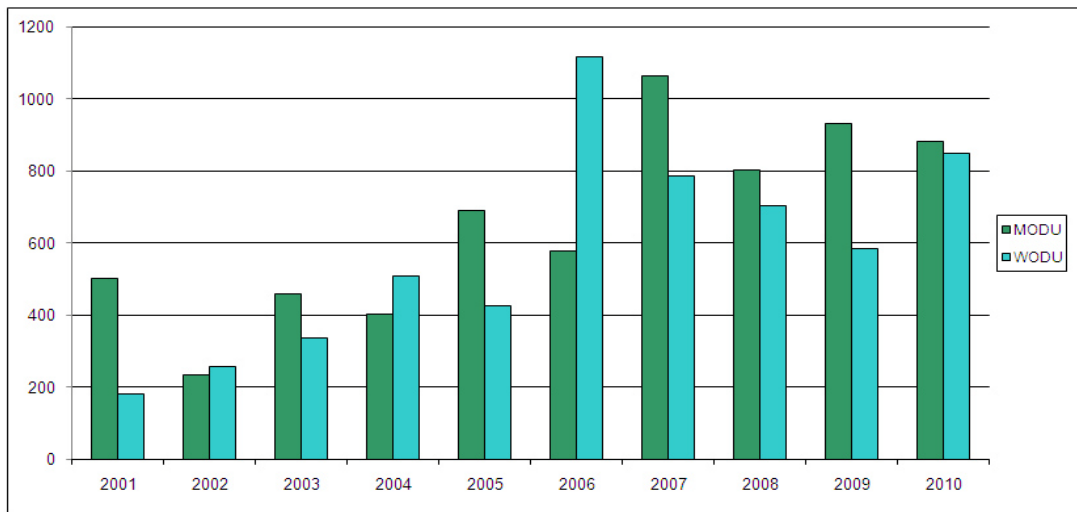


Figure 1. Numbers of Florida mottled ducks (MODU) and wood ducks (WODU) banded statewide by FWC staff, 2001-2010.

The March breeding population survey has been conducted since 1985 and FWC waterfowl biologists evaluated a new survey method during 2003-2009. The new method, point-transect sampling, replaced the original line-transect design. There are three important benefits of this new survey design as compared to the previous design. First, a point-transect method allow more efficient and accurate data collection from all types of mottled duck habitat, including urban/suburban areas. Second, point-transect sampling is physically less taxing on observers and utilizes direct distance measurements (i.e., employs laser range finders to measure distance to duck(s)). As a result, data collected are more

accurate and therefore more flexible analysis can be employed. Perhaps most importantly, this design is safer for the participants because much less time is spent flying at low altitudes and slow speeds.

Survey results indicate that the mottled duck population continues to be relatively stable; however, the proportion of mottled duck/mallard hybrids in the population is unknown. Without this key piece of information, population estimates will continue to be suspect, as changes in status or trends may be masked or even driven by hybrids. With current resources, FWC has been able to fund the population survey, but have only made minor steps in developing techniques to identify hybrids. A short term (2-3 year) shift in priorities is needed so that staff may focus on and fund efforts to develop techniques to identify hybrids and assess the proportion and distribution of hybrids in the population. During this time period, the annual survey (including the 2011 survey) will be discontinued so that funds can be used for hybridization work. Hopefully, the survey can be resumed in March 2012 or 2013, with a better handle on the impact hybrids may be having on survey results.

Mottled Duck Conservation – During fiscal year 2010-11, FWC secured funding to initiate the third phase of a research project examining habitat use, survival, and movements of Florida mottled duck females in the Everglades Agricultural Area and adjacent urban/suburban areas. The project began in August 2008 and will continue through 2012. In addition to objectives related to habitat use, movements, and survival of mottled ducks, the study also will characterize, in detail, the wetlands used by mottled ducks and blue-winged teal. This additional information is needed to improve wetland conservation and enhancement efforts within Florida.

The FWC's overall plan for addressing the mallard/mottled duck hybridization problem has three objectives: (1) develop techniques to identify pure mottled ducks, (2) assess the proportion and distribution of hybrids in the mottled duck population, and (3) identify and implement mechanisms to reduce hybridization. Last year, FWC biologists and University of California Davis researchers collaborated to identify physical characteristics of mottled ducks that will distinguish them from mallards and mallard/mottled duck hybrids. Data were collected from museum specimens of mottled ducks, mallards, and suspected hybrids at Harvard's Museum of Comparative Zoology in Cambridge, MA and the National Museum of Natural History in Washington, DC. These data were analyzed using Discriminant Function Analyses to quantitatively distinguish between the physical characteristics of Florida mottled ducks and mallards. These variables were used to draft a preliminary key to use to assist with reliably identifying mottled ducks and mallards.

In March 2011, at FWC's Fish and Wildlife Research Institute (FWRI) lab in St. Petersburg, the preliminary key was used to make *a priori* assignments of 140 mottled duck, mallard, and potential hybrid specimens, collected throughout the mottled duck range in Florida. During this exercise, each bird was "scored" based on the key and assigned as a mottled duck, mallard, or hybrid. A genetic sample (breast muscle) was collected from each bird at that time. Currently, the genetic samples are being analyzed by the FWRI genetics lab to compare to the results generated by using the preliminary key.

The results of these analyses should allow staff to refine a morphometric key or field guide to identify pure mottled ducks by plumage and structural characteristics. If successful, this tool could reduce the need for costly genetic sampling to identify pure mottled ducks. Similar techniques have recently been shown to be effective for the endangered Hawaiian duck (*Anas wyvilliana*), a close relative of both mallards and mottled ducks. The tool is needed to help monitor progress toward the management goal of reducing hybridization.

FWC continued progress on identifying and implementing mechanisms to reduce hybridization. The most important strategy for reducing hybridization is an education and communication program. The agency's efforts focus on maximizing public awareness of the issue. Strategies are to reduce the sale and subsequent release of mallards, gain wider acceptance for the possibility of reducing the mallard population, and create an awareness of the problem among identified stakeholders. In fiscal year 2010-11, staff continued to develop and distribute informational material, make presentations and contacts to groups and organizations, and coordinate media coverage. Staff continued to work with FWC's Division of Law Enforcement to remind businesses selling ducks (e.g., feed stores, auctions) about mallard possession and sale regulations.

FWC will continue to address the hybridization problem, as resources allow.

Wood Duck

Wood ducks are perhaps the most beautiful duck in North America and are admired by people throughout the state. The most abundant resident duck species of Florida, wood ducks also are highly valued by Florida hunters. Wood ducks ranked fourth in hunters' bags and made up approximately 7% of the total duck harvest in Florida in fiscal year 2010-11. The United States Fish and Wildlife Service (USFWS) estimated that 16,811 wood ducks were harvested in Florida during the 2010-11 regular duck hunting season.

Wood Duck Population Management -- Wood ducks inhabit wooded, brushy, or other vegetated wetland areas. Therefore, unlike other duck species, wood ducks cannot be counted reliably during aerial surveys. Consequently, populations have been monitored through banding, experimental monitoring of nest boxes, and harvest surveys. These efforts have been critical to continuing the special September duck season for Florida's hunters.

In 2010, WMP coordinated the banding of 549 wood ducks prior to the hunting season. Over the past 10 years, 5,749 wood ducks have been banded (Figure 1). Previous analysis of banding data indicated that a high proportion of wood ducks banded during the summer in Florida that are harvested by hunters are taken within the state. This information supports increased opportunity for hunting Florida's wood ducks.

Estimates of hunter effort and harvest are used to help determine whether the extra harvest allowed by the special September duck season in Florida is compatible with the well-being of Florida's wood duck population. Hunters harvested an estimated 4,457 wood ducks and 15,282 teal in Florida during this special season in 2010. Previous work by the WMP provided no evidence to suggest that the September season negatively affected wood duck populations.

