

TAMAULIPAN SAVANNA GRASSLAND

Nature Serve ID: CES301.985

Geology: On thinner eolian sands on the western side of the South Texas Sand Sheet, and other sandy sites such as those of the Eocene sands of the Carrizo, Queen City, and Sparta Formations. Also found associated with other formations, such as Oakville Sandstone and other formations producing sandy residuum.

Landform: Level to gently rolling sites.

Soils: Sandy to sandy loam sites, such as those of the Sandy, Loamy Sand and Sandy Loam Ecological Sites.

Parent Description: This system occurs on sandy soils, including sandy, sandy loam, and loamy sands. It is typically dominated by *Prosopis glandulosa* (honey mesquite) in the overstory, and the overstory may be sparse, giving the aspect of an open grassland, with scattered trees and shrubs. Or, more commonly, the system occurs as shrub-dominated patches within a grassy matrix, with an emergent canopy to about 6 or more meters in height of *Prosopis glandulosa* (honey mesquite) and sometimes other species, such as *Ebenopsis ebano* (Texas ebony) or *Celtis ehrenbergiana* (granjeno). Sometimes the overstory canopy is well-developed and would be considered woodland. These patches often coalesce to form significant expanses of shrubland. Sites with somewhat tighter soils tend to have a denser shrub stratum, while deep sands and sandy sites tend to be more open, often with sizeable areas lacking significant shrub cover and dominated by a primarily graminoid herbaceous layer. The shrub component of woody patches or shrublands is commonly dominated by species such as *Zanthoxylum fagara* (Colima), *Condalia hookeri* (brasil), *Celtis ehrenbergiana* (granjeno), *Opuntia engelmannii* var. *lindheimeri* (Lindheimer pricklypear), *Diospyros texana* (Texas persimmon), *Colubrina texensis* (Texas hogplum), *Cylindropuntia leptocaulis* (tasajillo), and *Acacia farnesiana* (huisache). *Prosopis glandulosa* (honey mesquite) is almost always present, and is often dominant to co-dominant and occupies the highest canopy position (sometimes sharing that position with few other species), sometimes to 6 m in height. Numerous other species may also occur in the shrub layer, including but not limited to *Schaefferia cuneifolia* (desert yaupon), *Mahonia trifoliolata* (agarito), *Forestiera angustifolia* (desert olive), *Lycium berlandieri* (Berlandier wolfberry), *Aloysia gratissima* (whitebrush), *Salvia ballotiflora* (shrubby blue sage), and *Ziziphus obtusifolia* (lotebush). The diversity of the shrub layer is significantly influenced by land use history, with recently cleared areas sometimes being represented by a near monoculture of *Prosopis glandulosa* (honey mesquite) in the overstory, *Pennisetum ciliare* (buffelgrass) in the herbaceous layer, and *Opuntia engelmannii* var. *lindheimeri* (Lindheimer pricklypear) as the most conspicuous component of the shrub layer. The herbaceous layer is typically dominated by graminoids and may be quite dense (60 to 100% cover). Grasses, such as *Schizachyrium scoparium* (little bluestem), *Schizachyrium littorale* (seacoast bluestem), *Chloris cucullata* (hooded windmillgrass), *Paspalum monostachyum* (gulfdune paspalum), *Paspalum plicatulum* (brownseed paspalum), *Elionurus tripsacoides* (Pan American balsamscale), *Bouteloua rigidiseta* (Texas grama), *Urochloa ciliatissima* (fringed signalgrass), *Heteropogon contortus* (tanglehead), *Eragrostis secundiflora* (red lovegrass), *Bothriochloa laguroides* ssp. *torreyana* (silver bluestem), *Trichloris pluriflora* (multiflower false Rhodes grass), *Aristida* spp. (threeawns), *Sporobolus cryptandrus* (sand dropseed), and/or *Dichanthelium* spp. (rosette grasses) commonly dominate or co-

