

## MAINLY NATURAL AZONAL MAPPED TYPES

**Description:** Azonal types are those types that are widespread and not particularly characteristic of any region or naturally occurring vegetation type. This may be due to disturbance, where wide ranging species adapted to disturbed conditions predominate. In other areas, land management may have resulted in invasion of widespread species such as juniper or mesquite. Azonal types may also be used to refer to general physiognomic types that are not ascribable to particular naturally occurring systems.

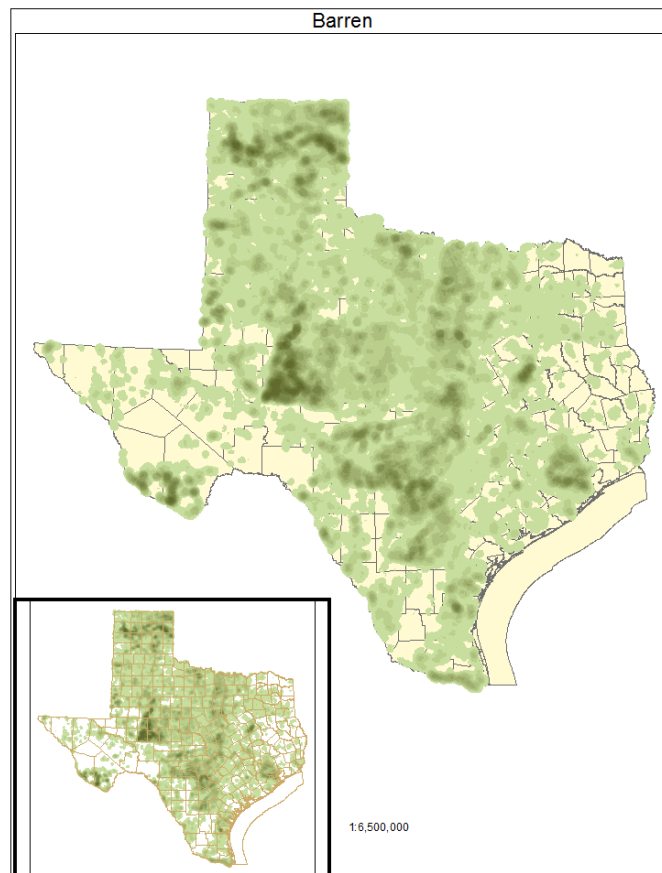
## ECOLOGICAL MAPPING SYSTEMS:

### BARREN

**Mapping System ID:** 9000

**EMS Description:** This type includes areas where little or no vegetative cover existed at the time of image data collection. Large areas cleared for development are included, as well as rural roads and buildings and associated clearing in primarily rural areas. Stream beds with exposed gravel or bedrock, rock outcrops, quarries, and mines may be mapped as this type. Fallow fields or areas within cropland blocks that remain barren throughout one growing season or heavily grazed pastures where bare soils are dominant may also be mapped as barren.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Enchanted Rock State Natural Area: Texas Parks & Wildlife Department

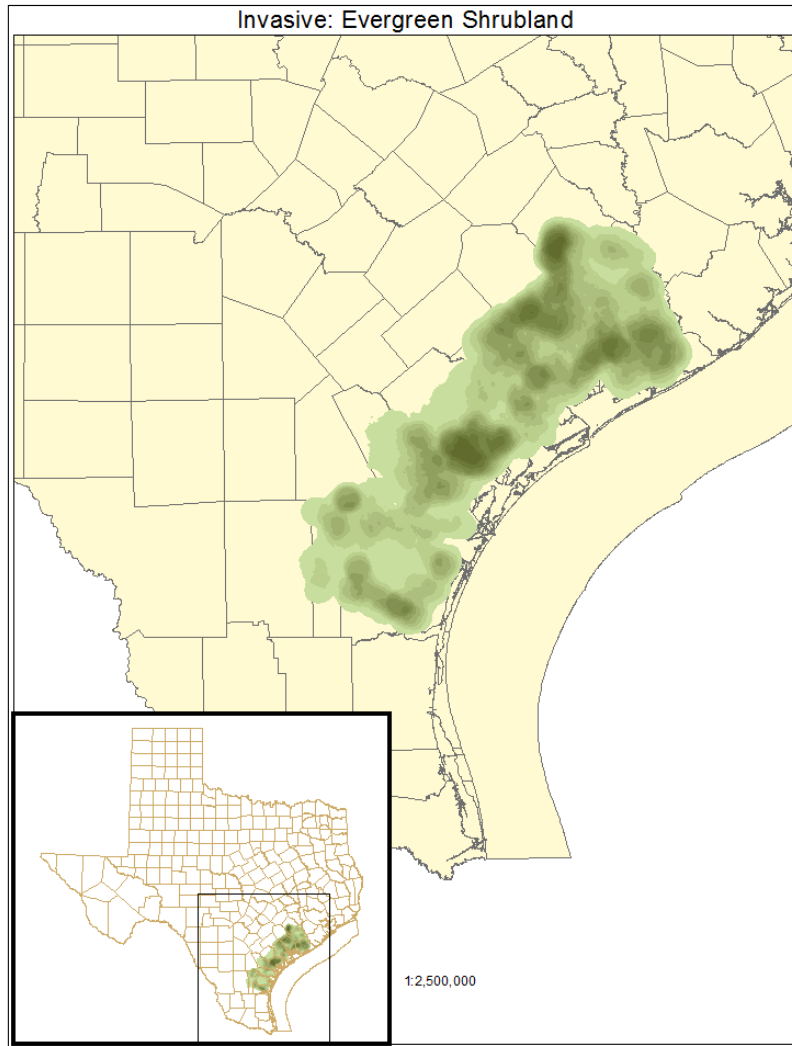
## **ECOLOGICAL MAPPING SYSTEMS:**

### **INVASIVE: EVERGREEN SHRUBLAND**

**Mapping System ID:** 9505

**EMS Description:** A variety of mainly disturbance shrublands with species such as *Acacia farnesiana* (huisache), *Baccharis* spp. (baccharis), *Rosa bracteata* (Macartney rose), *Triadica sebifera* (Chinese tallow)(north), *Ilex vomitoria* (yaupon), *Prosopis glandulosa* (honey mesquite), *Ziziphus obtusifolia* (lotebush), *Zanthoxylum fagara* (colima)(south), *Celtis ehrenbergiana* (granjeno)(south), and *Condalia hookeri* (brasil)(south) characterize this type. Sparse tree cover with species such as *Quercus fusiformis* (plateau live oak), *Quercus virginiana* (coastal live oak), *Quercus nigra* (water oak)(north), *Celtis laevigata* (sugar hackberry), and *Ulmus crassifolia* (cedar elm) may also occur.

**Distribution Map:**



**Example:**

*Not available at this time.*

**Public Land Occurrence:**

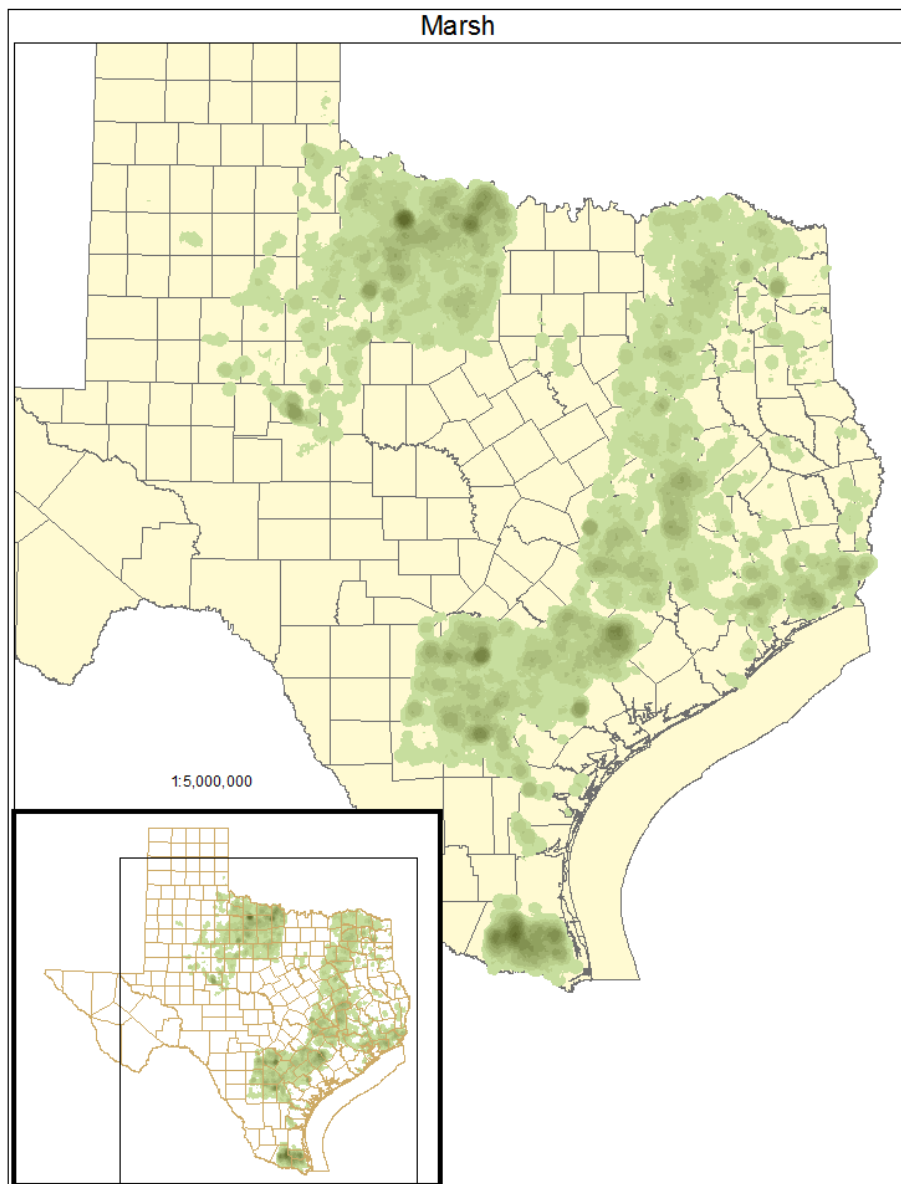
*None.*

## MARSH

**Mapping System ID:** 9007

**EMS Description:** Areas mapped as marsh are small, and consist of wet or alternately wet and dry soils with herbaceous vegetation. These are often near tanks or ponds, and may contain *Typha* spp. (cattails), *Eleocharis* spp. (spikerushes), *Schoenoplectus* spp. (bulrushes), other sedges, *Polygonum* spp. (smartweeds) and grasses such as *Sorghum halepense* (Johnsongrass) or *Cynodon dactylon* (bermudagrass) as important species. Some shrubs such as *Cephalanthus occidentalis* (common buttonbush) and *Salix nigra* (black willow) may be important in this mapped type.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Copper Breaks State Park: Texas Parks & Wildlife Department

Lake Arrowhead State Park: Texas Parks & Wildlife Department

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

Possum Kingdom State Park: Texas Parks & Wildlife Department

Twin Butte Reservoir Recreation Area: Texas Parks & Wildlife Department

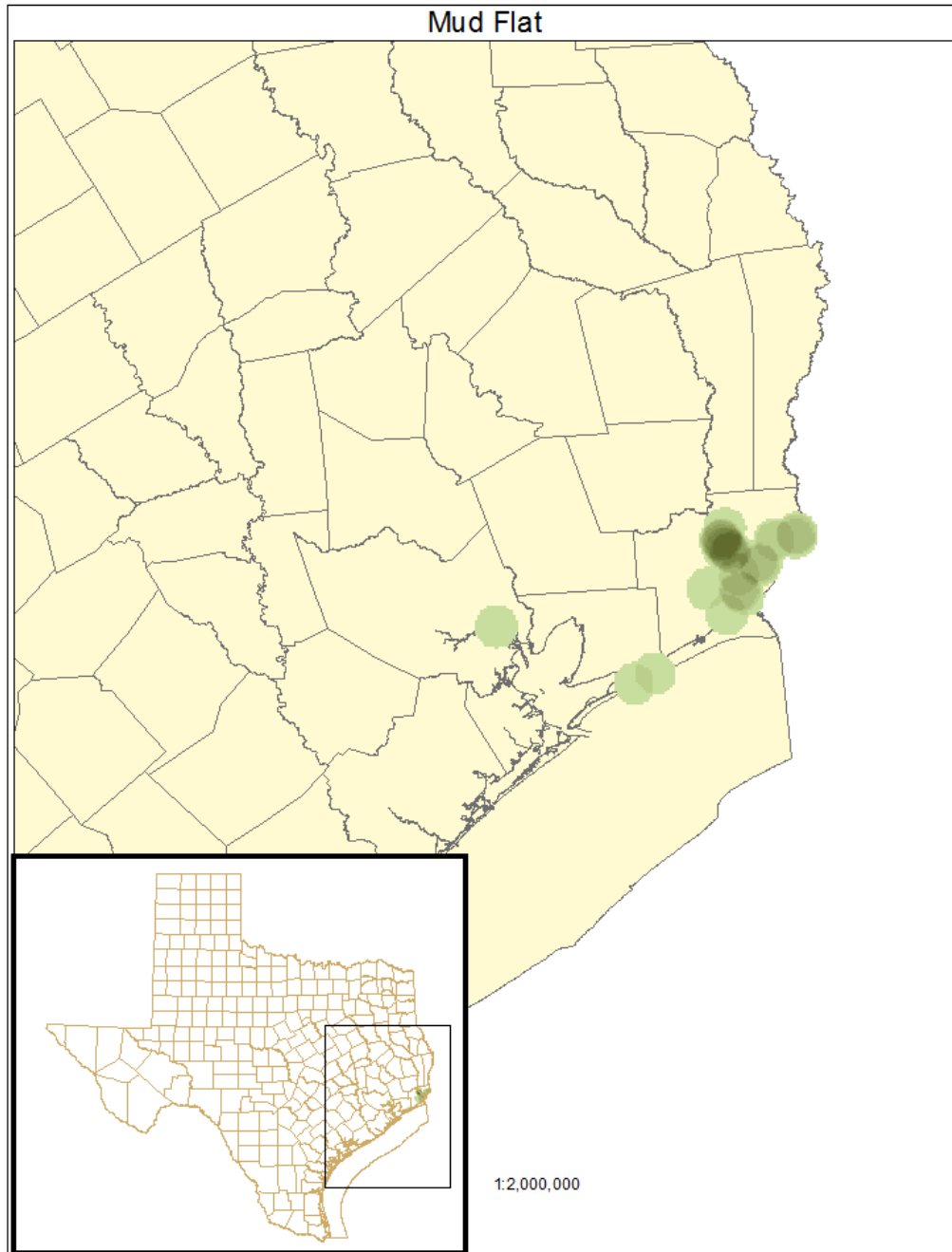


## MUD FLAT

**Mapping System ID:** 9002

**EMS Description:** This mapped type is essentially unvegetated at the time of data collection, but annual variation in storm events and precipitation influence the ability of these low areas to support vegetation.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

*None.*

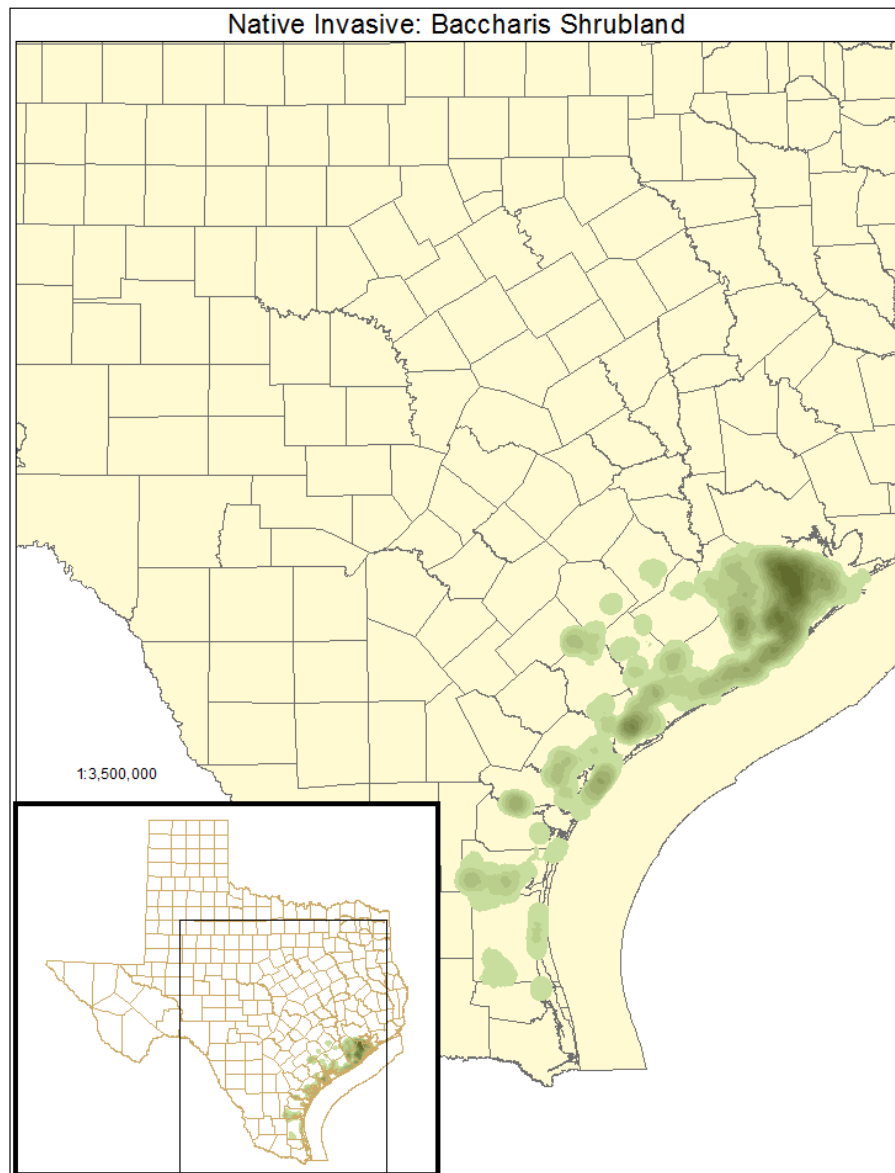


## NATIVE INVASIVE: BACCHARIS SHRUBLAND

**Mapping System ID:** 9116

**EMS Description:** This type is mapped on salty or sandy soils and *Baccharis* spp. (baccharis), *Prosopis glandulosa* (honey mesquite), *Tamarix* spp. (salt cedars), and *Iva frutescens* (shrubby sumpweed) are the most common dominants. Other shrubs may include *Triadica sebifera* (Chinese tallow), *Borrchia frutescens* (sea ox-eye daisy), *Rosa bracteata* (Macartney rose), *Forestiera acuminata* (swamp privet), and *Zanthoxylum fagara* (colima), and grasses may include *Spartina spartinae* (Gulf cordgrass), *Distichlis spicata* (saltgrass), *Cynodon dactylon* (bermudagrass), and *Sporobolus indicus* (rat-tail smutgrass).

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Aransas National Wildlife Refuge: US Fish and Wildlife Service

Big Boggy National Wildlife Refuge: US Fish and Wildlife Service

Brazoria National Wildlife Refuge: US Fish and Wildlife Service

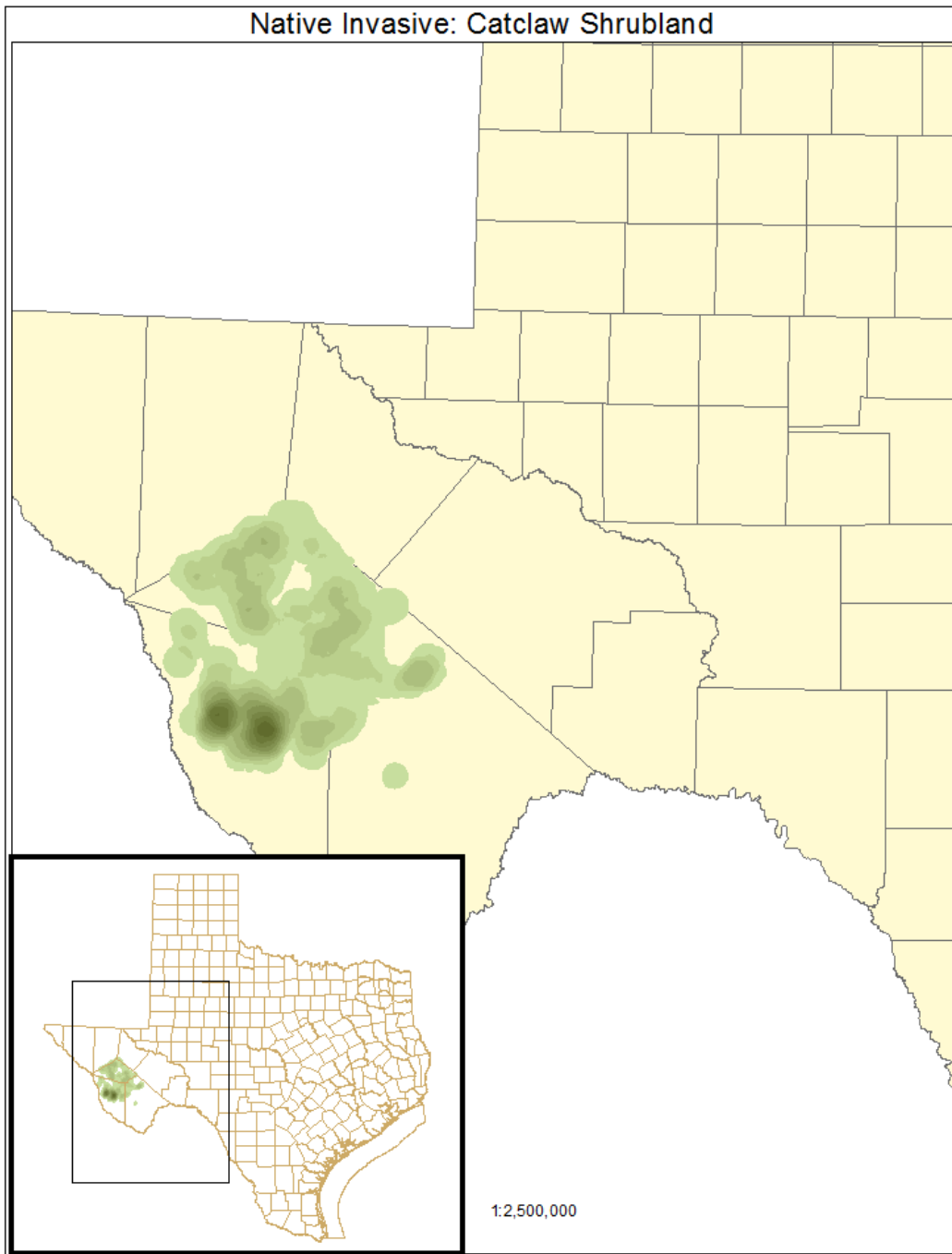
San Bernard National Wildlife Refuge: US Fish and Wildlife Service

## NATIVE INVASIVE: CATCLAW SHRUBLAND

**Mapping System ID:** 9166

**EMS Description:** Invasive shrublands often dominated by *Mimosa aculeaticarpa* var. *biuncifera* (catclaw mimosa), *Acacia constricta* (whitethorn acacia), and/or *Parthenium incanum* (mariola).

