

14390

South Texas Lomas

BpS Model/Description Version: Aug. 2020

Modelers		Reviewers	
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Vegetation Type

Forest and Woodland

Map Zone

36

Geographic Range

Predominantly Rio Grande delta (near coast) with a few small patch and scattered occurrences north to the vicinity of Corpus Christi, but these occurrences have reduced species diversity.

Biophysical Site Description

Lomas are characterized as wind-formed clay dunes on or near the coast, often surrounded by flats containing halophytic vegetation, coastal grasslands, or unvegetated wind tidal flats. They usually occur as topographic highs in the surrounding level landscape, sometimes to 10m above surrounding plain.

Vegetation Description

Shrublands, sometimes with emergent canopy species such as honey mesquite (*Prosopis glandulosa*) or Texas ebony (*Ebenopsis ebano*). Shrublands are often dense, sometimes to 100% cover at 0.5-4.0m in height. Species of the shrub layer include Berlandier's fiddlewood (*Citharexylum berlandieri*), Don Quixote's lace (*Yucca treculeana*), Texas torchwood (*Amyris texana*), Texas ebony, Berlandier's wolfberry (*Lycium berlandieri*), blackbrush acacia (*Acacia rigidula*), honey mesquite, Texas pricklypear (*Opuntia engelmannii*), Christmas cactus (*Opuntia leptocaulis*), and velvet shrubverbena (*Lantana velutina*). Sparse herbaceous layer with species such as rougeplant (*Rivina humilis*), salt heliotrope (*Heliotropium curassavicum*), turkey tangle fogfruit (*Phyla nodiflora*), buffalograss (*Buchloe dactyloides*), and bristlegrass (*Setaria* spp.).

BpS Dominant and Indicator Species

Symbol	Scientific Name	Common Name
EBEB	<i>Ebenopsis ebano</i>	Texas ebony
PRGL2	<i>Prosopis glandulosa</i>	Honey mesquite
CIBE	<i>Citharexylum berlandieri</i>	Berlandier's fiddlewood
LYBE	<i>Lycium berlandieri</i>	Berlandier's wolfberry
ACRI	<i>Acacia rigidula</i>	Blackbrush acacia

Species names are from the NRCS PLANTS database. Check species codes at <http://plants.usda.gov>.

Disturbance Description

Hurricanes and tropical storms can affect these sites through tidal surge causing influx of saline waters. Saltwater inundation would be restricted temporally to the period during storm surge and

would not likely significantly affect shrub mortality. Also, high-intensity storms may completely eliminate these sites through erosion. Erosional processes would tend to completely eliminate sites rather than causing changes in the system structure. Fire is not a process important to this system and does not or rarely occurs.

Fire Frequency

Severity	Avg FI	Percent of All Fires	Min FI	Max FI
Replacement				
Moderate (Mixed)				
Low (Surface)				
All Fires				

Fire interval is expressed in years for each fire severity class and for all types of fire combined (All Fires). Average FI is the central tendency modeled. Percent of all fires is the percent of all fires modeled in that severity class. Minimum and Maximum FIs show the relative range of fire intervals as estimated by model contributors, if known.

Scale Description

Occurs as small patch sites ranging from 10s to a few 100 acres.

Adjacency or Identification Concerns

Adjacent to South Texas Salt and Brackish Tidal Flat.

Issues or Problems

A wind/weather/stress disturbance (interval = 50yrs) was added after model delivery. This disturbance causes no marked changes in succession.

Native Uncharacteristic Conditions

Comments

Succession Classes

Mapping Rules

Upper Layer Lifeform	Height (m)	Canopy Cover (%)									
		0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Herb	0-0.5	A	A	A	A	A	A	A	A	A	A
Herb	0.5-1.0	A	A	A	A	A	A	A	A	A	A
Herb	>1.0	A	A	A	A	A	A	A	A	A	A
Shrub	0-0.5	A	A	A	A	A	A	A	A	A	A
Shrub	0.5-1.0	A	A	A	A	A	A	A	A	A	A
Shrub	1.0-3.0	A	A	A	A	A	A	A	A	A	A
Shrub	>3.0	A	A	A	A	A	A	A	A	A	A
Tree	0-5	A	UN	UN	UN	UN	UN	UN	UN	UN	UN
Tree	5-10	A	UN	UN	UN	UN	UN	UN	UN	UN	UN
Tree	10-25	A	UN	UN	UN	UN	UN	UN	UN	UN	UN
Tree	25-50	A	UN	UN	UN	UN	UN	UN	UN	UN	UN
Tree	>50	A	UN	UN	UN	UN	UN	UN	UN	UN	UN

Succession class letters A-E are described in the Succession Class Description section. Some classes use a leafform distinction where a qualifier is added to the class letter: Brdl (broadleaf), Con (conifer), or Mix (mixed conifer and broadleaf). UN refers to uncharacteristic native or a combination of height and cover that would not be expected under the reference condition. NP refers to not possible or a combination of height and cover which is not physiologically possible for the species in the BpS.

Description

Class A 100 Late Development 1 - Closed

Indicator Species

Symbol	Scientific Name	Common Name	Canopy Position
EBEB	Ebenopsis ebano	Texas ebony	Upper
PRGL2	Prosopis glandulosa	Honey mesquite	Upper
CIBE	Citharexylum berlandieri	Berlandier's fiddlewood	Upper
ACRI	Acacia rigidula	Blackbrush acacia	Upper

Description

Dense shrubland with scattered emergent canopy species. Disturbances tend to have local effects or completely eliminate a site. This Biophysical Setting occurs as a stable system.

Maximum Tree Size Class

None

Model Parameters

Deterministic Transitions

From Class	Begins at (yr)	Succeeds to	After (years)
Late1:CLS	0	Late1:CLS	999

Probabilistic Transitions

Disturbance Type	Disturbance occurs In	Moves vegetation to	Disturbance Probability	Return Interval (yrs)	Reset Age to New Class Start Age After Disturbance?	Years Since Last Disturbance
Wind or Weather or Stress	Late1:CLS	Late1:CLS	0.02	50	No	0

References

NatureServe. 2007. International Ecological Classification Standard: Terrestrial Ecological Classifications. NatureServe Central Databases. Arlington, VA, U.S.A. Data current as of 10 February 2007.

Tunnel, W. 2001. Laguna Madre of Texas and Tamaulipas. Texas A&M University Press.