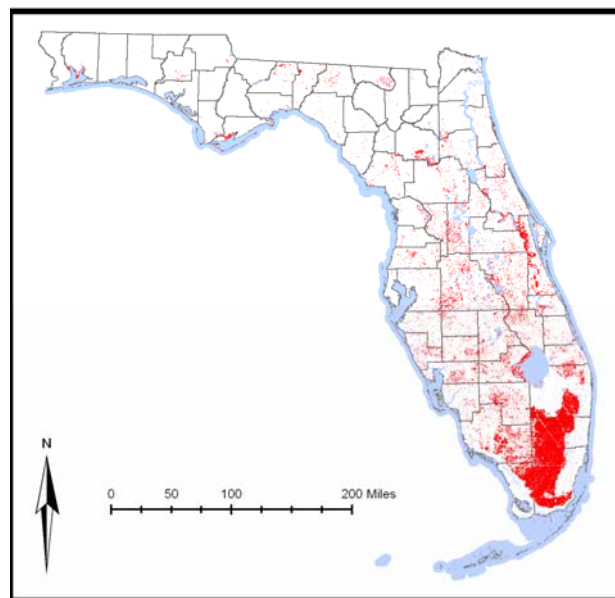


Freshwater Marsh and Wet Prairie



Status

Current condition: Poor and declining. According to the best available GIS information at this time (see Appendix D. GIS Data Tables), 2,941,170 acres (1,190,249 ha) of Freshwater Marsh and Wet Prairie habitat exist, of which 67% (1,959,950 ac; 793,164 ha) are in existing conservation or managed areas. Another 5% (145,462 ac; 58,866 ha) are in Florida Forever projects and 7% (200,677 ac; 81,211 ha) are in SHCA-designated lands. The remaining 21% (635,081 ac; 257,008 ha) are other private lands.



Some habitat distributions or locations may be misrepresented on this map due to size, resolution and insufficient data sources.

Habitat Description

FNAI type: Basin Marsh, Coastal Interdunal Swale, Depression Marsh, Marl Prairie, Wet Prairie, Floodplain Marsh, Sough, Swale

These wetland communities are dominated by a wide assortment of herbaceous plant species growing on sand, clay, marl, and organic soils in areas of variable water depths and inundation regimes. Generally, Freshwater Marsh habitat occurs in deeper, more strongly inundated situations and is characterized by tall emergents and floating-leaved species. Freshwater Marshes occur within flatwoods depressions, along broad, shallow lake and river shorelines, and scattered in open areas within hardwood, Dry Prairie, and Cypress Swamps. Portions of freshwater lakes, rivers, and canals that are dominated by floating-leaved plants such as lotus, spatterdock, duck weed, and water hyacinths are included in this category. Freshwater Marshes are common features of many river

deltas, such as the Escambia, Apalachicola and Choctawhatchee, where these rivers discharge into estuaries. Wet Prairies commonly occur in shallow, periodically inundated areas and are usually dominated by aquatic grasses, sedges, and their associates. Wet Prairies occur as scattered, shallow depressions within Dry Prairie and flatwoods habitat and on marl prairie areas in south Florida. Also included in this category are areas in southwest Florida with scattered dwarf cypress having less than 20 percent canopy coverage, and a dense ground cover of freshwater marsh plants. Various combinations of pickerel weed, sawgrass, maidencane, arrowhead, fire flag, cattail, spike rush, bulrush, white water lily, water shield, and various sedges dominate Freshwater Marshes and Wet Prairies. Many subcategories of this habitat, such as sawgrass marsh or maidencane prairie, have been described and named based on their dominant plant species.

Associated Species of Greatest Conservation Need

Mammals

- | | |
|---|--------------------------|
| • <i>Neofiber alleni</i> | Round-tailed Muskrat |
| • <i>Ursus americanus floridanus</i> | Florida Black Bear |
| • <i>Lutra canadensis lataxina</i> | River Otter |
| • <i>Mustela vison evergladensis</i> | Everglades Mink |
| • <i>Mustela vison halilimnetes</i> | Gulf Salt Marsh Mink |
| • <i>Mustela vison lutensis</i> | Atlantic Salt Marsh Mink |
| • <i>Puma concolor coryi</i> | Florida Panther |
| • <i>Trichechus manatus latirostris</i> | Florida Manatee |

Birds

- | | |
|--|----------------------------|
| • <i>Anas fulvigula fulvigula</i> | Florida Mottled Duck |
| • <i>Anas acuta</i> | Northern Pintail |
| • <i>Ardea herodias occidentalis</i> | Great White Heron |
| • <i>Botaurus lentiginosus</i> | American Bittern |
| • <i>Ixobrychus exilis</i> | Least Bittern |
| • <i>Egretta thula</i> | Snowy Egret |
| • <i>Egretta caerulea</i> | Little Blue Heron |
| • <i>Egretta tricolor</i> | Tricolored Heron |
| • <i>Egretta rufescens</i> | Reddish Egret |
| • <i>Nycticorax nycticorax</i> | Black-crowned Night-Heron |
| • <i>Nyctanassa violacea</i> | Yellow-crowned Night-Heron |
| • <i>Ajaja ajaja</i> | Roseate Spoonbill |
| • <i>Eudocimus albus</i> | White Ibis |
| • <i>Plegadis falcinellus</i> | Glossy Ibis |
| • <i>Mycteria americana</i> | Wood Stork |
| • <i>Elanoides forficatus</i> | Swallow-tailed Kite |
| • <i>Elanus leucurus</i> | White-tailed Kite |
| • <i>Rostrhamus sociabilis plumbeus</i> | Snail Kite |
| • <i>Ictinia mississippiensis</i> | Mississippi Kite |
| • <i>Haliaeetus leucocephalus</i> | Bald Eagle |
| • <i>Caracara cheriway</i> | Crested Caracara |
| • <i>Coturnicops noveboracensis noveboracensis</i> | Yellow Rail |
| • <i>Laterallus jamaicensis</i> | Black Rail |
| • <i>Rallus elegans elegans</i> | King Rail |
| • <i>Aramus guarauna</i> | Limpkin |

- *Grus canadensis pratensis* Florida Sandhill Crane
- *Grus americana* Whooping Crane
- *Recurvirostra americana* American Avocet
- *Calidris fuscicollis* White-rumped Sandpiper
- *Calidris melanotos* Pectoral Sandpiper
- *Ammodramus maritimus mirabilis* Cape Sable Seaside Sparrow

Amphibians

- *Pseudobranchius striatus lustricolus* Gulf Hammock Dwarf Siren
- *Ambystoma cingulatum* Flatwoods Salamander
- *Ambystoma tigrinum* Tiger Salamander
- *Notophthalmus perstriatus* Striped Newt
- *Stereochilus marginatus* Many-lined Salamander
- *Pseudacris ornata* Ornate Chorus Frog
- *Rana virgatipes* Carpenter Frog
- *Rana capito* Gopher Frog

Reptiles

- *Kinosternon subrubrum steindachneri* Florida Mud Turtle
- *Kinosternon baurii* Key Mud Turtle
- *Clemmys guttata* Spotted Turtle
- *Terrapene carolina major* Gulf Coast Box Turtle
- *Terrapene carolina bauri* Florida Box Turtle
- *Deirochelys reticularia* Chicken Turtle
- *Drymarchon couperi* Eastern Indigo Snake
- *Lampropeltis getula* Common Kingsnake
- *Crotalus adamanteus* Eastern Diamondback Rattlesnake

Fish

- *Atractosteus spatula* Alligator Gar
- *Umbra pygmaea* Eastern Mudminnow
- *Fundulus blairae* Western Starhead Topminnow
- *Acantharchus pomotis* Mud Sunfish
- *Enneacanthus chaetodon* Black Banded Sunfish
- *Etheostoma proeliare* Cypress Darter

Invertebrates

- *Oecetis parva* Little Longhorned Caddisfly

Conservation Threats

Threats to the Freshwater Marsh and Wet Prairie habitat that were also identified for multiple other habitats are addressed in the Chapter Multiple Habitat Threats and Conservation Actions. These threats include:

- Conversion to agriculture
- Conversion to housing and urban development
- Groundwater withdrawal
- Incompatible fire
- Incompatible forestry practices
- Incompatible recreational activities

- Incompatible resource extraction–mining/drilling
- Invasive animals
- Invasive plants
- Nutrient loads–agriculture
- Nutrient loads–urban
- Roads
- Surface water withdrawal and diversion

As one of the most ubiquitous and widespread wetland types in Florida, the Freshwater Marsh and Wet Prairie habitat is subject to a wide array of threats, many of them highly ranked. Widespread ditching, diking, and hydrologic fragmentation caused by roads in or adjacent to this habitat are important sources of altered hydrologic regime. Groundwater withdrawal for municipal and agricultural purposes has impacted depressional marsh wetlands in localized areas throughout Florida, but this threat is most severe in portions of central Florida. Nearly all marsh and wet prairie systems in unprotected lands have suffered from direct habitat conversion and altered landscape context as the surrounding uplands and much of the wet prairie habitat have been converted to other land uses, primarily agriculture and urban/suburban development. Small wetlands are undervalued and frequently altered even though they are the only sites in which certain Florida species either live or reproduce. In south and central Florida, marsh and wet prairie wetlands are particularly vulnerable to and have been seriously impacted by a variety of invasive plants. Many marsh and wet prairie wetlands in both agricultural and urban settings receive nutrients from discharges from stormwater management systems which may lead to substantial changes in plant community composition and associated faunal changes. The experts noted that very little of the marsh and wet prairie habitat statewide is receiving adequate fire as a result of perceived difficulties in burning these habitats and lack of knowledge of the role of fire in herbaceous wetland ecosystems. Additional threats specific to this habitat include the numerous water control structures affecting marsh and wet prairie habitat, particularly in the Everglades region and in smaller isolated wetlands, statewide.

The following stresses and sources of stress threaten this habitat:

Stresses		Habitat Stress Rank
A	Altered hydrologic regime	High
B	Fragmentation of habitats, communities, ecosystems	High
C	Altered fire regime	High
D	Altered landscape mosaic or context	High
E	Altered water quality of surface water or aquifer: nutrients	High
F	Altered species composition/dominance	High
G	Habitat destruction or conversion	Medium
H	Altered community structure	Medium
I	Habitat degradation/disturbance	Medium
J	Keystone species missing or lacking in abundance	Medium
K	Insufficient size/extent of characteristic communities or ecosystems	Medium
L	Absent or insufficient biological legacies	Medium
M	Altered water salinity, pH, conductivity or other physical water quality characteristics of surface water or aquifer	Low
N	Altered water quality of surface water or aquifer: contaminants	Low

The sources of stress, or threats, were used to generate conservation actions.

Sources of Stress		Habitat Source Rank	Related Stresses (see above)
1	Conversion to agriculture	Very High	A, B, D, G, J, K
2	Conversion to housing and urban development	Very High	A, B, C, D, G, J, K
3	Surface water withdrawal	High	A, B, C, D, E, F, H, J, K, L
4	Incompatible fire	High	B, C, D, F, G, H, K, L
5	Nutrient loads–agriculture	High	E, F, H
6	Incompatible resource extraction: mining/drilling	High	A, B, D, E, G, K
7	Roads	High	A, B, C, D, F, G
8	Invasive plants	High	B, C, D, F, H, K
9	Incompatible recreational activities	Medium	C, H, I
10	Invasive animals	Medium	F, H
11	Management of nature–water control structures	Medium	A, B, C, D, F
12	Nutrient loads–urban	Medium	E, F, H
13	Groundwater withdrawal	Medium	A, D, F
14	Incompatible forestry practices	Low	A, B, G
15	Incompatible grazing and ranching	Low	C, E, F
16	Channel modification/shipping lanes	Low	G
Statewide Threat Rank of Habitat		Very High	

Conservation Actions

Actions to abate the threats to Freshwater Marsh and Wet Prairie that were also identified as statewide threats (see list above in Conservation Threats section), are in the Chapter Multiple Habitat Threats and Conservation Actions.

Several of the actions developed for a statewide threat were only applicable to Freshwater Marsh and Wet Prairie and a few other habitats (i.e., Aquatic Cave, Calcareous Stream, Cypress Swamp, Natural Lake, Reservoir/Managed Lake, Seepage/Steephead Stream, Softwater Stream, Spring and Spring Run, Terrestrial Cave, and Coastal Tidal River or Stream) and are listed below. Additional actions were developed to address threats specific to this habitat. These actions are intended to support the ecological restoration efforts under way in the Everglades region, specifically, and more generally to increase the spatial extent of herbaceous wetlands in the landscape, improve the functionality of existing herbaceous wetlands through both regional and small-scale hydrologic restoration projects, raise awareness of the need for fire in herbaceous wetland systems, prevent harm to wetland ecosystems caused by discharge to and nutrient loading

of marshes and wet prairies, and decrease the amount of wetland acreage converted to other land uses by making development more compatible with wetland habitat conservation.

Conversion to Agriculture

Overall Rank	Economic and Other Incentives	Feasibility	Benefits	Cost
M	Create voluntary incentives for maintenance and conversion of lands to agricultural uses that use less water and result in lower nutrient outputs into Florida's waters and wetlands, and create market-based incentives to compensate private landowners for the environmental services they provide to the state through management that increases water storage and nutrient reduction.	M	M	H

Conversion to Housing and Urban Development

Overall Rank	Economic and Other Incentives	Feasibility	Benefits	Cost
L	Provide tax reductions or other voluntary incentives, such as density transfers, for environmentally friendly comprehensive development plans for projects that front on rivers and floodplains.	M	L	VH

Surface Water Withdrawal

Overall Rank	Capacity Building	Feasibility	Benefits	Cost
VH	Continue funding projects that address ecological restoration, including Comprehensive Everglades Restoration Plan, minimum Flows and Levels, water reservations, and other conservation programs	VH	VH	VH

Incompatible Fire

Overall Rank	Education and Awareness	Feasibility	Benefits	Cost
M	Develop and disseminate a focused education program for ranchers and plantation owners on the value of growing season burns and burning in wetlands. Review and improve existing agency outreach materials to address these issues.	H	M	L

Incompatible Resource Extraction – Mining/Drilling

Overall Rank	Economic and Other Incentives	Feasibility	Benefits	Cost
M	Create incentives to avoid loss of, and impacts to, SHCAs and sensitive habitats from mining, particularly wet and dry prairie, scrub, and bat caves.	H	M	H

Management of Nature – Water Control Structures

Overall Rank	Economic and Other Incentives	Feasibility	Benefits	Cost
M	Review existing Farm Bill programs and explore options for enhancing economic benefits to landowners that improve or remove water control structures.	VH	L	L
Overall Rank	Education and Awareness	Feasibility	Benefits	Cost
L	Develop an awareness program for Drainage Districts created by Chapter 298 of the Florida Administrative Code ("298 Districts") to educate them about opportunities to improve fish and wildlife habitat conditions through operational and/or structural changes in their drainage systems.	H	L	M

Overall Rank	Land/Water/Species Management	<i>Feasibility</i>	<i>Benefits</i>	Cost
H	Implement projects in the Comprehensive Everglades Restoration Plan.	H	H	VH
L	Create a grant program (or utilize existing Farm Bill and other federal programs) to replace or retrofit existing stop log or manually controlled structures with V-notch weirs in agricultural drainage systems. Give priority to those control structures identified as acting as barriers to wildlife movement or sheet flow.	H	L	H
Overall Rank	Policy	<i>Feasibility</i>	<i>Benefits</i>	Cost
H	Form an interagency task force to streamline the permitting process for wetland restoration projects that restore hydrology.	VH	M	M
Overall Rank	Research	<i>Feasibility</i>	<i>Benefits</i>	Cost
M	Fund research to identify the habitat needs, movements, and impacts of wetland restoration on SGCN. Inventory water control structures, and identify the extent to which particular existing water control structures negatively affect species ecology.	VH	L	M
L	Recognizing that species move between wetland and upland habitats, assess the effectiveness of current BMP's regarding bedding near isolated wetlands.	H	L	L