Wood Duck Habitat Management -- Wood ducks are cavity nesters. Many areas with adequate brood-rearing habitat do not contain trees large enough to have suitable nesting cavities. Fortunately, man-made nest boxes can provide nest sites. WMP biologists and other FWC staff maintained nest boxes existing on Wildlife Management Areas and other public water bodies. WMP personnel provided technical assistance to private citizens, government agencies, and groups such as local DU and Delta chapters and Boy Scout troops to erect and maintain nest boxes.

Fulvous and Black-bellied Whistling Ducks

Whistling ducks are more closely related to geese than to ducks. Fulvous whistling ducks have separate populations in Asia, Africa, Madagascar, South America, and North America. Prior to about 40 years ago, neither species of whistling ducks nested in Florida. Today, nesting fulvous whistling ducks are abundant in South Florida where rice is grown. In winter, many fly south, probably to Cuba. Florida's black-bellied whistling duck population seems to have increased dramatically in recent years, with reports of successful breeding in many areas of the state.

Whistling Duck Population Management -- Lack of funds and personnel have prevented the WMP from extensively monitoring or managing these populations.

Whistling Duck Habitat Management -- To promote good management for fulvous whistling ducks and black-bellied whistling ducks, the WMP encourages shallow flooding of fallow agricultural fields.

MIGRATORY WATERFOWL

This large group includes waterfowl that breed in northern North America and migrate to Florida during the fall and winter. Approximately 20 species of waterfowl regularly spend the winter in Florida, and the migratory ducks constitute the majority of all waterfowl harvested by Florida hunters. The estimated duck harvest in Florida during the 2010-11 hunting season totaled 229,000 birds. This is a 32% increase from the 2009-10 season estimated harvest (173,900).

Habitat in wintering areas, such as Florida, is important in the annual cycle of migratory waterfowl. Habitat conditions during this non-breeding period influence survival and subsequent reproduction. Ducks must maintain or improve their body condition during winter to avoid mortality during the spring migration and to meet the physiological demands of the nesting season (i.e., egg laying, incubation). The WMP devotes considerable resources to monitoring and managing these migrant birds and providing quality habitat.

Migrant Waterfowl Population Management

Ring-necked ducks are particularly important in Florida because they constitute a large proportion of the state's annual waterfowl harvest. A majority of the ring-necked ducks in the Atlantic Flyway spend the winter in Florida, and, on average, approximately 66% of ring-necked ducks harvested in the Flyway are harvested here. The WMP provides funding for cooperative banding efforts in Canada and remains vigilant in encouraging Canadian waterfowl managers to continue banding ring-necked ducks on the breeding

grounds. These efforts are important for justifying continued harvest opportunities for this species.

The Ontario Airboat Duck Banding Program (OADBP) is part of the Eastern Canada Cooperative Banding Project (ECCBP). Since 1963, this project has banded waterfowl to determine population dynamics of waterfowl species in order to formulate waterfowl harvest regulations for the Atlantic Flyway. The OADBP has banded almost 28,000 birds in 14 years, including large numbers of wood ducks, blue and green-winged teal and ring-necked ducks, all of which are common migrants to Florida. During fiscal year 2010-11 the OADBP invited an FWC waterfowl biologist to participate in a pilot exchange program. This program provides funding for a biologist from a selected Atlantic Flyway state to travel to Ontario to assist with banding operations. Also, an OADBP biologist traveled to Florida for 2 weeks to assist with FWC's banding operations. The program provided both biologists experience in new habitats and with new species of ducks and allowed the exchange of operational procedures, banding techniques, safety tips, etc. While in Ontario, FWC's biologist helped capture and band 1055 ducks. While in Florida, Ontario's biologist helped capture and band 654 ducks.