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Davis Mountains State Park: Texas Parks & Wildlife Department

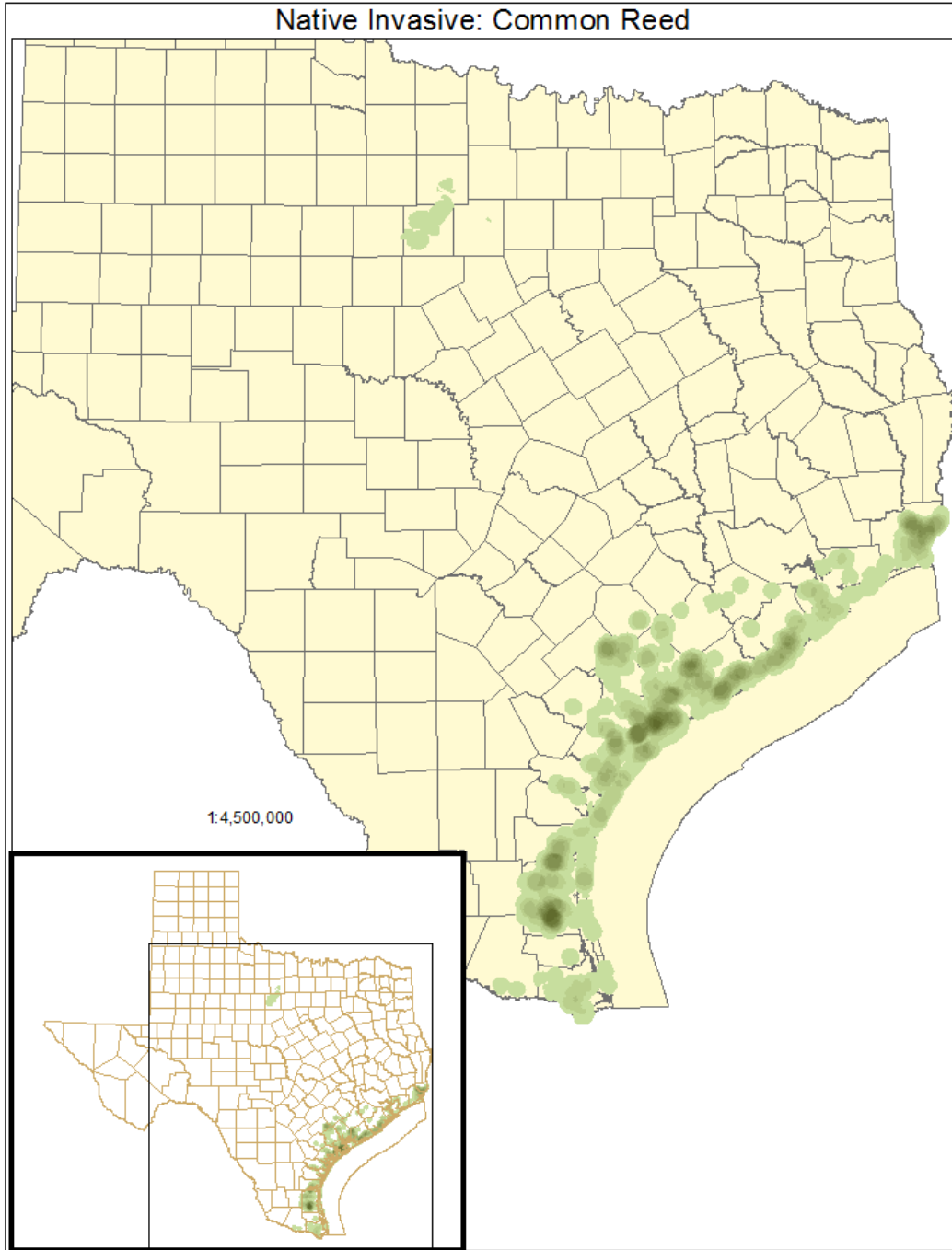
Fort Davis National Historic Site: US National Park Service

## NATIVE INVASIVE: COMMON REED

**Mapping System ID:** 9107

**EMS Description:** Areas mapped within this type are often dominated by nearly pure stands of *Phragmites australis* (common reed) on formerly disturbed soils.

**Distribution Map:**



**Example:**

*Not available at this time.*

**Public Land Occurrence:**

Anahuac National Wildlife Refuge: US Fish and Wildlife Service

J. D. Murphree Wildlife Management Area: Texas Parks & Wildlife Department

Lower Neches Wildlife Management Area: Texas Parks & Wildlife Department

McFaddin National Wildlife Refuge: US Fish and Wildlife Service

Tony Houseman Wildlife Management Area: Texas Parks & Wildlife Department

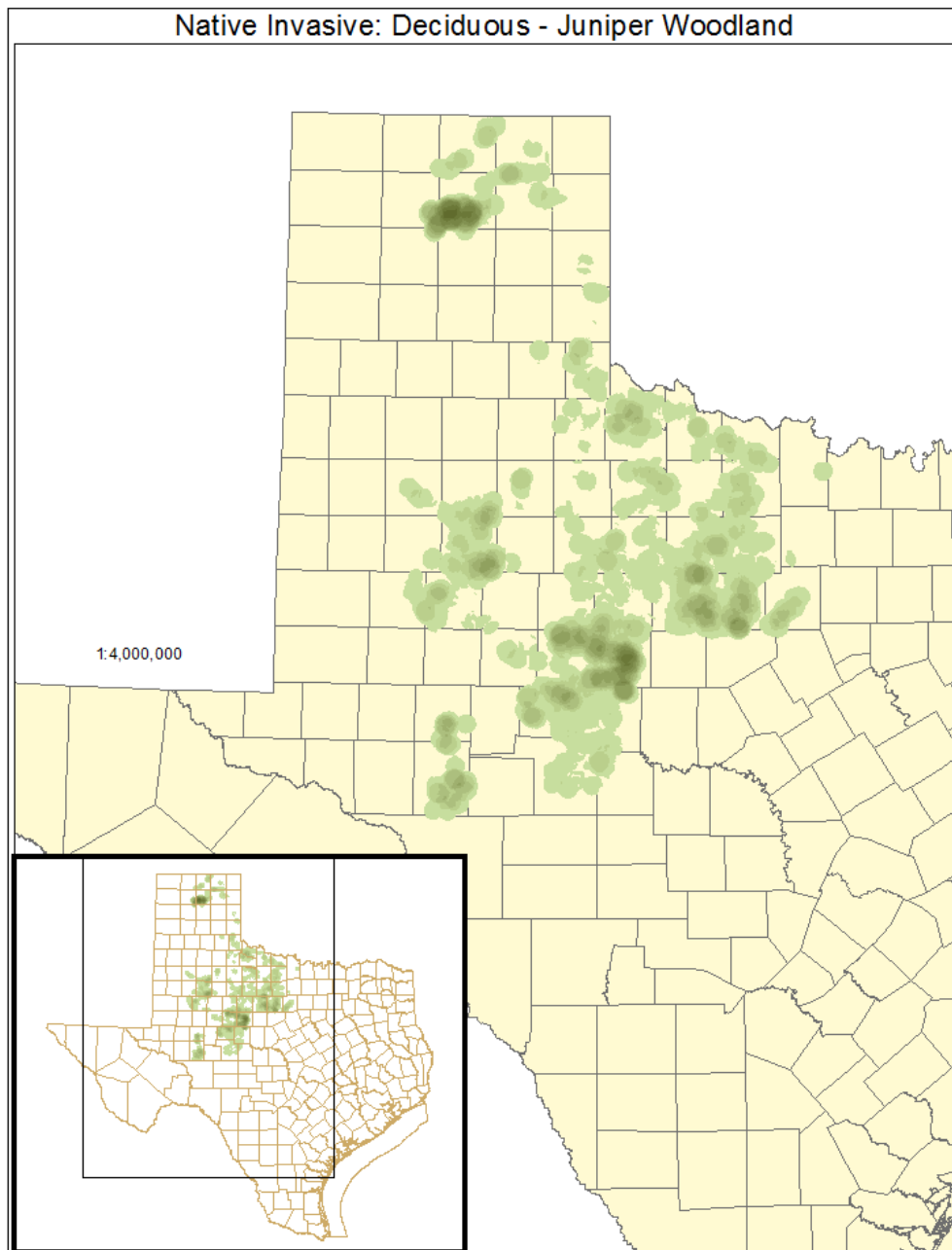


## NATIVE INVASIVE: DECIDUOUS – JUNIPER WOODLAND

**Mapping System ID:** 9103

**EMS Description:** Woodlands, typically of disturbed sites, sharing dominance between *Juniperus* spp. (junipers) and deciduous species such as *Celtis laevigata* var. *reticulata* (netleaf hackberry), *Sapindus saponaria* var. *drummondii* (western soapberry), *Prosopis glandulosa* (honey mesquite), and the non-native *Ulmus pumila* (Siberian elm).

**Distribution Map:**



**Example:**

*Not available at this time.*

**Public Land Occurrence:**

Lake Colorado City State Park: Texas Parks & Wildlife Department

Matador Wildlife Management Area: Texas Parks & Wildlife Department

San Angelo State Park: Texas Parks & Wildlife Department

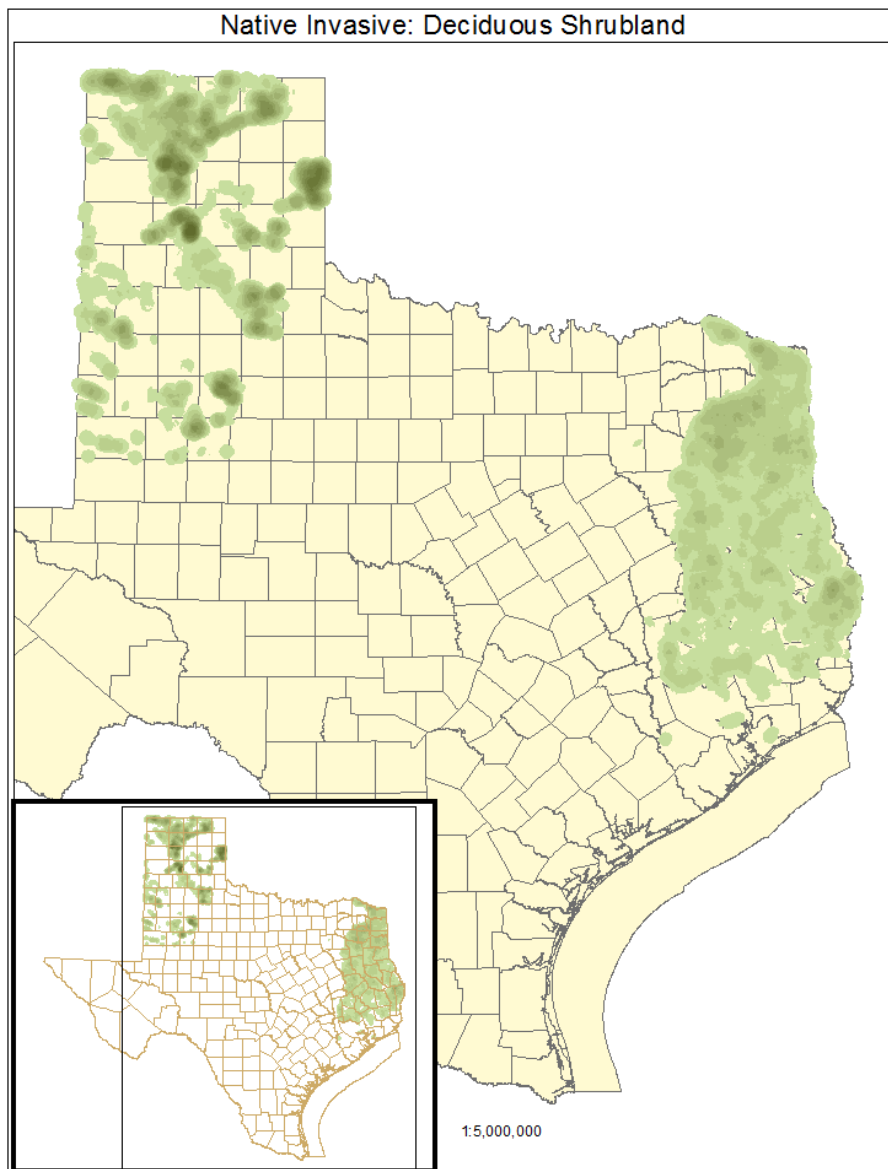
Twin Butte Reservoir Recreation Area: Texas Parks & Wildlife Department

## NATIVE INVASIVE: DECIDUOUS SHRUBLAND

**Mapping System ID:** 9126

**EMS Description:** A variety of shrubs and generally small or sparse deciduous trees may be important in this successional type that was mapped on non-prairie soils. Important species may include *Celtis laevigata* (sugar hackberry), *Quercus nigra* (water oak), *Prosopis glandulosa* (honey mesquite), *Triadica sebifera* (Chinese tallow, south), *Ilex vomitoria* (yaupon), *Baccharis* spp. (baccharis), *Rubus trivialis* (southern dewberry), *Liquidambar styraciflua* (sweetgum), *Quercus falcata* (southern red oak), *Ulmus alata* (winged elm), or *Ulmus crassifolia* (cedar elm). Small pine trees may be present in young, managed plantations.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

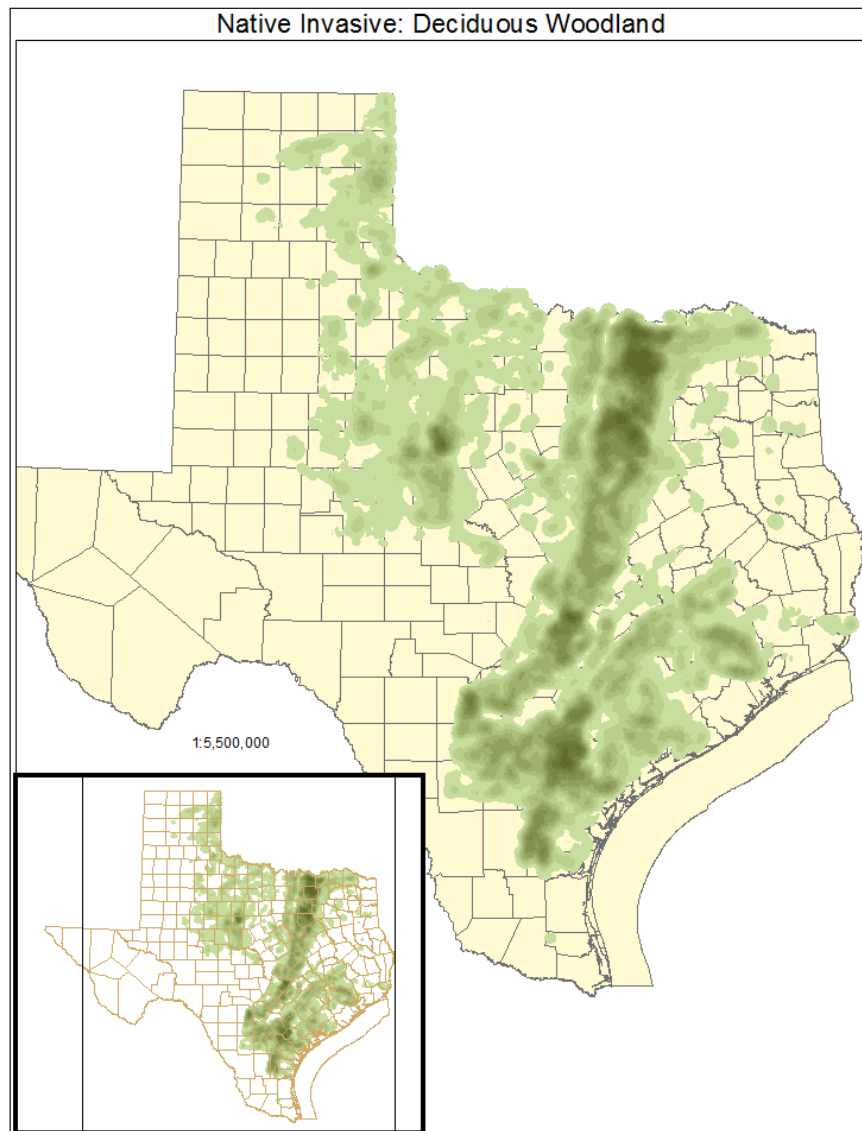
*None.*

## NATIVE INVASIVE: DECIDUOUS WOODLAND

**Mapping System ID:** 9104

**EMS Description:** This broadly-defined type may have *Celtis laevigata* (sugar hackberry), *Quercus nigra* (water oak), *Ulmus crassifolia* (cedar elm), *Liquidambar styraciflua* (sweetgum), *Ulmus alata* (winged elm), *Ilex vomitoria* (yaupon), *Acacia farnesiana* (huisache), *Fraxinus* spp. (ashes), or *Prosopis glandulosa* (honey mesquite) among the dominants. To the south and west, species such as *Celtis ehrenbergiana* (granjeno), *Zanthoxylum fagara* (colima), and *Diospyros texana* (Texas persimmon) are more common. *Quercus stellata* (post oak), *Quercus virginiana* (coastal live oak), and *Quercus fusiformis* (plateau live oak) may be important. *Juniperus virginiana* (eastern redcedar) and *Pinus taeda* (loblolly pine) may also be present.

**Distribution Map:**





**Example:**



**Public Land Occurrence:**

Aquilla Wildlife Management Area: Texas Parks & Wildlife Department  
Cedar Hill State Park: Texas Parks & Wildlife Department  
Copper Breaks State Park: Texas Parks & Wildlife Department  
E.V. Spence Reservoir Recreation Area: Texas Parks & Wildlife Department  
Fort Griffin State Historic Site: Texas Historical Commission  
Fort Richardson State Park and Historical Site: Texas Parks & Wildlife Department  
Granger Wildlife Management Area: Texas Parks & Wildlife Department  
Hagerman National Wildlife Refuge: U. S. Fish and Wildlife Service  
Lake Casa Blanca State Park: Texas Parks & Wildlife Department  
Lake Colorado City State Park: Texas Parks & Wildlife Department  
Lake Corpus Christi State Park: Texas Parks & Wildlife Department  
Lake Lewisville Recreation Area: US Army Corps of Engineers  
Lake Whitney Recreation Area: US Army Corps of Engineers  
Lavon Lake Recreation Area: US Army Corps of Engineers  
Lipantitlan State Historic Site: Texas Parks & Wildlife Department  
Matador Wildlife Management Area: Texas Parks & Wildlife Department  
McKinney Roughts: Lower Colorado River Authority  
Navarro Mills Lake Recreation Area: US Army Corps of Engineers  
O.C. Fisher Reservoir: Texas Parks & Wildlife Department  
Ray Roberts Lake Wildlife Management Area: Texas Parks & Wildlife Department  
San Angelo State Park: Texas Parks & Wildlife Department  
Twin Butte Reservoir Recreation Area: Texas Parks & Wildlife Department



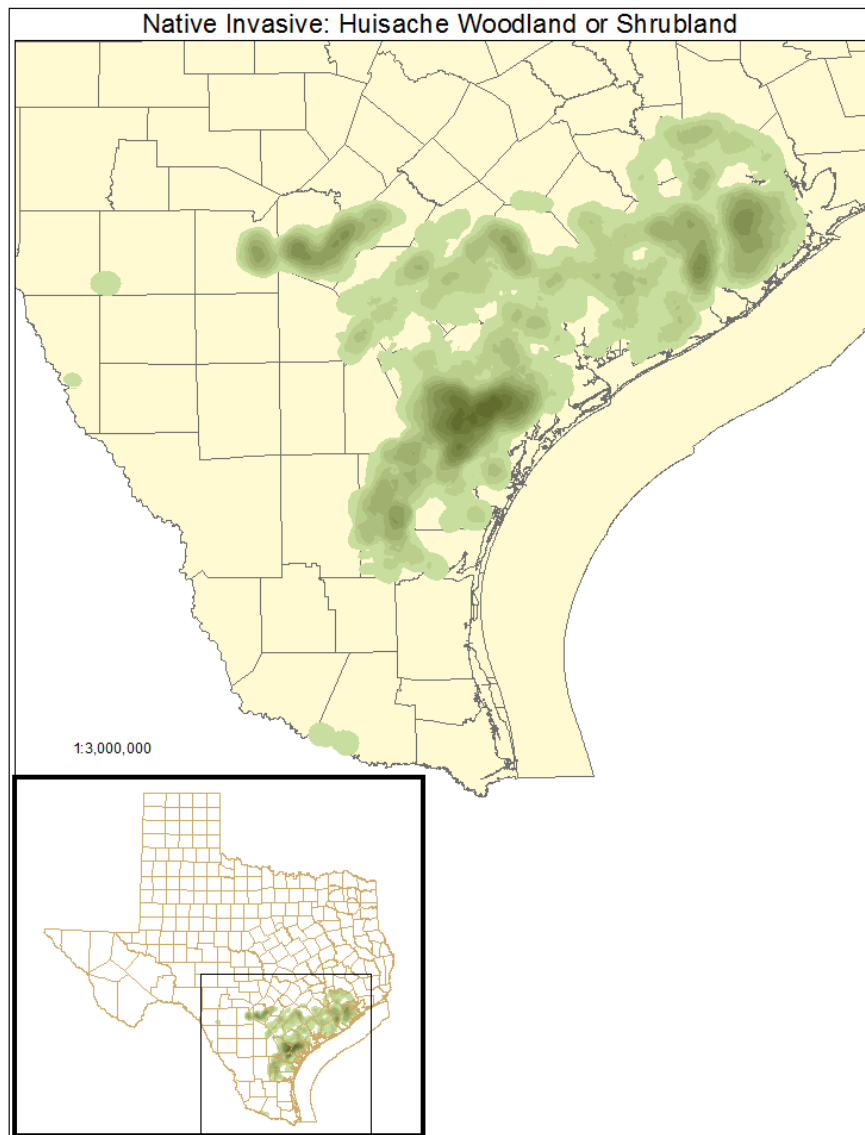


## NATIVE INVASIVE: HUISACHE WOODLAND OR SHRUBLAND

**Mapping System ID:** 9124

**EMS Description:** This broadly-defined type often has invasive shrubs or small trees such as *Acacia farnesiana* (huisache), *Prosopis glandulosa* (honey mesquite), *Celtis laevigata* (sugar hackberry), *Ulmus crassifolia* (cedar elm), *Sideroxylon lanuginosum* (gum bumelia), *Quercus nigra* (water oak), or *Triadica sebifera* (Chinese tallow) among the dominants. *Quercus fusiformis* (plateau live oak) or *Quercus virginiana* (coastal live oak) may be present in the tree layer and other common species include *Celtis ehrenbergiana* (granjeno), *Forestiera angustifolia* (elbow bush), *Acacia berlandieri* (guajillo), *Opuntia engelmannii* var. *lindheimeri* (Lindheimer pricklypear), *Diospyros texana* (Texas persimmon), and *Rosa bracteata* (Macartney rose).

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Lake Corpus Christi State Park: Texas Parks & Wildlife Department

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

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

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

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

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

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

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

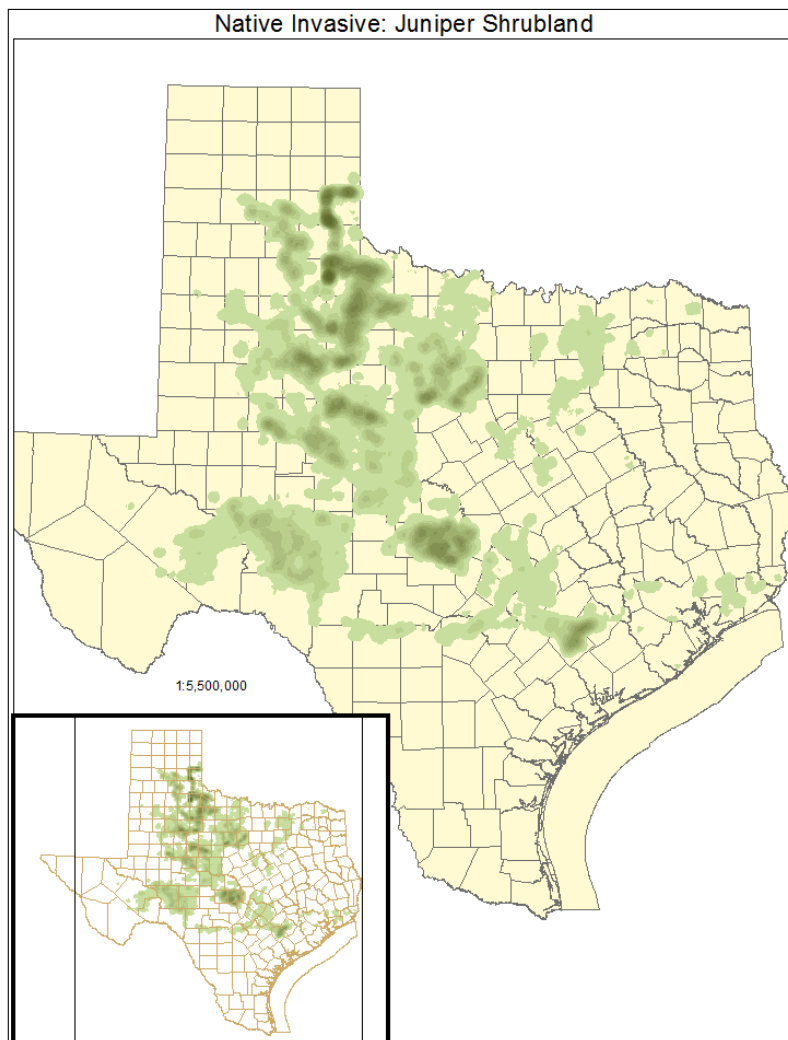
Lower Rio Grande Valley National Wildlife Refuge-Sam Fordyce Unit: US Fish and Wildlife Service

## NATIVE INVASIVE: JUNIPER SHRUBLAND

**Mapping System ID:** 9105

**EMS Description:** Various species of *Juniperus* (juniper) dominate these shrublands. *Juniperus virginiana* (eastern redcedar) is the primary dominant of these shrublands or low woodlands in the Blackland Prairie, Post Oak Savanna, and far northern Crosstimbers ecoregions. To the west, on the Rolling Plains, *Juniperus pinchotii* (redberry juniper) may be the dominant. In other areas, *Juniperus ashei* (Ashe juniper) may dominate these shrublands. Other sites mapped as this type may be dominated by *Ilex vomitoria* (yaupon). A variety of deciduous species may also be present, including *Ulmus crassifolia* (cedar elm), *Ulmus alata* (winged elm), *Celtis laevigata* (sugar hackberry), *Liquidambar styraciflua* (sweetgum), *Quercus nigra* (water oak), and *Prosopis glandulosa* (honey mesquite). To the east, sites dominated by young *Pinus taeda* (loblolly pine) may be mapped as this type.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Abilene State Park: Texas Parks & Wildlife Department  
Bastrop State Park: Texas Parks & Wildlife Department  
Big Bend Ranch State Park: Texas Parks & Wildlife Department  
Copper Breaks State Park: Texas Parks & Wildlife Department  
Devils River State Natural Area: Texas Parks & Wildlife Department  
E.V. Spence Reservoir Recreation Area: Texas Parks & Wildlife Department  
Elephant Mountain Wildlife Management Area: Texas Parks & Wildlife Department  
Fort Griffin State Historic Site: Texas Historical Commission  
Garner State Park: Texas Parks & Wildlife Department  
Hagerman National Wildlife Refuge: U. S. Fish and Wildlife Service  
Lake Colorado City State Park: Texas Parks & Wildlife Department  
Lake Lewisville Recreation Area: US Army Corps of Engineers  
Lake Witney Recreation Area: US Army Corps of Engineers  
Matador Wildlife Management Area: Texas Parks & Wildlife Department  
Navarro Mills Lake Recreation Area: US Army Corps of Engineers  
Possum Kingdom State Park: Texas Parks & Wildlife Department  
San Angelo State Park: Texas Parks & Wildlife Department  
Twin Butte Reservoir Recreation Area: Texas Parks & Wildlife Department

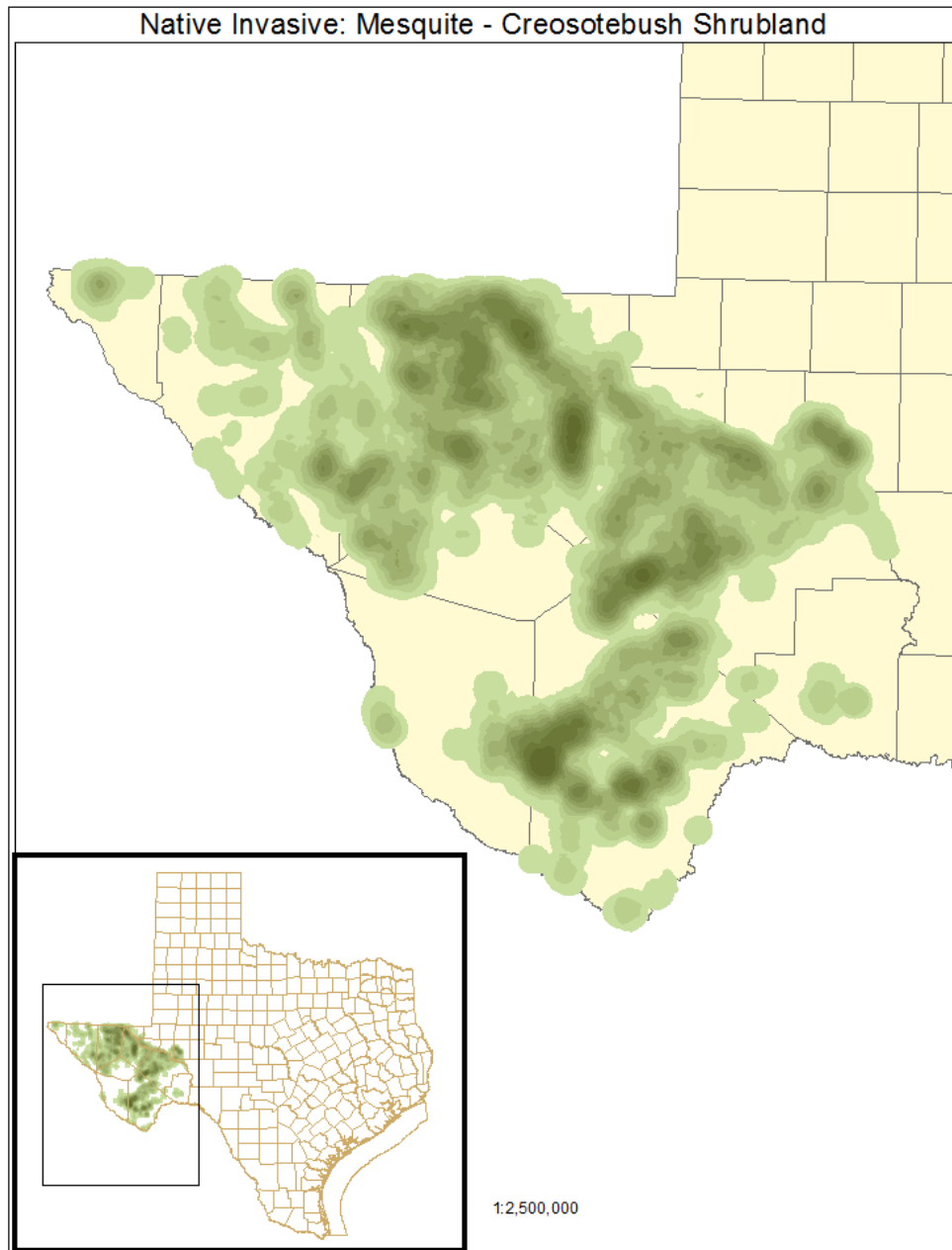


## NATIVE INVASIVE: MESQUITE - CREOSOTEBUSH SHRUBLAND

**Mapping System ID:** 9186

**EMS Description:** Invasive shrublands dominated by *Prosopis glandulosa* (honey mesquite) and/or *Larrea tridentata* (creosotebush). Other species such as *Flourensia cernua* (tarbush), *Parthenium incanum* (mariola), *Acacia constricta* (whitethorn acacia), and *Atriplex canescens* (four-wing saltbush) are commonly encountered.

**Distribution Map:**



**Example:**

*Not available at this time.*

**Public Land Occurrence:**

Big Bend National Park: Texas Parks & Wildlife Department

Black Gap Wildlife Management Area: Texas Parks & Wildlife Department

Elephant Mountain Wildlife Management Area: Texas Parks & Wildlife Department

Guadalupe Mountains National Park: US National Park Service

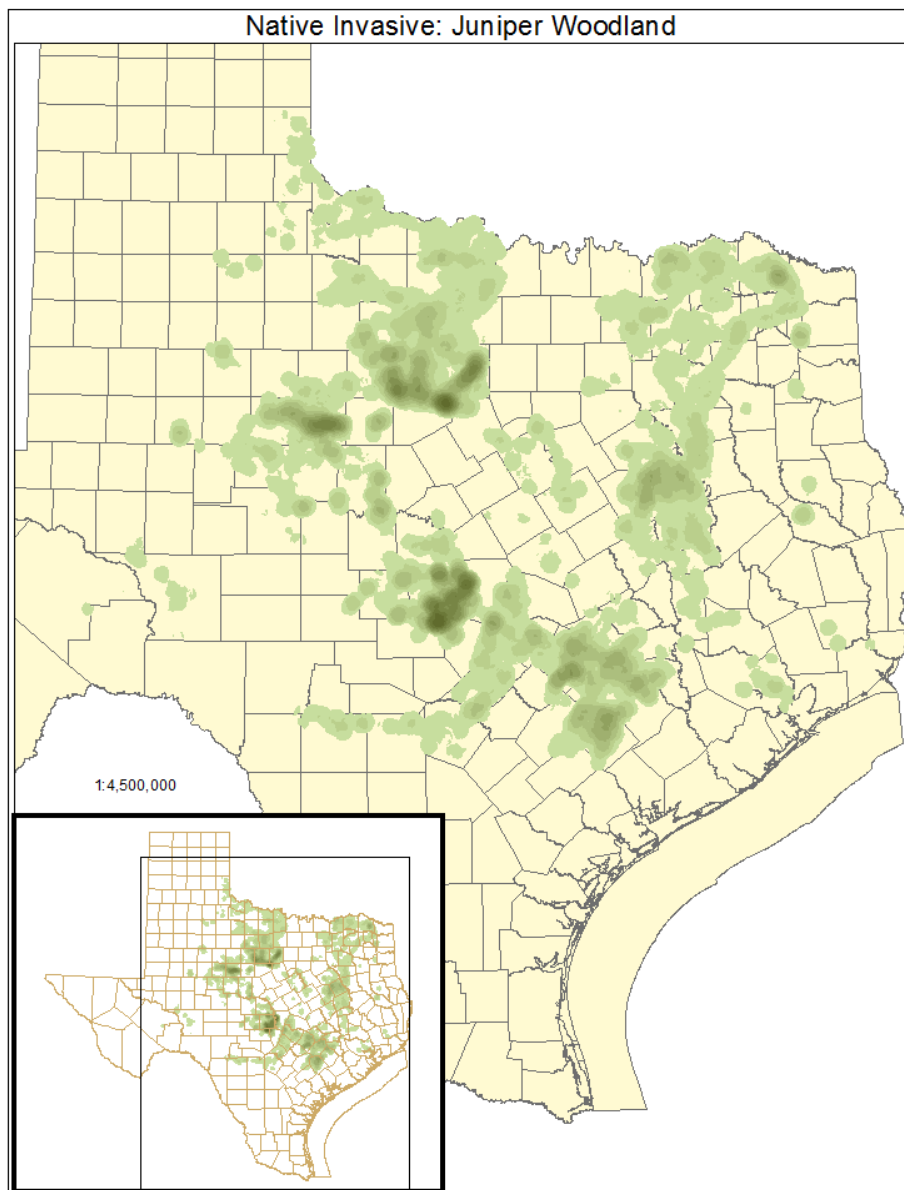


## NATIVE INVASIVE: JUNIPER WOODLAND

**Mapping System ID:** 9101

**EMS Description:** This type may be dominated either by *Juniperus ashei* (Ashe juniper) in the northwest, over Edwards Plateau limestones, or by *Juniperus virginiana* (eastern redcedar) in the northeast and east, or *Juniperus pinchotii* (redberry juniper) to the northwest. *Quercus fusiformis* (plateau live oak) is a common component, and species such as *Celtis laevigata* (sugar hackberry) and *Ulmus crassifolia* (cedar elm) occur throughout. *Quercus stellata* (post oak) and *Ilex vomitoria* (yaupon) are commonly associated with *Juniperus virginiana* (eastern redcedar).

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

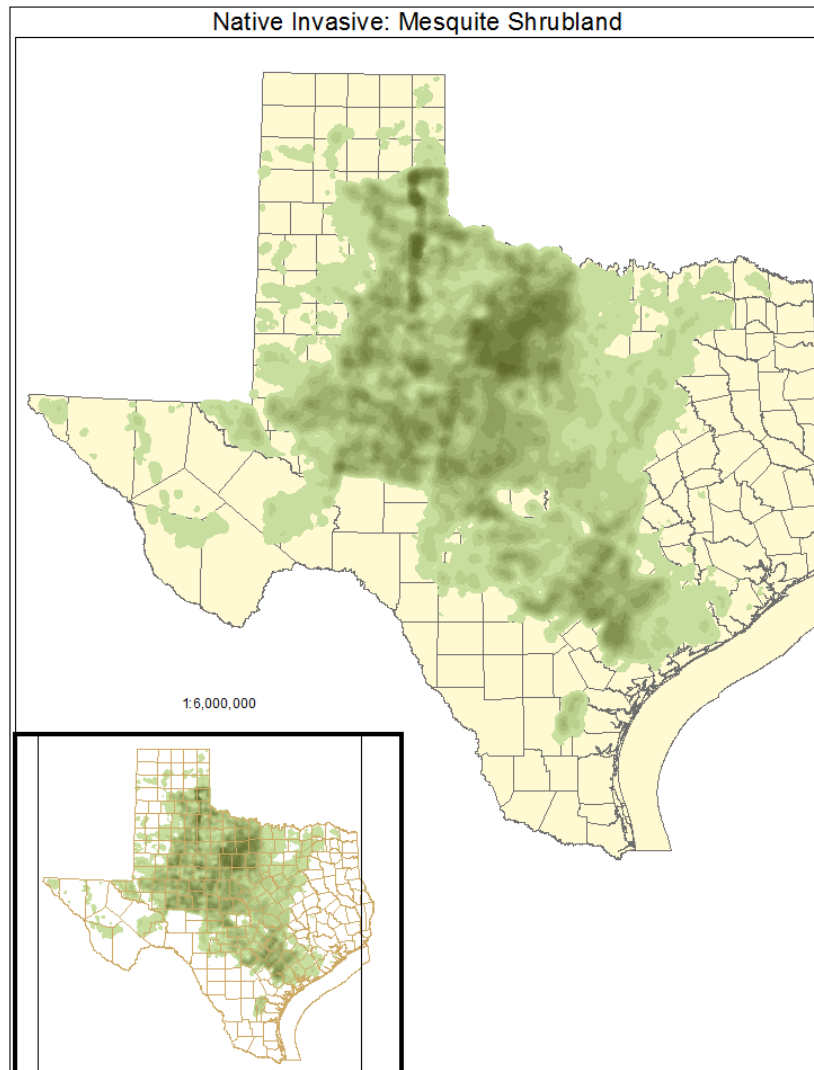
Abilene State Park: Texas Parks & Wildlife Department  
Caddo Lake National Grassland – Lake Fannin: US Forest Service  
Canyon of the Eagles Preserve: Lower Colorado River Authority  
Fort Griffin State Historic Site: Texas Historical Commission  
Garner State Park: Texas Parks & Wildlife Department  
Guadalupe Mountains National Park: Texas Parks & Wildlife Department  
Inks Lake State Park: Texas Parks & Wildlife Department  
Lake Whitney Recreation Area: US Army Corps of Engineers  
Lavon Lake Recreation Area: US Army Corps of Engineers  
Matador Wildlife Management Area: Texas Parks & Wildlife Department  
McKinney Falls State Park: Texas Parks & Wildlife Department  
San Angelo State Park: Texas Parks & Wildlife Department

## NATIVE INVASIVE: MESQUITE SHRUBLAND

**Mapping System ID:** 9106

**EMS Description:** *Prosopis glandulosa* (honey mesquite) is often the dominant species of this broadly-defined type, but species such as *Acacia farnesiana* (huisache), *Celtis laevigata* (sugar hackberry), *Juniperus ashei* (Ashe juniper), *Ulmus crassifolia* (cedar elm), *Ziziphus obtusifolia* (lotebush), *Mahonia trifoliolata* (agarito), *Ulmus alata* (winged elm), *Rhus* spp. (sumacs), *Condalia hookeri* (brasil), *Diospyros virginiana* (common persimmon), *Diospyros texana* (Texas persimmon), *Celtis ehrenbergiana* (granjeno), and *Opuntia engelmannii* var. *lindheimeri* (Lindheimer pricklypear) may also be important. Trees such as *Quercus fusiformis* (plateau live oak), *Quercus virginiana* (coastal live oak), or *Quercus stellata* (post oak) may form a sparse canopy.

**Distribution Map:**





**Example:**



**Public Land Occurrence:**

Abilene State Park: Texas Parks & Wildlife Department  
Amistad National Recreation Area: US National Park Service  
Aquilla Wildlife Management Area: Texas Parks & Wildlife Department  
Belton Lake Recreation Area: US Army Corps of Engineers  
Big Bend National Park: US National Park Service  
Copper Breaks State Park: Texas Parks & Wildlife Department  
Davis Mountains State Park: Texas Parks & Wildlife Department  
E.V. Spence Reservoir Recreation Area: Texas Parks & Wildlife Department  
Elephant Mountain Wildlife Management Area: Texas Parks & Wildlife Department  
Fort Griffin State Historic Site: Texas Historical Commission  
Fort Richardson State Park and Historical Site: Texas Parks & Wildlife Department  
Garner State Park: Texas Parks & Wildlife Department  
Granger Wildlife Management Area: Texas Parks & Wildlife Department  
Guadalupe Mountains National Park: US National Park Service  
Hords Creek Lake Recreation Area: US Army Corps of Engineers  
Hueco Tanks State Park & Historic Site: Texas Parks & Wildlife Department  
Independence Creek Preserve: The Nature Conservancy  
Kerr Wildlife Management Area: Texas Parks & Wildlife Department

Lake Arrowhead State Park: Texas Parks & Wildlife Department  
Lake Brownwood State Park: Texas Parks & Wildlife Department  
Lake Casa Blanca State Park: Texas Parks & Wildlife Department  
Lake Colorado City State Park: Texas Parks & Wildlife Department  
Lake Corpus Christi State Park: Texas Parks & Wildlife Department  
Las Palomas Wildlife Management Area: Texas Parks & Wildlife Department  
Lower Rio Grande Valley National Wildlife Refuge-El Morillo Banco Unit: US Fish and Wildlife Service  
Lower Rio Grande Valley National Wildlife Refuge-Kiskadee Unit: US Fish and Wildlife Service  
Lower Rio Grande Valley National Wildlife Refuge-La Joya Unit: US Fish and Wildlife Service  
Lower Rio Grande Valley National Wildlife Refuge-Pate Bend: US Fish and Wildlife Service  
Lower Rio Grande Valley National Wildlife Refuge-Sam Fordyce-North Unit: US Fish and Wildlife Service  
Matador Wildlife Management Area: Texas Parks & Wildlife Department  
Navarro Mills Lake Recreation Area: US Army Corps of Engineers  
Possum Kingdom State Park: Texas Parks & Wildlife Department  
Ray Roberts Lake Wildlife Management Area: Texas Parks & Wildlife Department  
San Angelo State Park: Texas Parks & Wildlife Department  
Twin Butte Reservoir Recreation Area: Texas Parks & Wildlife Department

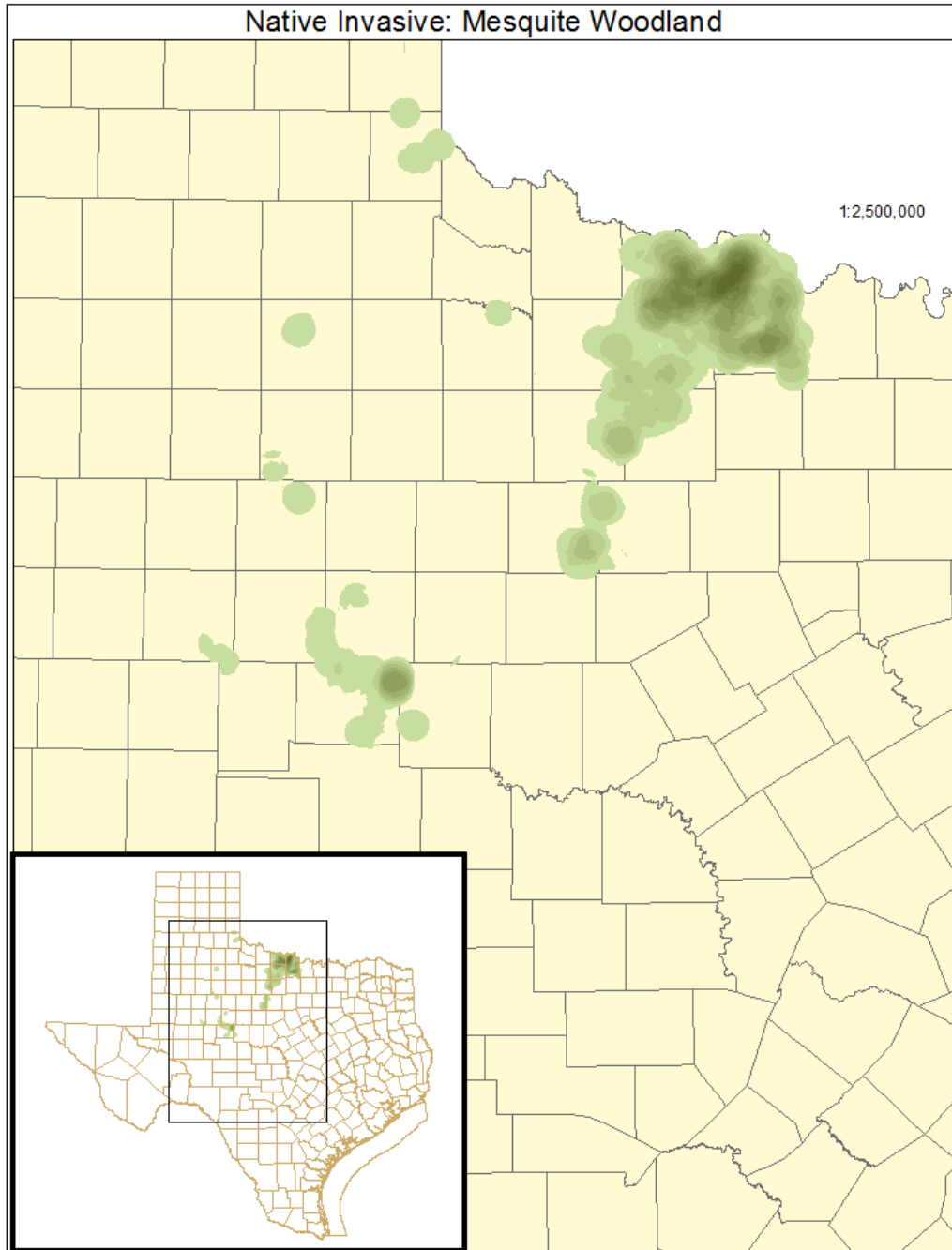


## NATIVE INVASIVE: MESQUITE WOODLAND

**Mapping System ID:** 9114

**EMS Description:** Areas where *Prosopis glandulosa* (honey mesquite) has invaded and grown to tree stature to dominate the canopy.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

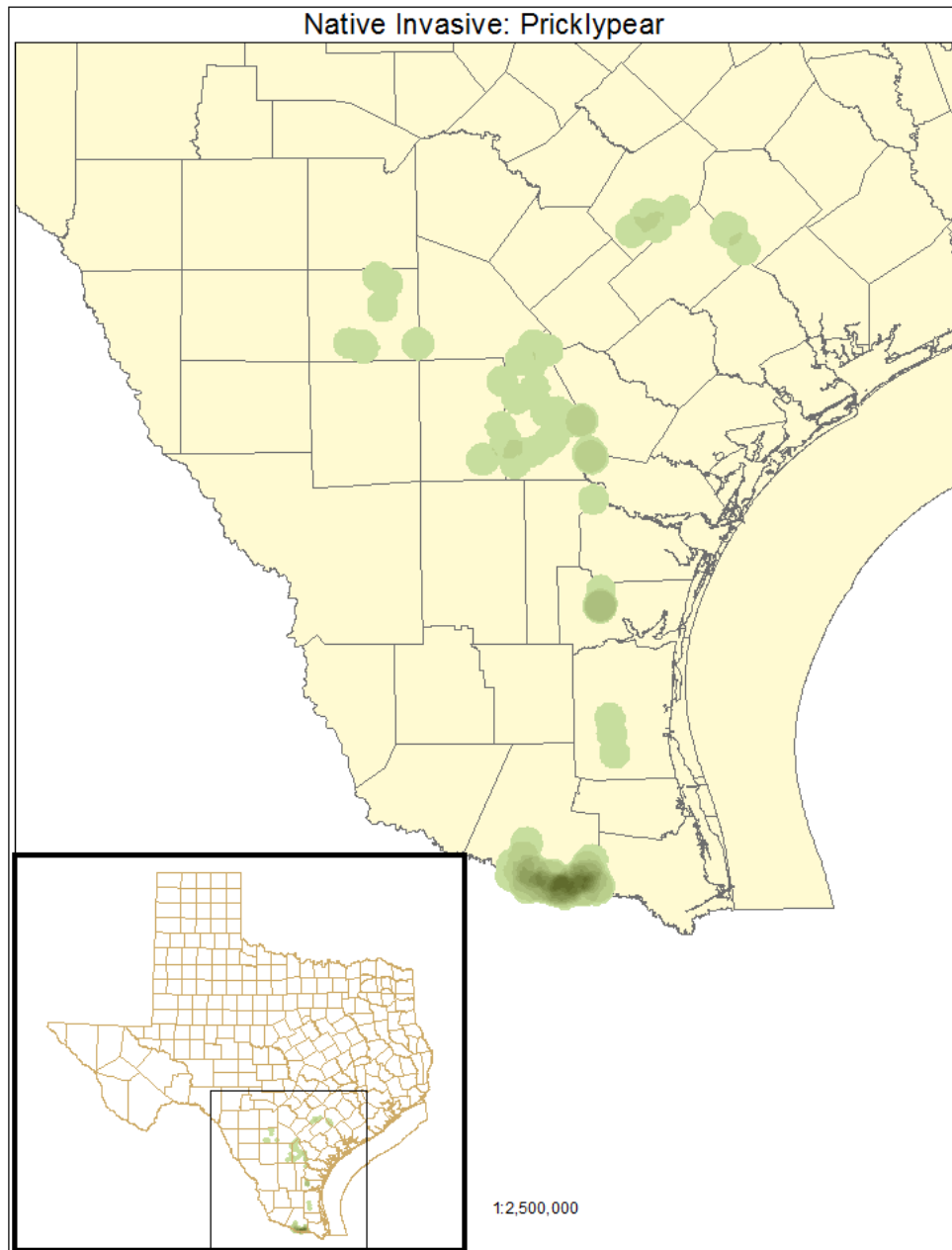
Lake Arrowhead State Park: Texas Parks & Wildlife Department

## NATIVE INVASIVE: PRICKLYPEAR

**Mapping System ID:** 9128

**EMS Description:** This type is only mapped on disturbed soils and may contain species such as *Prosopis glandulosa* (honey mesquite), *Acacia farnesiana* (huisache), *Celtis ehrenbergiana* (granjeno), and *Zanthoxylum fagara* (colima) as well as *Opuntia engelmannii* var. *lindheimeri* (Lindheimer pricklypear) among the dominants.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

*None.*



## NATIVE INVASIVE: SAND SAGEBRUSH SHRUBLAND

**Mapping System ID:** 9206

**EMS Description:** Shrublands dominated by *Artemisia filifolia* (sand sagebrush), usually in overgrazed and/or fire suppressed prairie soils. This species occupying deep sands would likely be mapped as Western Great Plains Sandhill Steppe (CES303.671).

**Distribution Map:**

*Not available.*

**Example:**



**Public Land Occurrence:**

*None.*

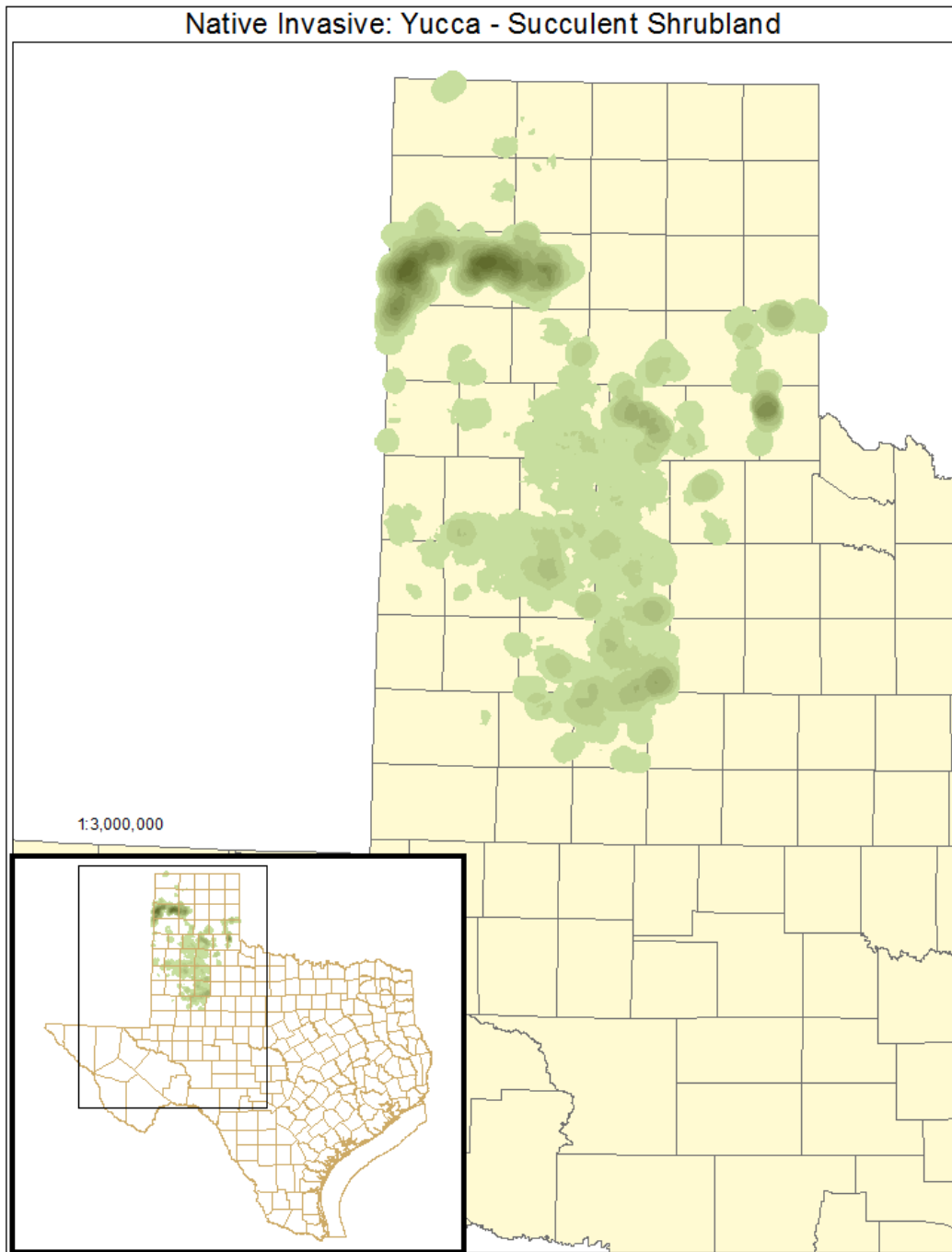


## NATIVE INVASIVE: YUCCA – SUCCULENT SHRUBLAND

**Mapping System ID:** 9118

**EMS Description:** Canopy dominated by shrub or succulent species such as *Yucca glauca* (narrowleaf yucca), *Cylindropuntia imbricata* (tree cholla), or *Opuntia* spp. (pricklypear).

**Distribution Map:**



**Example:**

*Not available at this time.*

**Public Land Occurrence:**

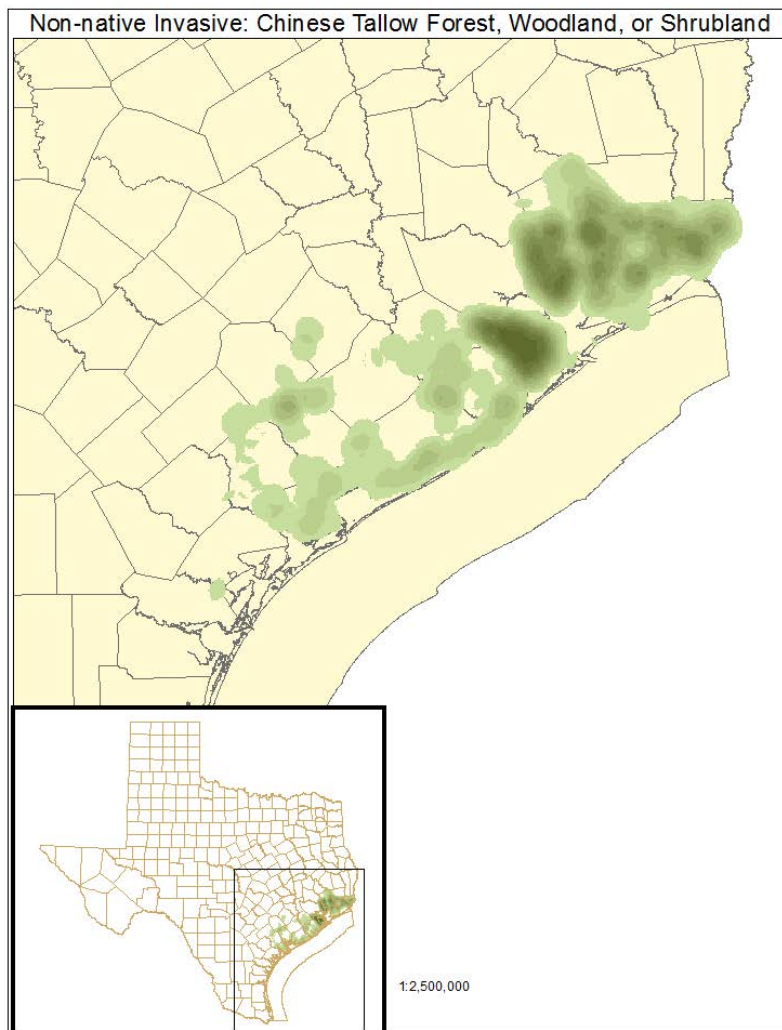
*None.*

## NON-NATIVE INVASIVE: CHINESE TALLOW FOREST, WOODLAND, AND SHRUBLAND

**Mapping System ID:** 9214

**EMS Description:** More or less dense stands of *Triadica sebifera* (Chinese tallow) characterize this type, which is generally mapped over prairie soils, but a diversity of mainly invasive deciduous shrublands and sparse woodlands are circumscribed. Other component species may include *Prosopis glandulosa* (honey mesquite), *Acacia farnesiana* (huisache), *Baccharis* spp. (baccharis), *Rosa bracteata* (Macartney rose), *Ulmus crassifolia* (cedar elm), *Quercus nigra* (water oak), *Ligustrum sinense* (Chinese privet), and *Ilex vomitoria* (yaupon). Sparse tree cover with *Celtis laevigata* (sugar hackberry), *Quercus nigra* (water oak), *Quercus phellos* (willow oak), *Quercus fusiformis* (plateau live oak), *Quercus virginiana* (coastal live oak), *Pinus taeda* (loblolly pine), and *Liquidambar styraciflua* (sweetgum) may be present.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

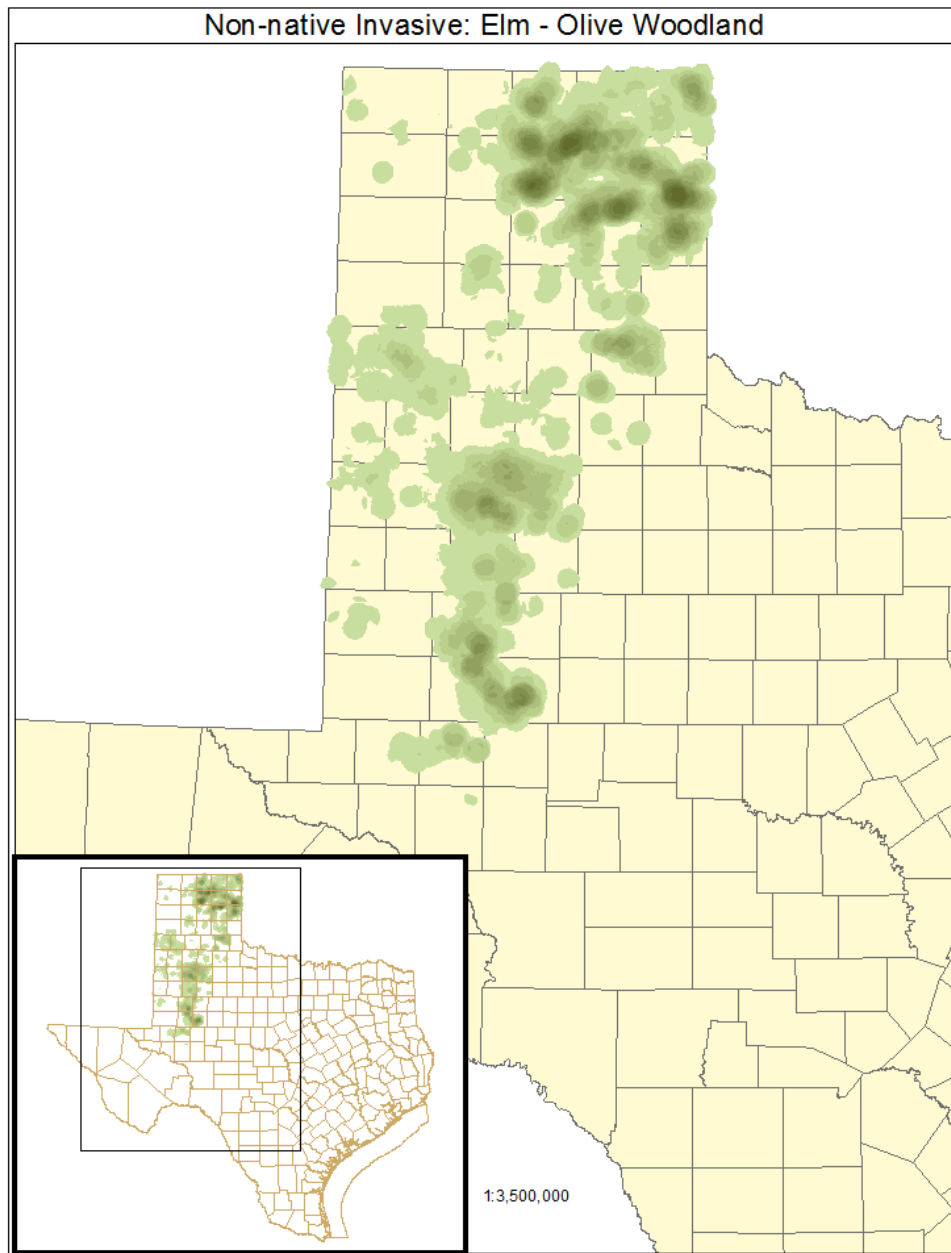
*None.*

## NON-NATIVE INVASIVE: ELM – OLIVE WOODLAND

**Mapping System ID:** 9224

**EMS Description:** This woodland typically occupies sites that do not naturally support woodland, but they may occur in floodplains or riparian sites as well. This type is often found on fence rows, home sites, and shelterbelt plantings typically of the High Plains and Rolling Plains. It is often dominated by *Ulmus pumila* (Siberian elm) and *Elaeagnus angustifolia* (Russian olive), though *Prosopis glandulosa* (honey mesquite) and *Celtis* spp. (hackberries) may also be present.

