SOUTH TEXAS SALT AND BRACKISH TIDAL FLATS

Nature Serve ID: CES301.461

Geology: Recent wind-distributed coastal sands. Tidal fluctuations and wind continue to redistribute these sands.

Landform: Extensive, very gentle slopes (nearly flat).

Soils: Coastal sands.

Description: This system occurs on flats influenced by tidal fluctuations in water level, primarily driven by winds rather than by diurnal or semidiurnal tidal fluctuations. Due to the nearly level condition of these flats, small fluctuations in tidal level may result in extensive changes in inundation patterns. These flats are typically associated with hypersaline bay waters of the Laguna Madre. Some sites may have sparse vegetation consisting of *Salicornia bigelovii* (dwarf glasswort), *Salicornia depressa* (Virginia glasswort), *Batis maritima* (saltwort), *Suaeda linearis* (annual seepweed), *Sesuvium portulacastrum* (shoreline seapurslane), *Monanthochloe littoralis* (shoregrass), and/or *Distichlis spicata* (saltgrass), but are typically unvegetated or covered by a layer of *Lyngbya* spp. (blue-green algae). The development of vast areas dominated by *Lyngbya* spp. (blue-green algae) occurs with appropriate frequency and duration of inundation. Higher flats may be too dry to support the algae, and at lower elevation, flats may remain inundated for extended periods. Occasionally flats (usually not those supporting extensive blue-green algae) may develop a substantial herbaceous cover, especially during years of increased rainfall. Development of significant areas of marsh grasses such as *Spartina patens* (marshhay cordgrass) or *Spartina alterniflora* (smooth cordgrass) is generally lacking. Scattered individuals of *Avicennia germinans* (black mangrove) occur within these flats.

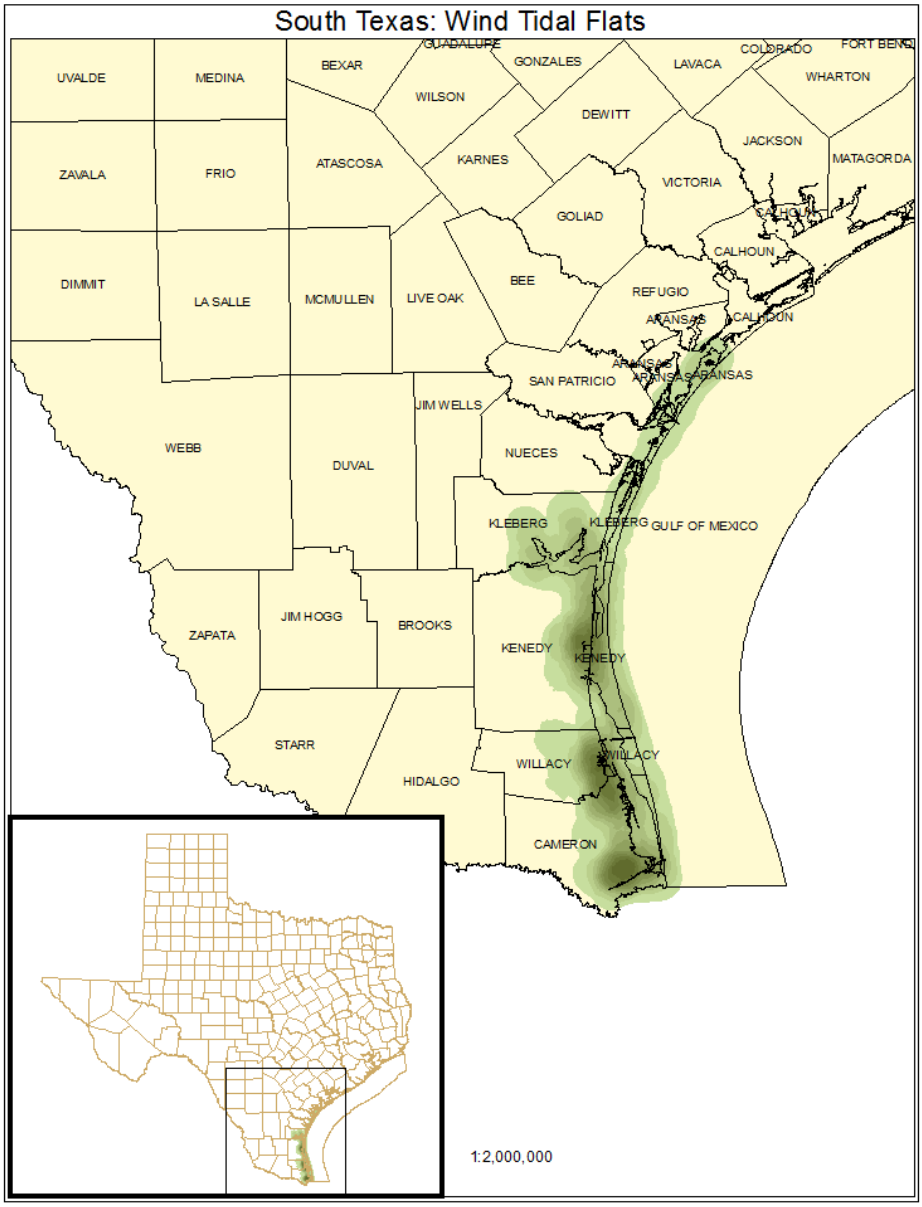
ECOLOGICAL MAPPING SYSTEMS:

SOUTH TEXAS: WIND TIDAL FLATS

Mapping System ID: 6600

EMS Description: These flats are typically unvegetated, and lack significant development of *Lyngbya* spp. (blue-green algae) on their surface. Some sites may develop substantial herbaceous cover, but typically they are unvegetated or very sparsely vegetated with species mentioned in the system description.

Distribution Map:



Example:

Public Land Occurrence:

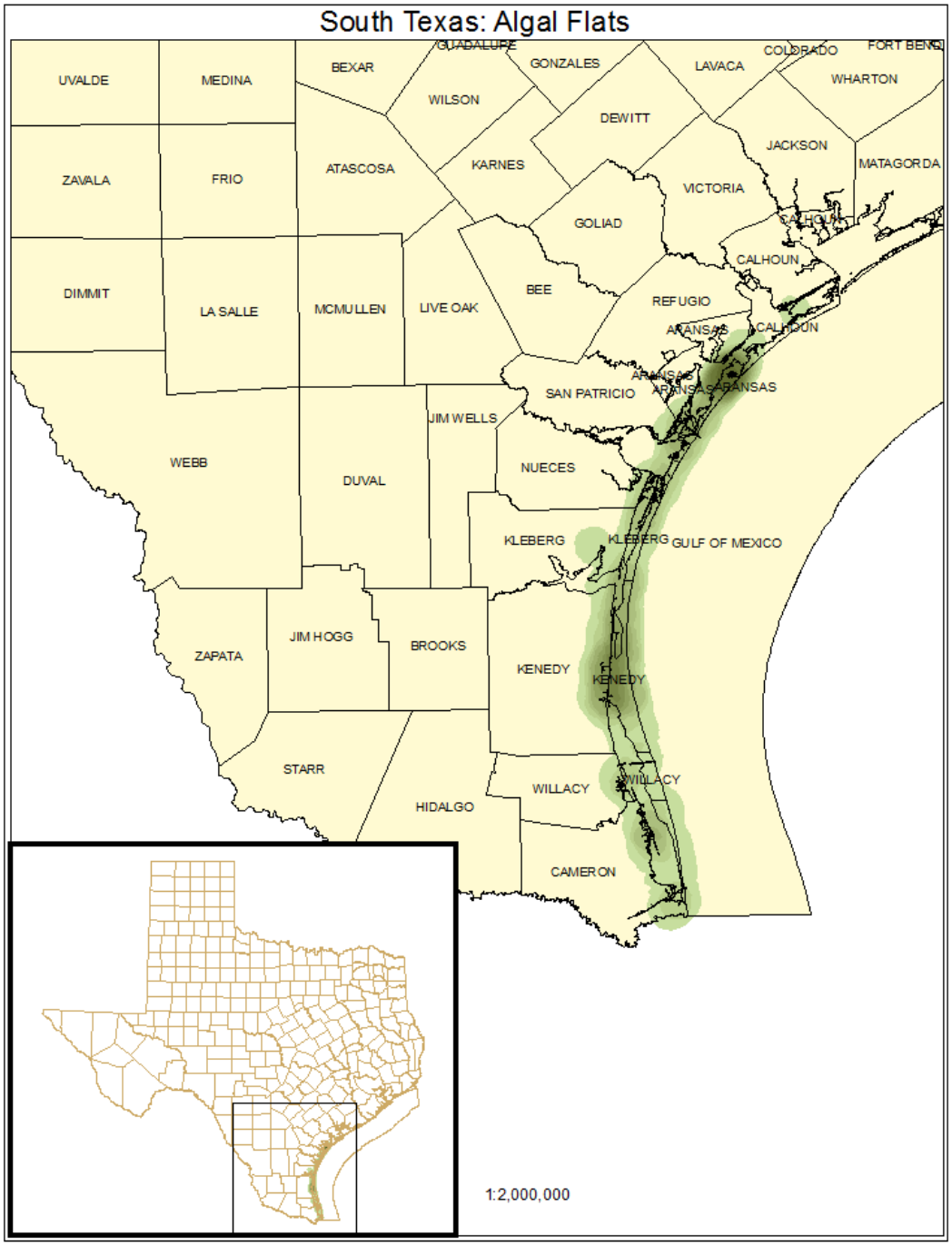
Boca Chica State Park: Texas Parks & Wildlife Department
Laguna Atascosa National Wildlife Refuge: US Fish and Wildlife Service
Lower Rio Grande Valley National Wildlife Refuge-Boca Chica: US Fish and Wildlife Service
Lower Rio Grande Valley National Wildlife Refuge-Loma Preserve: US Fish and Wildlife Service
Padre Island National Seashore: US National Park Service

