

TIDAL FRESHWATER MARSH (SAWGRASS SUBTYPE)

Concept: Tidal Freshwater Marshes are very wet herbaceous wetlands, permanently saturated and regularly or irregularly flooded by lunar or wind tides with fully fresh or oligohaline water. The Sawgrass Subtype covers the common zones in oligohaline areas, dominated by *Cladium jamaicense*.

Distinguishing Features: All Tidal Freshwater Marsh communities are distinguished from Brackish Marsh and Salt Marsh by occurring in oligohaline to fresh water and having plants intolerant of brackish water. The Sawgrass Subtype is distinguished from all other subtypes by the dominance of *Cladium jamaicense*. It is one of the most salt-tolerant subtypes, and may extend into areas approaching brackish.

Synonyms: *Cladium mariscus* ssp. *jamaicense* Tidal Herbaceous Vegetation (CEGL004178). Atlantic Coastal Plain Embayed Region Tidal Freshwater Marsh (CES203.259). Ecological Systems: Atlantic Coastal Plain Central Fresh and Oligohaline Tidal Marsh (CES203.376).

Sites: This community occurs on intertidal flats and shorelines, most often in zoned mosaics with other subtypes. Patches may be in either the marsh interior or on the edges adjacent to tidal channels.

Soils: Most occurrences in both lunar and wind tidal areas have organic soils, most often Currituck (Terric Haplosaprist) but often Lafitte, Hobonny, or Dorovan (Typic Haplosaprist). A few may be mineral soils such as Chowan (Thapto-histic Fluvaquent).

Hydrology: Lunar or wind tides in oligohaline waters, occasionally in areas that are nearly brackish in salinity.

Vegetation: Dense tall herbaceous vegetation is dominated by *Cladium jamaicense*. Dominant species of other subtypes may sometimes be abundant or even codominant, including *Sporobolus* (*Spartina*) *cynosuroides*, *Typha angustifolia*, *Typha domingensis*, or *Schoenoplectus pungens*. Exotic *Phragmites australis* may become established and displace nearly all native plants. The native *Phragmites americana* may also occur, though its distribution is not well known. While some patches may be nearly monospecific with *Cladium*, many are quite diverse. In 16 CVS plots of this subtype in North Carolina, other frequent species were *Osmunda spectabilis*, *Hibiscus moscheutos*, *Thelypteris palustris* var. *pubescens*, *Sagittaria lancifolia*, and *Mikania scandens*. Other species occasionally abundant to codominant were *Kosteletzkya pentocarpos*, *Juncus roemerianus*, *Centella erecta*, *Hydrocotyle bonariensis*, *Typha angustifolia*, and *Symphyotrichum* sp. Approximately 110 additional plant species were found in the 16 plots. Woody species are often present at low density, most frequently *Morella cerifera*, *Toxicodendron radicans*, *Baccharis halimifolia*, and *Rosa palustris*, but sometimes *Persea palustris*, *Pinus taeda*, *Acer rubrum*, or *Taxodium distichum*.

Range and Abundance: Ranked G4? The equivalent association ranges from North Carolina southward and westward to Louisiana. This community is abundant in the freshwater tidal zones of North Carolina, and usually is one of the most extensive subtypes.

Associations and Patterns: The Sawgrass Subtype most often occurs in zoned mosaics with the Giant Cordgrass, Needlerush, Cattail, Threesquare, and Shrub Subtype, sometimes with Oligohaline Low Marsh or other subtypes or with Freshwater Marsh Pool. It usually occurs as extensive patches in the marsh mosaic, both along channels and in the marsh interior. It occasionally occurs in association with Brackish Marsh, usually upstream of it along tidal creeks or landward of it in marsh complexes.

Variation: Two variants are recognized, based on flooding dynamics and presumed differences in animal and microbial components and in ecosystem processes. Plot data show some differences in species, but these are not believed to be related to environment or region. differences:

1. Wind Tidal Variant
2. Lunar Tidal Variant

Plot data show some differences in species between the two variants, but these are not believed to be related to environment or region. differences:

Dynamics: Dynamics are typical of the theme. This subtype usually occurs in association with other subtypes, and it is unclear if the patches are stable or shift over time. Patches could be a simple result of clonal growth and dominance by *Cladium*, part of a long term successional trajectory, or a reflection of microsite differences.

Comments: Although recognized in the NVC, the Giant Cordgrass, Sawgrass, Cattail, and Needlerush subtype may be only marginally distinct. They usually occur in mosaics with each other, may share dominants with each other, and have substantial floristic overlap.

Rare species:

References: