

# Protecting Florida's wetlands

People and nature benefit from protecting the state's wetlands

## FAST FACT

Wetlands serve many beneficial purposes, including providing habitat for fish and wildlife, filtering pollutants and storing flood waters.



Mangroves have prop roots.



A cypress with a buttressed base.



"Gleyed" wetland soil.

## Introduction

Through the years, public perception of wetlands has varied, with wetlands mostly seen as breeding grounds for mosquitoes and other pests or as being nuisances that needed to be drained in order to use the land.

Historically, wetlands were believed to be useful only to produce peat and fossil fuels or to be drained as sites for agriculture.

However, wetlands serve valuable functions that benefit everyone, including:

- Cleaning, or filtering, pollutants from surface waters
- Storing water, for example from storms or runoff
- Preventing flood damage to developed lands
- Recharging groundwater
- Serving as nurseries for saltwater and freshwater fish and shellfish that have commercial, recreational and ecological value
- Serving as the natural habitat for a variety of fish, wildlife and plants, including rare, threatened, endangered and endemic (native) species

## What is a wetland?

A wetland is an area that is inundated (flooded) or saturated (soaked) by ground or surface water frequently or for prolonged periods — often enough and long enough to support vegetation typically adapted for life in saturated soils. Wetlands are habitats that have both hydric (wet) soils and vegetation.

Wetlands types found in Florida include bayheads, cypress wetlands, deep marshes, hardwood swamps, hydric hammocks, shallow marshes and wet prairies.

Because water levels in wetlands can fluctuate, the presence of water by ponding, flooding or soil saturation is not always a good indication that an area is a wetland; other characteristics have to be taken into account.

## Wetlands characteristics

Two of the signs that an area is a wetland are the type of soil and the types of vegetation growing there.



Wetlands are areas that are typically flooded or soaked for long periods and lie between a water body and uplands, such as this freshwater wetlands area.

Soils are many times the only feature for determining if a site is hydric. Long-term flooding or saturation of the soil creates anaerobic (containing no oxygen) conditions. Such soils appear as surface "muck," contain very dark surface layers and are generally blue, gray or blackish-gray in color, which is known as "gleyed" soil.

Certain types of vegetation also indicate a wetland. Wetland vegetation is adapted to very wet or flooded soil conditions, and these plants have adapted to grow and reproduce in soils with very low oxygen or a totally aquatic environment.

Wetlands vegetation often needs extra support to stand in a wet environment. For example, mangroves, found along coastal shores, have prop roots that act like outstretched fingers to hold the plant in place. Likewise, the cypress tree has a buttressed base (wider at the bottom) for more support in soft soils.

Plant types found in a wetland include water tupelo, water pennywort, torpedo grass, bulrush, pickerelweed, sedge, sweetbay magnolia, pond pine, fetter-bush, swamp fern, water hickory, buttonbush, sawgrass, flatsedge, cyrilla, white-top sedge, sundew, spikerush, ash, rosemallow, rush, bogbutton, sweetgum, ludwigia, common reed, water-lilies, royal fern, cinnamon fern, smartweed, beakrush, lizard's tail, cordgrass, fire flag, arrowhead and yellow-eyed grass.

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Wetlands plants include, from left, sweetbay magnolia, buttonbush and pond cypress.

Water marks may signal that an area is a wetland. These are marks on the sides of trees and vegetation that show a darker color at the base, indicating the area was once soaked by water.

Aquatic mosses or liverworts also indicate wetlands. These plants have no true roots and leaves and are generally found in shaded, moist environments. Typically, they appear as a dark, greenish-brown, “shaggy” growth on tree bark or rocks.

## **Declining wetlands**

While wetlands are estimated to make up about 6 percent of the Earth, Florida contains approximately 20 percent of the remaining wetlands in the United States. As of 1997, the latest statistic available, there were an estimated 105.5 million acres of wetlands in the United States. Ninety-five percent of the nation’s wetlands are freshwater and the remainder (at 5 million acres) are salt water.

The U.S. Fish and Wildlife Service estimates that the nation loses about 58,500 acres of wetlands each year. In a study between 1986 and 1997, estuarine wetlands (along coastlines) declined by about 24,450 acres annually. Forested wetlands declined during the same period by 1.2 million acres.



Princess Place in Flagler County is an example of a salt marsh.

As Florida’s population has grown, wetlands have diminished due to residential and commercial development and agricultural uses. Urban development accounts for 30 percent of the decline and agriculture accounts for 26 percent.

Federal regulations control about 60 percent of the nation’s wetlands, but states, counties and municipalities are taking more and more responsibility for protecting wetlands.

## **Protecting wetlands**

As a regulatory agency of the state, the St. Johns River Water Management District uses its Environmental Resource Permit (ERP) program as one of its primary tools to make sure that new construction does not harm wetlands or cause flooding or pollute waterways. Anyone proposing construction of new facilities, including governmental agencies, developers building new residential or commercial areas, or anyone who wants to fill in wetlands, must have an ERP.

An ERP is issued for a specific purpose and contains a number of conditions that permit holders must follow. Applicants must provide reasonable assurances that their project will not cause adverse “secondary” impacts to water resources due to construction or alteration. Examples include boat traffic generated by a proposed dock or wildlife mortality from a permitted highway.

Permit applicants must also provide reasonable assurances that their project — combined with existing, permitted or pending projects — will not cause unacceptable “cumulative” impacts on wetlands and other surface waters in the same drainage basin. District staff take into consideration future projects based on local comprehensive plans or land use restrictions and regulations.

## **For more information**

ERP guidelines and additional information about wetlands, including groundcover maps, are available on the District’s Web site at <http://sjr.state.fl.us>. Additional information about wetlands and the District’s ERP program is also available by calling (800) 451-7106.