SOUTH TEXAS: ALGAL FLATS

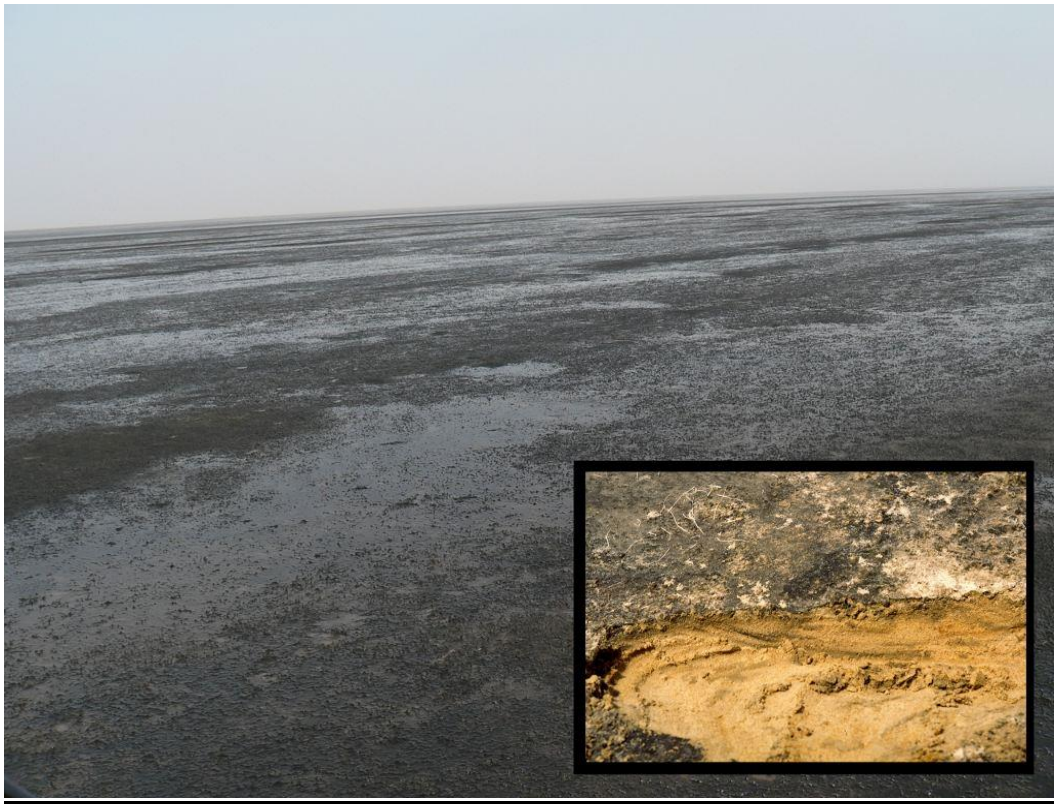
Mapping System ID: 6610

EMS Description: Flats dominated by *Lyngbya* spp. (blue-green algae). This algal mat covers the surface of vast areas and greatly enhances the productivity of these tidal flats.

Distribution Map:



Example:



Public Land Occurrence:

Boca Chica State Park: Texas Parks & Wildlife Department
Laguna Atascosa National Wildlife Refuge: US Fish and Wildlife Service
Mustang Island State Park: Texas Parks & Wildlife Department
Padre Island National Seashore: US National Park Service