dominate the herbaceous layer. Forbs are also common, including species such as *Gaillardia pulchella* (Indian blanket), *Eriogonum multiflorum* (heartsepal wildbuckwheat), *Croton* spp. (croton), *Cnidoscolus texanus* (Texas bull-nettle), *Aphanostephus skirrhobasis* (lazy daisy), *Rudbeckia hirta* (blackeyed Susan), *Verbesina encelioides* (cowpen daisy), *Clematis drummondii* (old man's beard), *Cynanchum barbigerum* (bearded shallow-wort), *Thymophylla pentachaeta* (parralena), *Justicia pilosella* (hairy tubetongue), *Nama jamaicense* (fiddleleaf nama), *Monarda punctata* (spotted beebalm), *Palafoxia texana* (Texas palafoxia), *Florestina tripteris* (white palafoxia), *Zornia bracteata* (bracted zornia), *Croptilon divaricatum* (scratch-daisy), *Rhynchosia americana* (American snoutbean), and *Wedelia texana* (hairy zexmania), though some of these species are restricted to the sandiest sites.

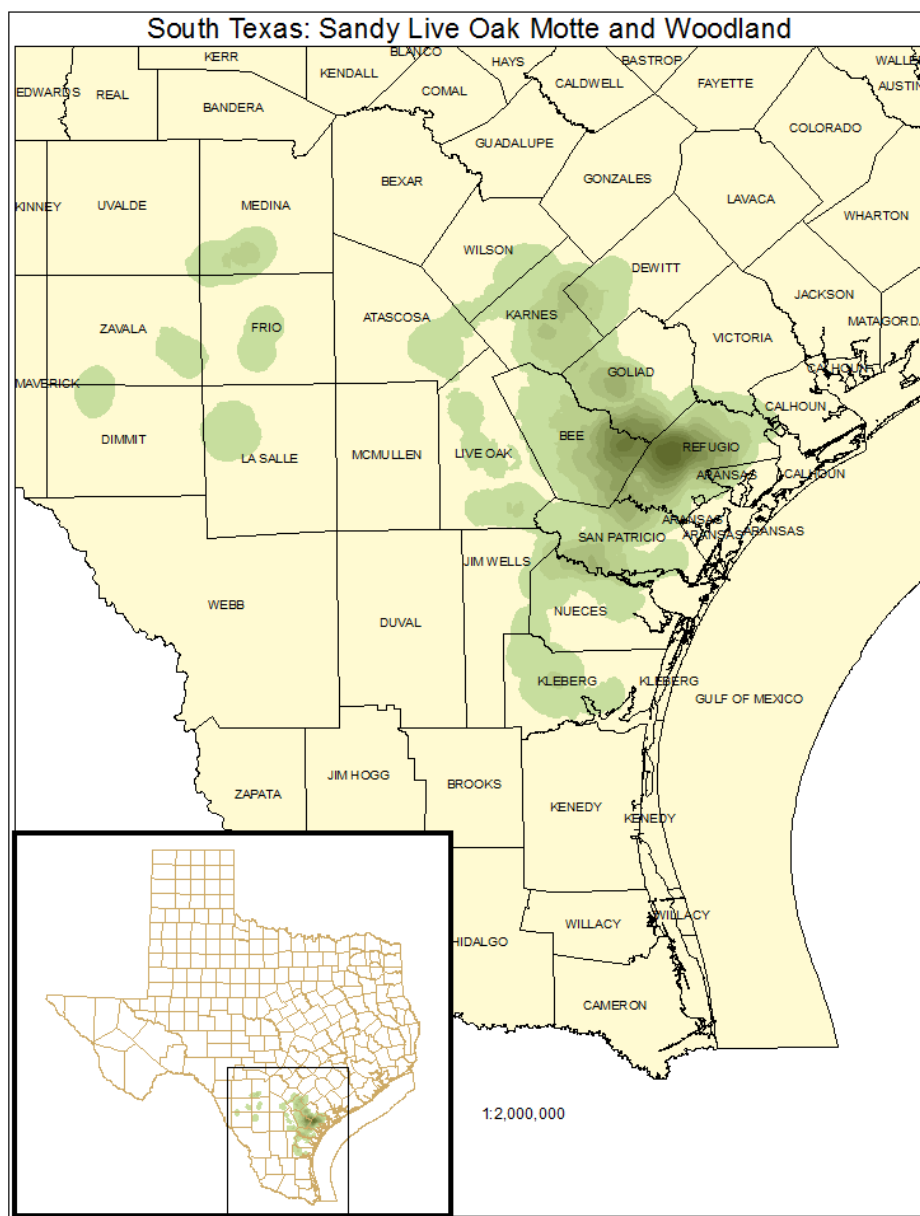
ECOLOGICAL MAPPING SYSTEMS:

SOUTH TEXAS: SANDY LIVE OAK MOTTE AND WOODLAND

Mapping System ID: 7102

EMS Description: Sandy sites along the northern edge of the South Texas Plains where *Quercus fusiformis* (plateau live oak) dominates the canopy. *Prosopis glandulosa* (honey mesquite), *Celtis ehrenbergiana* (granjeno), *Zanthoxylum fagara* (colima), and various other species may dominate the understory and/or shrub layer.

Distribution Map:



Example:



Public Land Occurrence:

Welder Wildlife Refuge: Welder Wildlife Foundation

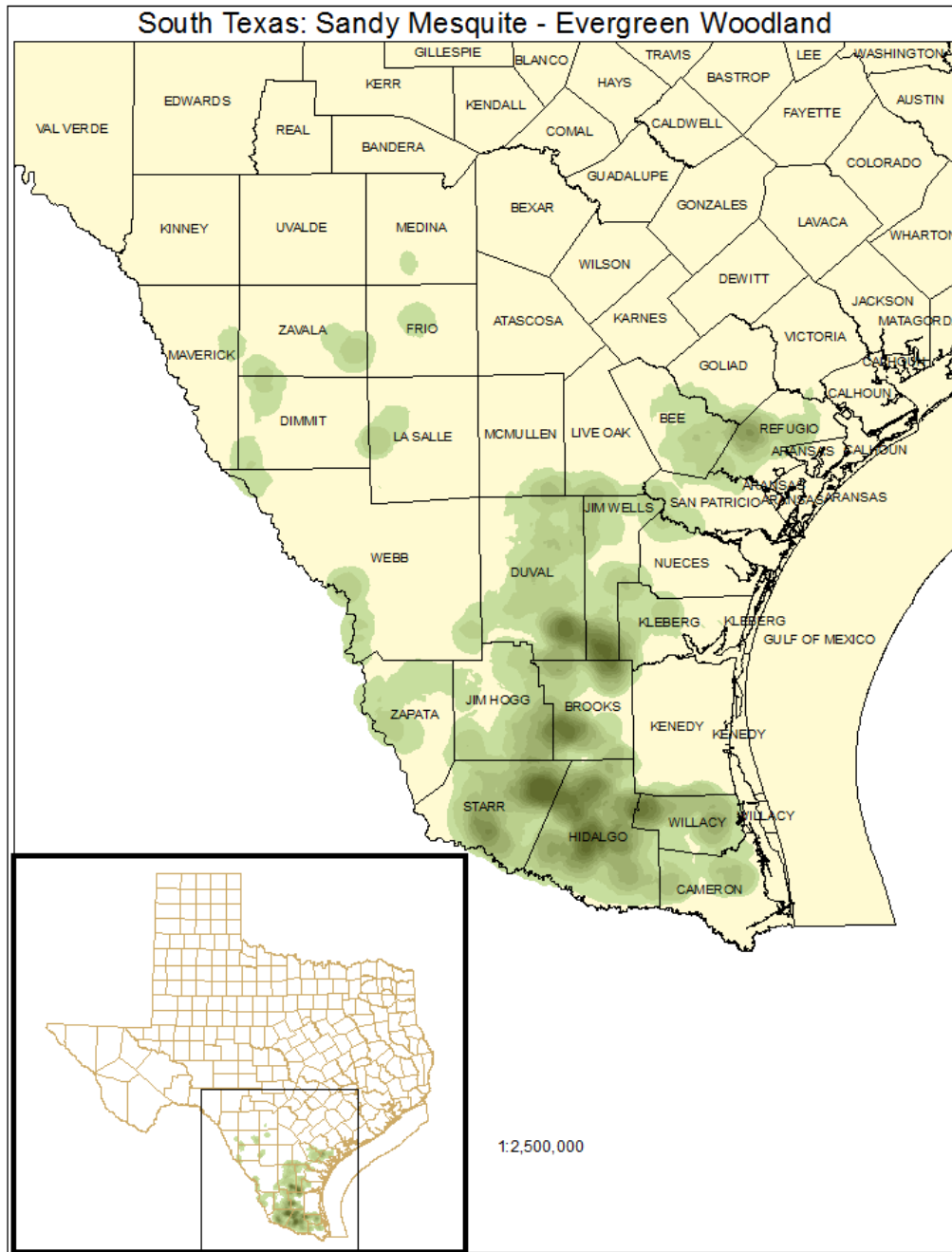
Lake Corpus Christi State Park: Texas Parks & Wildlife Department

