

34. Vegetated Pioneer Emerging Delta

Rarity Rank: S2S3/G3G4

Synonyms: Delta Flats, Emergent Islands

Ecological Systems: CES203.470 Mississippi Delta Fresh and Oligohaline Tidal Marsh

General Description:

Vegetated Pioneer Emerging Delta is a dynamic community forming primarily within the actively building delta region at the mouth of the Atchafalaya River. Zonation of species occurs on the newly accreted land. *Echinochloa walteri* (coast cocksbur grass) dominates the higher areas; *Sagittaria latifolia* (broadleaf bulltongue), *S. platyphylla* (delta arrowhead), *Cyperus difformis* (variable flatsedge), *Leptochloa uninervia* (Mexican sprangletop), and *Eleocharis parvula* (dwarf spikerush) dominate the lower zones inundated by daily tides; *Sagittaria platyphylla* (delta arrowhead), *Cyperus difformis* (variable flatsedge), *Leptochloa uninervia* (Mexican sprangletop), *Eleocharis parvula* (dwarf spikerush) and *Bacopa monnieri* (coastal water hyssop) dominate the intermediate zone. Other characteristic vegetation includes *Salix* spp. (willow), *Typha latifolia* (common cattail), *Scirpus validus* (softstem bulrush), *Scirpus americanus* (threesquare bulrush), and *Juncus effusus* (soft rush).



The island soils contain a greater percentage of sand and less moisture than marsh soils. The pioneer ridge vegetation is similar to the sand bars and delta of the Mississippi River while the pioneer marsh vegetation is similar to that of fresh marsh areas. The community is very diverse with as many as 241 species. The pioneer community is successional in nature and changes rapidly with time. The new delta community's ecological functions are similar in nature to marsh and mudflat systems.

Current Extent and Status:

According to Smith (1993) there was an estimated 2,000 to 10,000 acres of vegetated pioneer emerging delta in presettlement times. An estimated 75 to 100 percent is present today.

There are two areas of the Louisiana coast supporting this habitat: the actively forming Atchafalaya Delta and the current mouth of the Mississippi River. In the case of the former area,



newly created delta land is incorporated into Atchafalaya Delta WMA. The WMA is 141,000 acres, and consists of newly formed land and open shallow bay. About 27,000 acres are vegetated land. Land is created by natural deltaic processes and by dredge spoil strategically deposited by the COE. Most newly formed land at the mouth of the Mississippi River in Plaquemines Parish is captured in Pass-a-Loutre WMA, which totals 115,000 acres. In addition to delta splays, this total acreage also includes fresh and intermediate marsh. The Mississippi River has been held in its current course for an over-extended period of time and would likely have switched deltas recently. Management activities at Pass-a-Loutre include diverting sediment-laden waters into shallow open water habitat to create new delta land.

VEGETATED PIONEER EMERGING DELTA SPECIES OF CONSERVATION CONCERN (23)		
BIRDS	Lesser Scaup	Short-billed Dowitcher
Brown Pelican	Bald Eagle	Gull-billed Tern
Reddish Egret	Whooping Crane	Caspian Tern
Yellow-crowned Night-Heron	Snowy Plover	Royal Tern
Mottled Duck	Wilson's Plover	Sandwich Tern
Northern Pintail	Piping Plover	Common Tern
Canvasback	Marbled Godwit	Forster's Tern
Redhead	Dunlin	Black Skimmer

Priority Species Research and Survey Needs:

Brown Pelicans: Large populations should be monitored on a scheduled basis to detect long-term trends and to guide management decisions.

Reddish Egret: Surveys are needed to assess the limiting factors of reproductive success and the effects of human coastal recreational activities on egret populations.

Piping Plovers: Conduct long term winter surveys to monitor yearly abundance patterns.

Shorebirds and Terns: Initiate surveys to determine species use of this habitat and develop management recommendations for inclusion in future coastal restoration plans.

Species Conservation Strategies:

1. Shorebirds, Wading Birds:
 - Provide public education regarding the importance of waterbird nesting colonies and shorebird feeding areas. Reduce the negative effects on these areas from recreational and other uses.
 - Coordinate with GCJV to implement recommendations of shorebird and wading bird conservation plans.
2. Brown Pelican: Continue with long-term monitoring of nesting colonies.
3. Bald Eagle: Continue with long-term monitoring of active bald eagle nests, successful breeding pairs, and fledged eagles.

Threats Affecting Habitat:

The following table illustrates the threats identified for this habitat type and the sources of these threats. This represents all threats and sources of threats identified across all ecoregions of the state where this habitat occurs.

Source of Threat	Threat				
	Altered Composition/ Structure	Habitat Disturbance	Herbivory	Modification of Water Levels; Changes in Natural Flow Patterns	Salinity Alteration
Channelization of rivers or streams	XXX			XXX	
Invasive/alien species	XXX		XXX		
Operation of drainage or diversion systems				XXX	
Recreational use/vehicles		XXX			
Saltwater intrusion					XXX

Habitat Conservation Strategies:

1. Identify and protect sensitive areas from disturbances such as boats or other motorized vehicles and recreational use. Limit human access to this habitat type.
2. Work with COE to develop better strategies for the placement of dredge materials as a restoration method for this habitat type. Promote appropriate use of dredge spoil to develop new areas for nesting sites, general stopover sites, and to enhance aquatic species habitat.
3. Work with COE, LDNR, and other interested groups to develop improved management techniques for this habitat type.
4. Work with COE and others to manage water control to create more high quality habitat and benefit existing delta habitat.
5. Work with LCA, CWPPRA, NRCS to incorporate management objectives for the protection and restoration of emerging delta habitat.

References:

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