TIDAL FRESHWATER MARSH (CATTAIL SUBTYPE)

Concept: The Cattail Subtype covers Tidal Freshwater Marsh zones dominated or codominated by *Typha latifolia, Typha angustifolia,* or *Typha domingensis*. These generally occur in the interior of oligohaline marshes.

Distinguishing Features: The Cattail Subtype is distinguished from all other Tidal Freshwate4r Marsh subtypes by the dominance of some species of *Typha,* or by the codominance of *Typha* with species other than the dominants of other subtypes. It is distinguished from other communities which may be dominated by *Typha,* such as Interdune Marsh and Coastal Plain Semipermanent Impoundment by occurring in tidal wetlands and being associated with species typical of those communities. Brackish Marsh (Transitional Subtype) may have local patches of *Typha,* which might dominate a small vegetation plot but is unlikely to cover a larger area.

Synonyms: *Typha angustifolia - Hibiscus moscheutos* Herbaceous Vegetation (CEGL004201) (only a very partial match). Unnamed *Typha latifolia* tidal association.
Ecological Systems: Atlantic Coastal Plain Embayed Region Tidal Freshwater Marsh (CES203.259). Atlantic Coastal Plain Central Fresh and Oligohaline Tidal Marsh (CES203.376).

Sites: The Cattail Subtype occurs on intertidal flats and shorelines, in zoned mosaics with other subtypes. Patches are usually in the marsh interior.

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

Hydrology: Lunar or wind tides in oligohaline waters.

Vegetation: Dense tall herbaceous vegetation is dominated by *Typha angustifolia, Typha domingensis,* or *Typha latifolia,* most often by *T. angustifolia*. The dominants of other subtypes, particularly *Juncus roemerianus, Sporobolus cynosuroides, Schoenoplectus pungens*, and *Cladium jamaicense* may be abundant or occasionally codominant. Frequent species include *Sagittaria lancifolia* var. *media, Ptilimnium capillaceum, Hydrocotyle verticillata, Hydrocotyle umbellata, Mikania scandens, Pontederia cordata, Osmunda spectabilis, Galium obtusum, Solidago sempervirens, Solidago mexicana, Eleocharis fallax, Pluchea* spp., *Hibiscus moscheutos*, and *Kosteltzkya pentacarpos*. Other fairly frequent species include several *Persicaria* species, *Bulboschoens robustus, Carex hyalinolepis, Apios americana, Theylpteris palustris, Sporobolus pumilus (Spartina patens*), *Lythrum lineara, Amaranthus cannabinus, Hypericum virginianum, Hypericum walteri, Sium suave, Cicuta maculata,* and *Toxicodendron radicans*. Woody species may be present at low density, including remnant *Taxodium distichum*, young *Acer rubrum, Morella cerifera, Baccharis halimifolia*, and less frequently, *Persea palustris* and other species of Tidal Swamps. Some examples are nearly monospecific stands, but many are very diverse. A large number of additional freshwater wetland species may be present.

Range and Abundance: Ranked G4G5. This subtype is widespread in North Carolina, occurring throughout the tidal regions of the state. The NVC association, which is partially synonymous, is widespread to the north, range to Maine. It may range into South Carolina. This large span of climate suggests the association may warrant splitting.
.

Associations and Patterns: The Cattail Subtype most often occurs in zoned mosaics with the Giant Cordgrass, Needlerush, Sawgrass, 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.

Variation: Examples are extremely variable, but variation is not well understood. Variants could be recognized based either on flooding dynamics on dominant species. The species are likely to reflect differences in salinity tolerance of biogeography. In cases with multiple species present, the variant can be named by the predominant species.

1. Narrowleaf Cattail Variant – dominated by *Typha angustifolia* or *Typha* x *domingensis*
2. Broadleaf Cattail Variant – dominated by *Typha latifolia*
3. Southern Cattail Variant – dominated by *Typha domingensis*.

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 *Typha*, part of a long term successional trajectory, or a reflection of microsite differences.

Comments: The relationship to the NVC association is only partial. That association is described as being a brackish marsh, but it occurs in North Carolina in oligohaline marshes. The NVC at present has no tidal *Typha latifolia* association, so oligohaline marshes dominated by it are included in this subtype.

The vegetation description here is drawn from a combination of CVS plot data and NHP site descriptions. Both kinds of data are fairly abundant, but in both there is uncertainty about the identity of the community in some examples. Some plots may be in marsh ecotones rather than this subtype, and many site descriptions do not distinguish this subtype from others. Both sources of information show substantial variability among examples.

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: