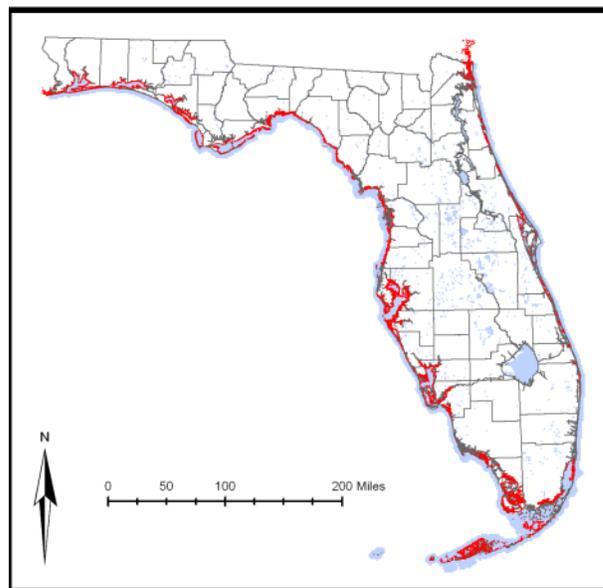


# Tidal Flat



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

## Status

Current condition: Poor and declining. According to the best available GIS information at this time (see Appendix C: GIS Data Tables), 442,500 acres (179,073 ha) of Tidal Flat habitat exist, of which 71% (316,000 ac; 127,881 ha) are protected in reserves and easements. Another 14% (60,000 ac; 24,281 ha) are proposed for acquisition. The remaining 15% (66,500 ac; 26,912 ha) are other private lands.

## Habitat Description

**FNAI type:** None

Tidal flats are non-vegetated areas of sand or mud protected from wave action and composed primarily of mud transported by tidal channels. An important characteristic of the tidal flat environment is its alternating tidal cycle of submergence and exposure to the atmosphere.

## Associated Species of Greatest Conservation Need

### **Mammals**

- *Lontra canadensis lataxina*
- *Neovison vison halilimnetes*
- *Neovison vison lutensis*
- *Neovison vison* ssp.
- *Procyon lotor auspicatus*
- *Procyon lotor incautus*
- *Procyon lotor inesperatus*
- *Trichechus manatus latirostris*
- River Otter
- Gulf Salt Marsh Mink
- Atlantic Salt Marsh Mink
- Mink
- Key Vaca Raccoon
- Key West Raccoon
- Matecumbe Key Raccoon
- West Indian Manatee

**Birds**

- *Anas fulvigula* Mottled Duck
- *Pelecanus occidentalis* Brown Pelican
- *Ardea herodias* Great Blue Heron
- *Ardea herodias occidentalis* Great White Heron
- *Ardea alba* Great Egret
- *Egretta thula* Snowy Egret
- *Egretta tricolor* Tricolored Heron
- *Egretta rufescens* Reddish Egret
- *Nycticorax nycticorax* Black-crowned Night-Heron
- *Nyctanassa violacea* Yellow-crowned Night-Heron
- *Platalea ajaja* Roseate Spoonbill
- *Haliaeetus leucocephalus* Bald Eagle
- *Falco columbarius* Merlin
- *Falco peregrinus* Peregrine Falcon
- *Pluvialis squatarola* Black-bellied Plover
- *Pluvialis dominica* American Golden-Plover
- *Charadrius nivosus* Snowy Plover
- *Charadrius wilsonia* Wilson's Plover
- *Charadrius melodus* Piping Plover
- *Haematopus palliatus* American Oystercatcher
- *Tringa semipalmata semipalmata* Eastern Willet
- *Tringa semipalmata inornata* Western Willet
- *Tringa flavipes* Lesser Yellowlegs
- *Numenius phaeopus* Whimbrel
- *Numenius americanus* Long-billed Curlew
- *Limosa fedoa* Marbled Godwit
- *Arenaria interpres* Ruddy Turnstone
- *Calidris canutus* Red Knot
- *Calidris canutus rufa* Red Knot (rufa)
- *Calidris pusilla* Semipalmated Sandpiper
- *Calidris mauri* Western Sandpiper
- *Calidris fuscicollis* White-rumped Sandpiper
- *Calidris alpina* Dunlin
- *Calidris himantopus* Stilt Sandpiper
- *Limnodromus griseus* Short-billed Dowitcher
- *Limnodromus scolopaceus* Long-billed Dowitcher
- *Phalaropus tricolor* Wilson's Phalarope
- *Chlidonias niger* Black Tern

**Reptiles**

- *Crocodylus acutus* American Crocodile
- *Farancia erythrogramma* Rainbow Snake
- *Nerodia clarkii clarkii* Gulf Saltmarsh Watersnake
- *Nerodia clarkii compressicauda* Mangrove Saltmarsh Watersnake
- *Nerodia clarkii taeniata* Atlantic Saltmarsh Watersnake
- *Caretta caretta* Loggerhead Sea Turtle
- *Lepidochelys kempii* Kemp's Ridley Sea Turtle
- *Malaclemys terrapin* Diamond-backed Terrapin

**Fish**

- *Acipenser oxyrinchus desotoi* Gulf of Mexico Sturgeon
- *Acipenser oxyrinchus oxyrinchus* Atlantic Sturgeon

- *Alosa aestivalis* Blueback Herring
- *Alosa alabamae* Alabama Shad
- *Aetobatus narinari* Spotted Eagle Ray
- *Carcharhinus plumbeus* Sandbar Shark
- *Carcharias taurus* Sand Tiger Shark
- *Negaprion brevirostris* Lemon Shark
- *Pristis pectinata* Smalltooth Sawfish
- *Pristis pristis* Largetooth Sawfish
- *Atractosteus spatula* Alligator Gar
- *Agonostomus monticola* Mountain Mullet
- *Epinephelus itajara* Goliath Grouper

### **Invertebrates**

- *Panopea bitruncata* Atlantic Geoduck
- *Uca minax* Red-jointed Fiddler, Brackish Water Fiddler
- *Uca pugilator* Sand Fiddler
- *Uca pugnax* Mud Fiddler
- *Cicindela togata togata* White-cloaked Tiger Beetle

## Conservation Threats

Threats to Tidal Flat habitat that were also identified for multiple other habitats are addressed in Chapter 7: Multiple Habitat Threats and Conservation Actions. These threats include:

- Channel modification/shipping lanes
- Chemicals and toxins
- Climate variability
- Coastal development
- Dam operations/incompatible release of water (quality, quantity, timing)
- Disruption of longshore transport of sediments
- Fishing gear impacts
- Harmful algal blooms
- Incompatible industrial operations
- Incompatible recreational activities
- Industrial spills
- Invasive animals
- Management of nature (beach nourishment and impoundments)
- Roads, bridges and causeways
- Shoreline hardening
- Surface and groundwater withdrawal
- Vessel impacts

The following stresses and sources of stress threaten this habitat:

Stresses		Habitat Stress Rank
A	Altered water quality – physical, chemistry	Very High
B	Altered species composition	Very High
C	Altered water quality - contaminants	Very High
D	Habitat destruction	Very High
E	Habitat disturbance	Very High
F	Altered hydrological regime	Medium
G	Altered weather regime/sea level rise	Medium

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

<b>Sources of Stress</b>		<b>Habitat Source Rank</b>	<b>Related Stresses</b> (see above)
1	Coastal development	<b>Very High</b>	B, C, D, E, F
2	Incompatible industrial operations	<b>Very High</b>	B, C, D, E, F
3	Incompatible recreational activities	<b>High</b>	B, E
4	Roads, bridges and causeways	<b>High</b>	D, E, F
5	Inadequate stormwater management	<b>High</b>	A, B, C, E, F
6	Management of nature (beach nourishment, impoundments)	<b>High</b>	B, E, F
7	Invasive animals	<b>High</b>	B, E
8	Chemicals and toxins	<b>High</b>	C
9	Industrial spills	<b>High</b>	B, C
10	Dam operations/incompatible release of water (quality, quantity, timing)	<b>High</b>	A, C, F
11	Solid waste	<b>Medium</b>	E
12	Disruption of longshore transport of sediments	<b>Medium</b>	A, B, D, F
13	Climate variability	<b>Medium</b>	G
14	Shoreline hardening	<b>Medium</b>	D, F
15	Boating impacts	<b>Medium</b>	E
16	Channel modification/shipping lanes	<b>Medium</b>	D, E, F
17	Surface water withdrawal	<b>Medium</b>	A
18	Groundwater withdrawal	<b>Medium</b>	A
19	Vessel impacts	<b>Medium</b>	D, E
20	Harmful algal blooms	<b>Medium</b>	B
21	Fishing gear impacts	<b>Low</b>	E
<b>Statewide Threat Rank of Habitat</b>		<b>Very High</b>	

## Conservation Actions

Actions to abate the threats to Tidal Flat habitats that were also identified as statewide threats (see list above) are in Chapter 7: Multiple Habitat Threats and Conservation Actions. Many of the threats to Tidal Flats are the same as for several other marine and estuarine habitats. Consequently, actions to abate these threats will be the same or similar to the actions recommended for abating threats to several other marine and estuarine habitats (e.g., Beach/Surf Zone, Mangrove Swamp, Seagrass, Coastal Tidal River or Stream).