SOUTH TEXAS: SANDY MESQUITE / EVERGREEN WOODLAND

Mapping System ID: 7103

EMS Description: Woodlands on sandy sites in the southern part of the South Texas Plains where the canopy is co-dominated by *Prosopis glandulosa* (honey mesquite) and *Ebenopsis ebano* (Texas ebony). A diverse shrub layer is often present.

Distribution Map:



Example:

Not available at this time.

Public Land Occurrence:

Chaparral Wildlife Management Area: Texas Parks & Wildlife Department

Laguna Atascosa National Wildlife Refuge: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-La Sal Del Rey: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Teniente: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Alto Bonito Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Garza Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Havana North: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-La Puerta Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Los Olmos Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Monte Cristo Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Pope Unit: US Fish and Wildlife Service

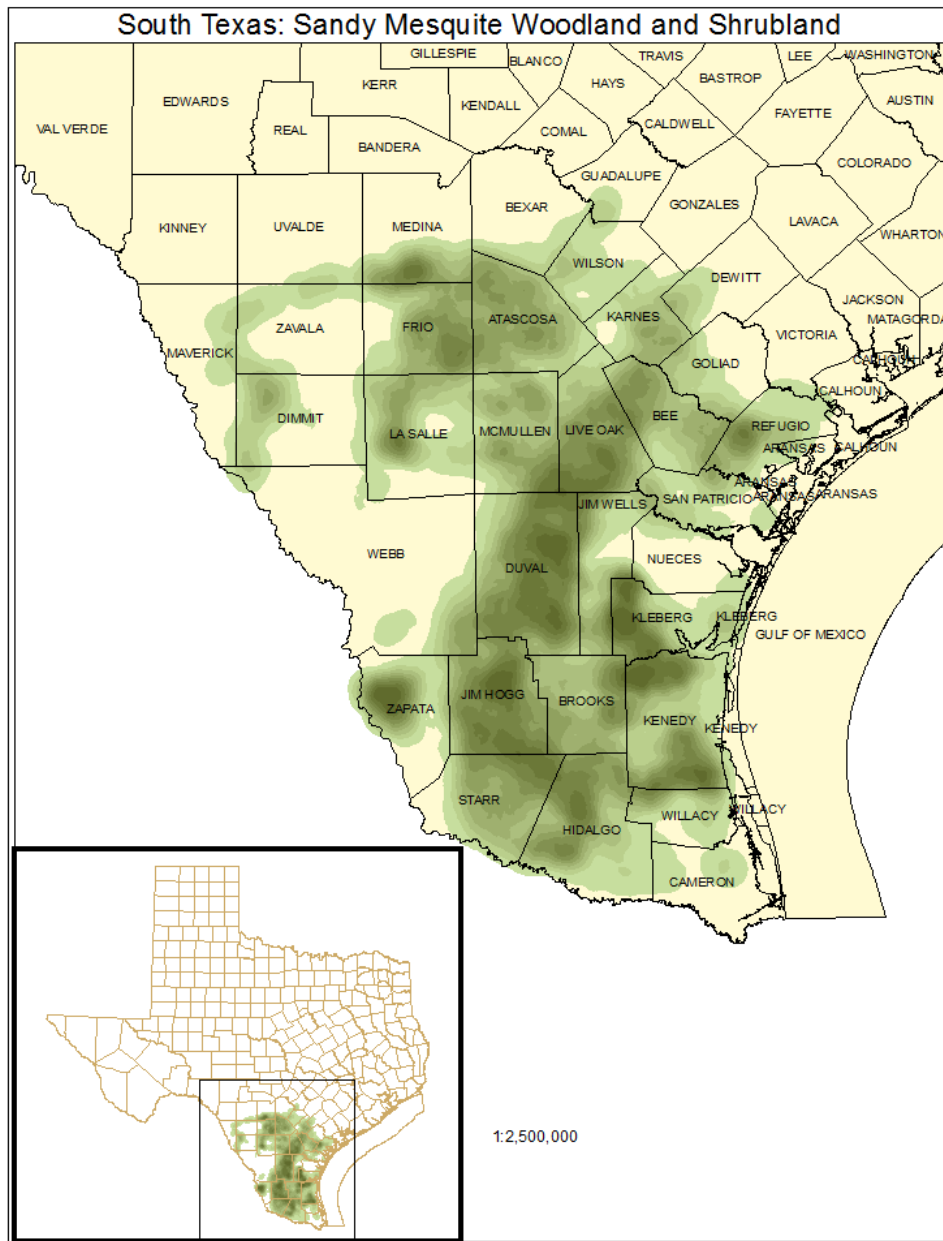
Lower Rio Grande Valley National Wildlife Refuge-Yturria Brush Unit: US Fish and Wildlife Service