Florida participates in international waterfowl management by sending FWC representatives to serve on the Atlantic Flyway Council and its Technical Sections as voting members. Representatives from 17 states and six Canadian provinces participate. This council coordinates international research, monitoring, and management in the Flyway and makes recommendations the USFWS concerning appropriate waterfowl hunting seasons. The WMP coordinator is Florida's technical representative for game birds, and the WMP participates in several cooperative Flyway projects, helping to ensure that Florida's waterfowl enthusiasts continue to have access to this valuable resource.

Providing appropriate waterfowl hunting opportunities for Florida's citizens is a primary mission of the WMP. Hunting seasons are established in Florida to maximize hunter opportunity within the constraints of sound resource stewardship and guidelines mandated by the USFWS. The WMP develops recommendations for the FWC Commission concerning appropriate waterfowl hunting regulations in Florida.

Migratory Waterfowl Habitat Management

Florida lost approximately 260,000 acres of freshwater, emergent wetlands between 1985 and 1996. This habitat type is essential for waterfowl, yet losses continue. Waterfowl management staff manages habitat through technical assistance to various agencies, groups, and individuals (Table 1) and through administration of public waterfowl areas. Not all technical assistance produces a tangible increase in waterfowl habitat, but this input does cause the welfare of wetlands and associated wildlife to be considered when resource management decisions are made. As a result, waterfowl habitat in the state is conserved and enhanced.

Staff continued to work with several entities and private landowners during the fiscal year 2010-11 to evaluate numerous wetland projects. Entities included DU, the Natural Resource Conservation Service Wetlands Reserve Program, ACJV, Water Management Districts, the USFWS, and several local and county governmental offices. Approximately 50 projects, totaling over 170,000 acres were evaluated throughout the state. The majority of the projects were located in the southern half of the state (primarily

in Glades, Hardee, Hendry, Highlands, Martin, Okeechobee, Palm Beach and St. Lucie counties). Staff is also involved in several on-going planning efforts as they relate to restoring and enhancing aquatic habitats and restoring water level regulation for Lakes Istokpoga, Okeechobee, Tohopekaliga, Cypress, Hatchineha, and Kissimmee.

Waterfowl staff participated in FWC teams responsible for coordinating (1) management of fish and wildlife habitat on the Kissimmee Chain of Lakes, Lake Istokpoga and the Orange Creek Basin and (2) the use of triploid grass carp for aquatic plant management to improve fish and wildlife habitat. As part of the team effort on the Kissimmee Chain of Lakes, the WMP coordinator leads an effort by a sub-team to set quantitative objectives for managing the aquatic vegetation to provide fish and wildlife habitat.

T. M. Goodwin Waterfowl Management Area -- This 6,270-acre area in the upper St. Johns River Basin continues to be intensively managed by staff for waterfowl and continues to provide important habitat for migrating, wintering, and resident waterfowl and other wetland-dependent wildlife, as a result of the intensive management. The area is composed of two management units: T. M. Goodwin (Goodwin) and Broadmoor Marsh (Broadmoor).

Prescribed fire, disking, roller chopping, and herbicide application are used within the impoundments on the area to maintain vegetation in an early succession stage (i.e., grasses and herbaceous plants), control noxious and exotic vegetation or reduce the height of existing vegetation to create a greater interspersion of open water after flooding. During fiscal year 2010-11, staff burned 659 acres (480 acres Goodwin, 179 acres Broadmoor), disked 75 acres (Goodwin), and roller chopped 1,880 acres (135 acres Goodwin, 1745 acres Broadmoor) on the area. Staff also continued with the annual herbicide application program treating 1,009 acres of para grass and cattails (224 ac in Goodwin and 995 ac Broadmoor).

