

Terrestrial Programs

Florida has several Terrestrial conservation programs in place such as protected Critical Wildlife Areas (CWA), habitat restoration, Safe Harbors, and the Bird Conservation Initiative. These programs utilize private-public relationships and partnership with institutions like state universities, the Atlantic Coast Joint Venture, Audubon Florida, Nature Conservancy, and the U.S. Department of Defense- Eglin Air Force Base. The success of these programs rests upon many factors.

Specific species plans have been developed to focus on animals such as the: Red Knot, Northern Bobwhite, American Woodcock, Florida Mottled Duck, Red-Cockaded Woodpecker, American Oystercatcher, and the Bald Eagle. Critical Wildlife Areas help establish public orders to protect areas from dogs, vehicles, and other vessels during critical life cycles like nesting or migration. Habitat management and monitoring is an important part of bird conservation, protection efforts include removal of exotic plants, predator control, and enforcement of laws. Habitat Restoration covers three subcategories: Hydrologic Restoration, Ground Cover Restoration, and Exotic Species Control. Hydrologic Restoration focuses on how water should naturally flow, assesses and recommends projects and structures are working properly. Ground Cover Restoration looks at areas that have been altered by native, non-native, and/or off-site vegetation. As with most projects, all work begins with an assessment followed by recommendations. Exotic Species Control is an on-going effort as urban and suburban areas grows, and efforts vary by regions.¹

Since 2007, the Safe Harbor programs provide incentives for private landowners who want to provide habitat for imperiled species. Essentially, a landowner applies to become a Safe Harbor and then the conditions of the property are determined usable or not. If they are, conservation efforts are identified and the landowner implements the project, the landowner can return the land or terminate the agreement at any time.² Many programs owe success to previously implemented restoration projects like the Nature Conservancy's management of the longleaf pine habitat at the Disney Wilderness Preserve that now allows the Red Cockaded Woodpecker establishment project to thrive.³

Florida's Bird Conservation Initiative is one of many special initiatives that focuses on promoting conservation and restoration of bird populations and habitats, improving coordination and cooperation among stakeholders to support mutual priorities, and increase awareness and support. These goals are reached with definitive strategies that identify past, future, and present land use available for bird population sustainability; recommend and direct habit conservation efforts in conjunction with joint ventures such as the Atlantic Coast Joint Venture; improves coordination and integration among existing programs; and address

¹ <http://myfwc.com/conservation/terrestrial/>

² <http://myfwc.com/conservation/terrestrial/safe-harbor/>

³ <https://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/florida/placesweprotect/the-disney-wilderness-preserve.xml>

information gaps.⁴ Partners play a major role in achieving the initiative's objectives, the U.S. Department of Defense- Eglin Air Force Base. A monitoring program implemented at many Air Force bases helped remove the Bald Eagle from the endangered species list.⁵

Saltwater

The Florida Fish and Wildlife Conservation Commission has several saltwater programs in place to conserve coral reefs, influence marine organisms by way of artificial reefs, and fishing guidelines that contribute to the conservation of saltwater habitats. The Florida Coral Reef Protection Act authorizes the Department of Environmental Protection to lead, protect, and recover damages resulting from vessel impact, as well as delegate to state and local government. The Florida Artificial Reef Program was established in 1982 to place artificial reefs around the Florida coasts, as of 2012 there are over 2700 artificial reefs. The Sport Fish Restoration project and Catch and Release guidelines coupled with educational opportunities increase released fish survival rates.

Coral reefs are a natural resource that provide a buffer from storms and hurricanes, education and research opportunities, and have a profound economic impact. Two major coral reef types are recognized in Florida: patch reefs and bank reefs. The complexity of reef structures allows a highly diverse flora and fauna to flourish.⁶ Since 1996, the Dry Tortugas Coral Reef Evaluation and Monitoring Project has surveyed coral that covers about 100 square miles of marine habitat to monitor temporal changes.⁷ As a part of the Florida Coral Reef Protection Act the Reef Injury Prevention and Response Program was initiated to manage coral reef injury related to commercial and recreational vessels. The Act also outlines the extent of power used to deter coral injury by assessing fines and adequate compensation.⁸ Established in 2005, BleachWatch is an active program modeled after the Great Barrier Reef's BleachWatch program that trains people to report "bleaching" or "no bleaching" after their dive.⁹ The Southeast Florida Coral Reef Initiative is comprised of marine resource professionals, scientists, and stakeholders to protect coral reef resources from Miami-Dade to Martin County.

Artificial reefs were established throughout the areas surrounding Florida coasts to promote healthy ecosystems. Some of the goals of the program are to foster public-private stewardship and accurate understanding of artificial reefs, use artificial reefs as component

⁴ <http://myfwc.com/conservation/special-initiatives/fbci/>

⁵ Barnett, Jerron. "Bald Eagles Prosper on Eglin." *Eglin Air Force Base*, 29 June 2007, www.eglin.af.mil/News/Article-Display/Article/393384/bald-eagles-prosper-on-eglin/.