SOUTH TEXAS: SANDY MESQUITE WOODLAND AND SHRUBLAND

Mapping System ID: 7104

EMS Description: Woodlands or shrublands on sandy substrate where *Prosopis glandulosa* (honey mesquite) and *Acacia farnesiana* (huisache) dominate the overstory. Other species, including *Celtis ehrenbergiana* (granjeno) may also occur in the canopy. A diverse shrub layer may also be present, with species such as *Diospyros texana* (Texas persimmon), *Zanthoxylum fagara* (colima), *Condalia hookeri* (brasil), *Acacia rigidula* (blackbrush) and others.

Distribution Map:



Example:**Public Land Occurrence**

Chaparral Wildlife Management Area: Texas Parks & Wildlife Department

Choke Canyon State Park: Texas Parks & Wildlife Department

James E. Daughtrey Wildlife Management Area: Texas Parks & Wildlife Department

Laguna Atascosa National Wildlife Refuge: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Chicharra Banco Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Garza Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- La Puerta Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Los Olmos Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Monte Cristo Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Pope Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Sam Fordyce North Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Sam Fordyce Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge- Yturria Brush Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-La Sal Del Rey: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Teniente: US Fish and Wildlife Service

Welder Wildlife Refuge: US Fish and Wildlife Service

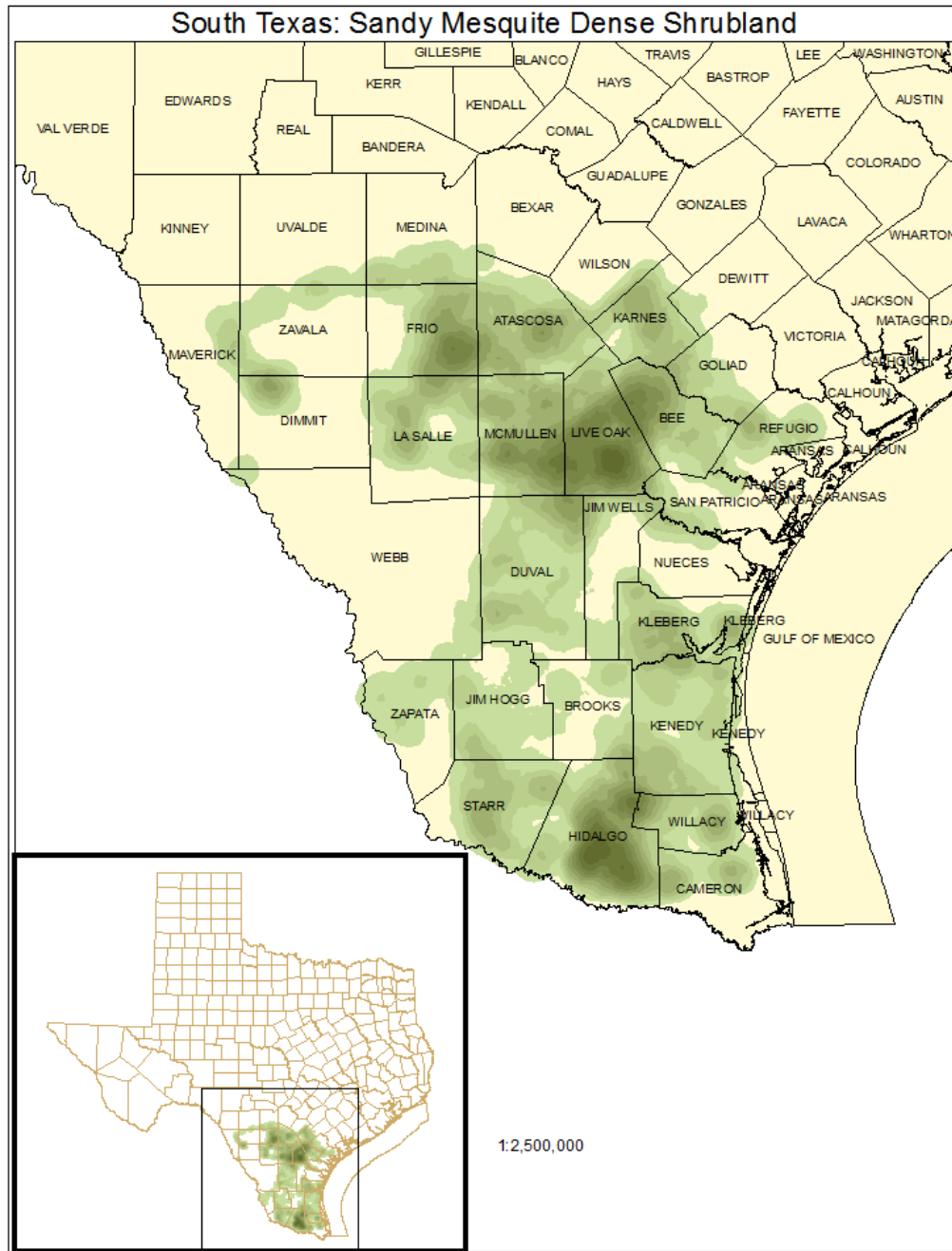


SOUTH TEXAS: SANDY MESQUITE DENSE SHRUBLAND

Mapping System ID: 7105

EMS Description: Dense shrublands on sandy substrates. These shrublands may have *Prosopis glandulosa* (honey mesquite) in the overstory, though the height of the upper layer is typically less than 5 m in height. Numerous other shrub species form the dense shrub canopy.

Distribution Map:



Example:**Public Land Occurrence:**

Chaparral Wildlife Management Area: Texas Parks & Wildlife Department

James E. Daughtrey Wildlife Management Area: Texas Parks & Wildlife Department

Laguna Atascosa National Wildlife Refuge: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Alto Bonito Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Chicharra Banco Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Garza Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Havana North: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-La Puerta Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-La Sal Del Rey: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Los Olmos Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Monte Cristo Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Payne: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Pope Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Schaleben: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Teniente: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Yturria Brush Unit: US Fish and Wildlife Service

Padre Island National Seashore: US National Park Service

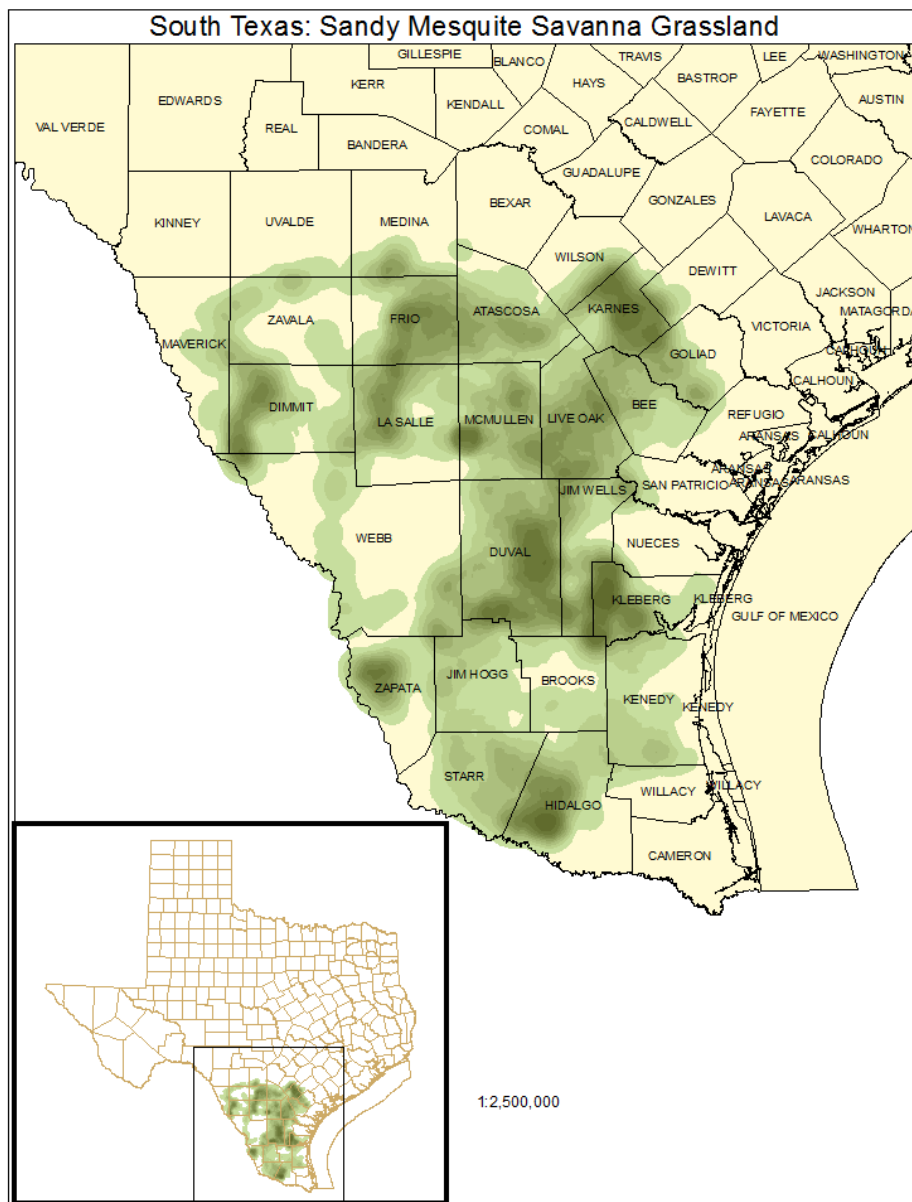


SOUTH TEXAS: SANDY MESQUITE SAVANNA GRASSLAND

Mapping System ID: 7107

EMS Description: Grass dominated sandy sites, sometimes with a sparse or patchy overstory of *Prosopis glandulosa* (honey mesquite) or other species. *Schizachyrium scoparium* (little bluestem), *Schizachyrium littorale* (seacoast bluestem), *Bothriochloa laguroides* ssp. *torreyana* (silver bluestem), and other native species may dominate these grasslands, or non-native species such as *Cynodon dactylon* (bermudagrass), *Bothriochloa ischaemum* var. *songarica* (King Ranch bluestem), or *Pennisetum ciliare* (buffelgrass) may dominate.

Distribution Map:



Example:

Not available at this time.

Public Land Occurrence:

Chaparral Wildlife Management Area: Texas Parks & Wildlife Department

Choke Canyon State Park: Texas Parks & Wildlife Department

James E. Daughtrey Wildlife Management Area: Texas Parks & Wildlife Department

Lake Corpus Christi State Park: Texas Parks & Wildlife Department

Lower Rio Grande Valley National Wildlife Refuge-Chicharra Banco Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Havana North Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Havana South Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-La Puerta Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-La Sal Del Rey: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Los Ebanos Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Monte Cristo Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Pope Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Sam Fordyce North Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Sam Fordyce Unit: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Teniente: US Fish and Wildlife Service

Lower Rio Grande Valley National Wildlife Refuge-Yturria Brush Unit: US Fish and Wildlife Service