As a result of these management activities, waterfowl use of the impoundments is high and waterfowl hunting is therefore in high demand at the area. A total of 1,613 hunters' bagged 4,485 ducks (average 2.8 ducks/hunter) during the 2010-11 waterfowl season. In addition to the regular season, a special Youth Waterfowl Hunt was held on February 5 and 6, 2011. The special youth hunt included a variety of events targeted for youth hunters including overnight camping, hunter safety instruction and catered meals provided by Ducks Unlimited, United Waterfowlers and the Brevard County Airboat Club. Snipe hunting is also permitted on the area, and 59 hunters bagged 267 snipe (average 4.5 snipe/hunter) during 2010-11 season. Other public use activities included observing waterfowl and other birds, biking, hiking, and fishing.

PROGRAM DIRECTION AND NEEDS

Florida's WMP has been in existence for more than 30 years. The challenge has been large with limited resources. During this time, substantial contributions have been made to the knowledge and habitat base needed to manage and sustain waterfowl in Florida and internationally. The population monitoring efforts yield information necessary for management. Informing the public is an important part of the efforts to ensure the well-being of the waterfowl resource (Table 2).

The challenge for the future is to continue population monitoring and management, while using up-to-date information to increase involvement in habitat issues. The biggest opportunity to reduce the hybridization threat to mottled ducks by feral mallards is through public education and marketing of the issue. Efforts to conserve and manage mottled duck habitat are limited due to the need for additional scientific information on which to base sound recommendations. Coordinating activities between the WMP and other entities involved in habitat and conservation issues will remain a challenge. Continued funding of cooperative habitat projects with DU programs is still vital. FWC continues to seek funding from external grants and other sources in an attempt to meet unfunded needs.

Table 1. Entities that received technical assistance from waterfowl personnel during fiscal year 2010-11.

Florida State Agencies

Florida Department of Environmental Protection
South Florida Water Management District
Suwannee River Water Management District
Southwest Florida Water Management District
St. Johns River Water Management District
Florida Department of Health
Florida Executive Office of the Governor
Subcommittee on Managed Marshes
Florida Department of Elderly Affairs

Other State or Provincial Agencies

Georgia Department of Natural Resources
Ontario Department of Natural Resources
South Carolina Department of Natural Resources

Federal Agencies

U.S. Department of Agriculture--Wildlife Services
U.S. Fish and Wildlife Service
Natural Resource Conservation Service
U.S. Park Service--Gulf Island National Seashore
U.S. Geological Survey

State-Federal Cooperative Entities

Southeastern Cooperative Wildlife Disease Study

Local Government

Lake, Alachua, Indian River, Palm Beach, Lee, Duval, Polk and Leon counties

Universities

University of Florida,
 Institute of Food and Agricultural Services
 Department of Wildlife Ecology and Conservation
 School of Veterinary Medicine
Auburn University, Department of Forestry and Wildlife
University of California, Davis. Museum of Fish & Wildlife Biology

Table 1 (continued). Entities that received technical assistance from waterfowl personnel during fiscal year 2010-11.

Non-governmental Organizations

Ducks Unlimited Inc., national, state chapter, and various local chapters
United Waterfowlers – Florida, Inc.
National Wildlife Federation
Florida Wildlife Federation
Boy Scouts of America
North American Wetlands Conservation Council
Atlantic Coast Joint Venture
Black Duck Joint Venture
Delta Waterfowl
Wildlife Management Institute
Tall Timbers Research Station

Businesses

Bass Pro Shops
Okeelanta Corporation
Montalbano and Company – Consulting Biologists, LLC
St. Joe Land Development Company
Universal Orlando
CF Industries
Walt Disney World
Duda and Sons, Inc.

Citizens

(numerous)

Table 2. List of selected waterfowl management reports and publications, through fiscal year 2010-11.

Bielefeld, R. R. 2011. Mottled ducks genetics update. Unpublished report. Florida Fish and Wildlife Conservation Commission. Tallahassee, Florida. USA.

Roberts, D. and S. V. Rockwood. 2011. 2010 Annual Report for the T. M. Goodwin Waterfowl Management Area. Unpublished report. Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida, USA.