⁶ <http://myfwc.com/research/habitat/coral/cremp/>

⁷ <http://myfwc.com/research/habitat/coral/cremp/drto-annual-report/>

⁸ <https://floridadep.gov/fco/coral/content/reef-injury-prevention-and-response-program>

⁹ <https://floridadep.gov/fco/coral/content/bleachwatch>

of fishery management, and utilize the artificial reefs in scientific research to predict how the reefs function ecologically and physically.¹⁰

Sport fishing is popular with many Floridians and attracts anglers worldwide; therefore, the need for the Sport Fish Restoration project and Catch and Release programs are vital to sustained growth. Sport Fish Health Monitoring gathers information about fish kills (most frequently caused by pollution and oxygen depletion) and diseased fish through volunteers and citizen reports to the Marine Fish Kill Hotline.¹¹ Sport Fish Genetics focuses on two major research areas: the genetic study of natural fish populations and the genetic monitoring of hatchery-raised fish at the Stock Enhancement Research Facility. The information gathered is used to determine the success of the stocking program.¹² The Catch and Release program educates the public on fish handling to ensure fish survival after being released. The educational components of the program teach best practices when handling fish, rules for photograph and videos, the difference between using a circle hook and a J-hook, and the ethics involved in angling.¹³ Catch and Release provides a wealth of knowledge and informative guidelines for anglers and future anglers.

Freshwater

Freshwater programs in Florida are helping to restore human and natural damage that affect aquatic habitats like the Everglades and Florida Springs by effectively utilizing private-public partnerships, Best Management Practices (BMPs), and policy work.

Florida wetlands function to recharge groundwater, filter nutrients and pesticides in runoff, retain storm water drainage, and provides food and shelter for many of Florida's endangered species. Much of the land is currently managed by the Florida Forest Service which has implemented multiple conservation programs in places like Blackwater River, Lake Wales Ridge State Forests, Tate's Hell, and Jennings. Since 2000, Florida has restored over 100,000 acres of wetlands.¹⁴ Blackwater Fisheries Research and Development Center near Holt, Florida has operated for almost 80 years and has stocked millions of fish into Florida waters. The center is heavily credited with developing a method for cultivating largemouth bass on artificial food past the fingerling stage (2-3 inches) and into Phase II (6-8 inches) which predicts greater survival rate once released into the wild.¹⁵

¹⁰ <http://myfwc.com/conservation/saltwater/artificial-reefs/ar-program/>

¹¹ <http://myfwc.com/fishing/sfr/>

¹² <http://myfwc.com/research/saltwater/tarpon/genetics/>

¹³ <http://myfwc.com/fishing/saltwater/recreational/fish-handling/>

¹⁴ <http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Our-Forests/Best-Management-Practices-BMP/Wetland-Restoration-on-State-Forests>

¹⁵ <http://myfwc.com/conservation/freshwater/blackwater/>

The Everglades provide about eight million people with water in Southern Florida and even more when you consider the role it plays with aquifers. Much of this drainage is directly related to human actions; however, the damage is not permanent. The Nature Conservancy completed restoration of wetlands at the Disney Wilderness Preserve to perfect the process of restoring wetlands. By applying what they learned they helped ranchers in the northern Everglades reduce their agriculture waste and nutrient run-off to allow adequate water recharge. In an effort to improve water quality and preserve habitats the refuge center, The Everglades Headwaters National Wildlife Refuge and Conservation Area, was established to link public and private lands with 150,000 acres for recreation.

Much of Florida's success can be attributed to partnerships. Ducks Unlimited has provided matching funds to acquire and conserve over 26,000 acres since 1985.¹⁶ Managing wetlands properly supports greater quantity and quality habitats for waterfowls, plants, and other wildlife animals. Partnerships with the cities of Orlando, Ocoee, Winter Park, as well as, Bass Pro Shop and other volunteer or civic groups bring programs to focus on creating, conserving, and promoting quality fishing opportunities.¹⁷ These efforts help grow conservation and restoration efforts by supplying communities with responsible ways to conduct agriculture, water retention, and sport fishing.

Not only do Florida's natural springs provide 90% of Florida's drinking water, they also serve as a refuge for the Florida manatee and black bear, fishes, and mussels. Additionally, the springs contribute to Florida's economy each year by attracting visitors from all around the world. Most harm comes from unsustainable agriculture practices, sewage runoff, invasive species, and erosion. The Nature Conservancy has positively contributed by developing projects backed by scientific research to restore sea grass beds, while non-profits like The Florida Springs Institute have been implementing projects since 2010 focused on spring restoration.

Best Management Practices (BMPs) help maintain the integrity of restored wetlands. BMPs like Drainage and Conversion habits ensure that people do not significantly alter the natural drainage processes as they have in the past. Quotas are set for harvesting, skidding, and building roadways through wetlands.¹⁸ Working with ranchers on sustainable agriculture supports rehabilitation of the Everglades. Improving water quantity and quality to springs is vital for the health of wildlife that inhabit these wetlands, and educating communities on responsible fishing practices all contribute to conservation efforts in Florida.

¹⁶ <http://myfwc.com/conservation/freshwater/wetland-habitat/>

¹⁷ <http://myfwc.com/conservation/freshwater/fish-orlando/>