**Distribution Map:**





**Example:**

*Not available at this time.*

**Public Land Occurrence:**

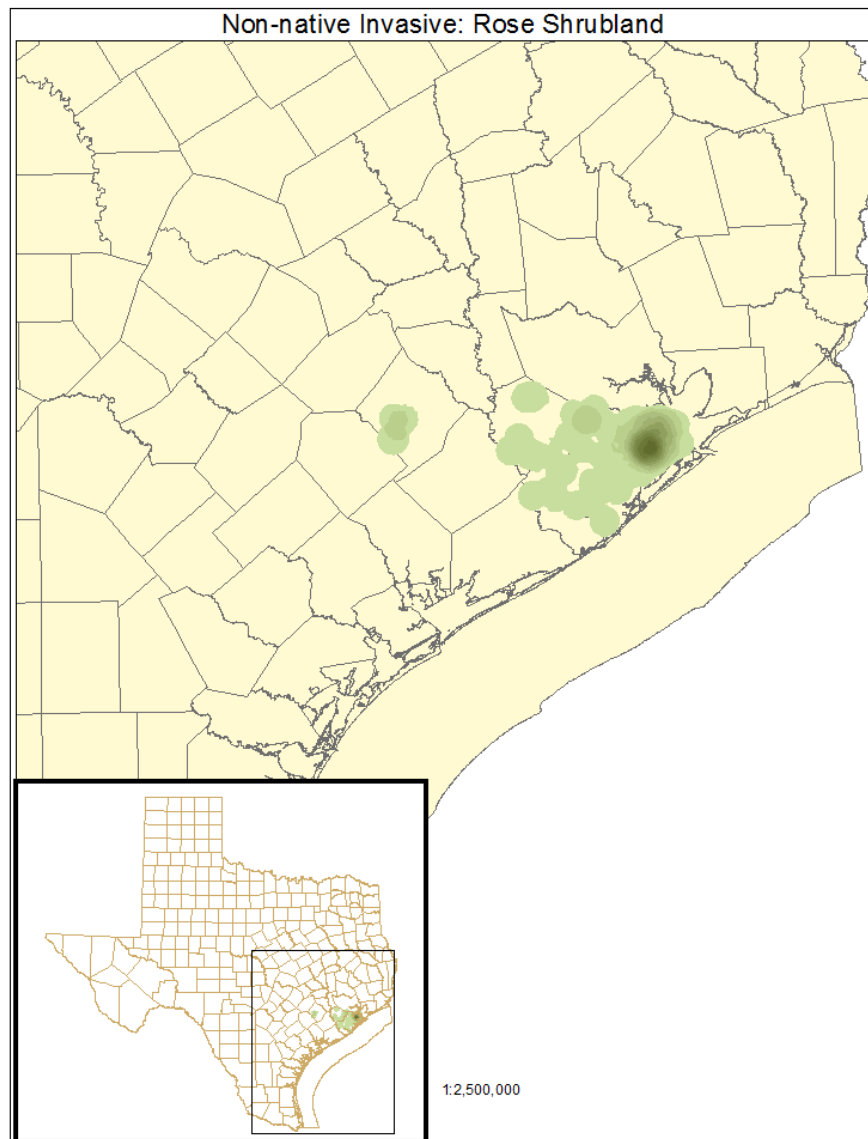
*None.*

## NON-NATIVE INVASIVE: ROSE SHRUBLAND

**Mapping System ID:** 9205

**EMS Description:** *Rosa bracteata* (Macartney rose) is the most common dominant of this type, but a variety of mainly invasive shrub types may occur, including species such as *Acacia farnesiana* (huisache), *Baccharis* spp. (baccharis), *Triadica sebifera* (Chinese tallow), *Celtis laevigata* (sugar hackberry), *Ulmus crassifolia* (cedar elm), and *Ilex vomitoria* (yaupon). Sparse tree cover with species such as *Quercus fusiformis* (plateau live oak), *Quercus virginiana* (coastal live oak), *Quercus nigra* (water oak), *Celtis laevigata* (sugar hackberry), and *Fraxinus pennsylvanica* (green ash) may also occur.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

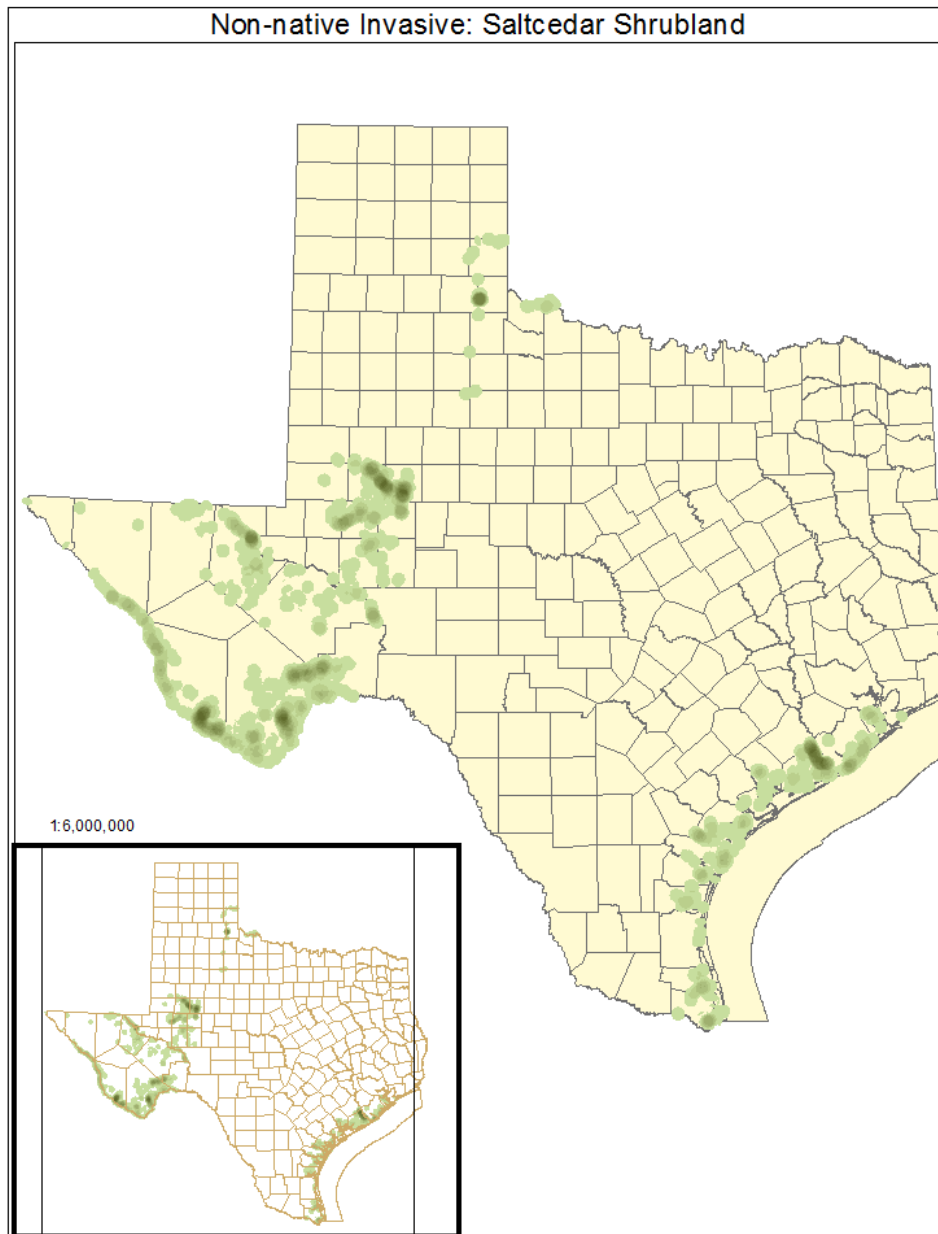
*None.*

## NON-NATIVE INVASIVE: SALT CEDAR SHRUBLAND

**Mapping System ID:** 9204

**EMS Description:** Mainly invasive shrublands are characteristic of this type and *Tamarix* spp. (salt cedars) is the most common dominant. Species such as *Iva frutescens* (shrubby sumpweed), *Baccharis* spp. (baccharis), *Prosopis glandulosa* (honey mesquite), *Acacia farnesiana* (huisache), *Celtis laevigata* (sugar hackberry), and *Borrichia frutescens* (sea ox-eye daisy) may also be present.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Big Bend National Park: US National Park Service

Big Bend Ranch State Park: Texas Parks & Wildlife Department

Black Gap Wildlife Management Area: Texas Parks & Wildlife Department

Las Palomas Wildlife Management Area: Texas Parks & Wildlife Department

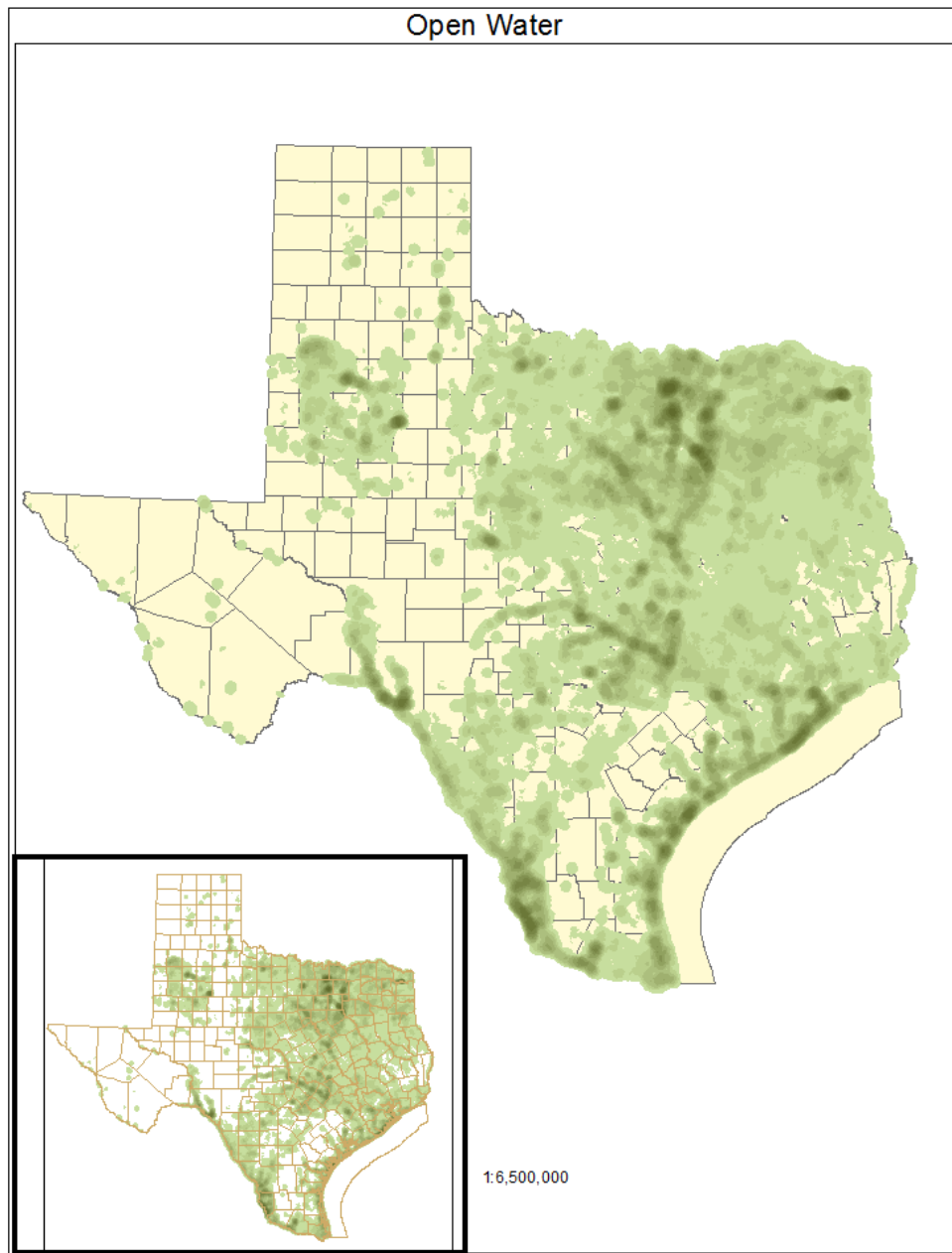


## OPEN WATER

**Mapping System ID:** 9600

**EMS Description:** In addition to large lakes, rivers, and marine water, ephemeral ponds may be mapped as open water. Some mapped areas may support vegetation with pioneering species such as *Salix nigra* (black willow), *Populus deltoides* (eastern cottonwood), *Triadica sebifera* (Chinese tallow), *Suaeda* spp. (seepweeds), *Borrchia frutescens* (sea ox-eye daisy), *Batis maritima* (saltwort), *Juncus* spp. (rushes), sedges, *Typha* spp. (cattails), and *Eleocharis* spp. (spikerushes).

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

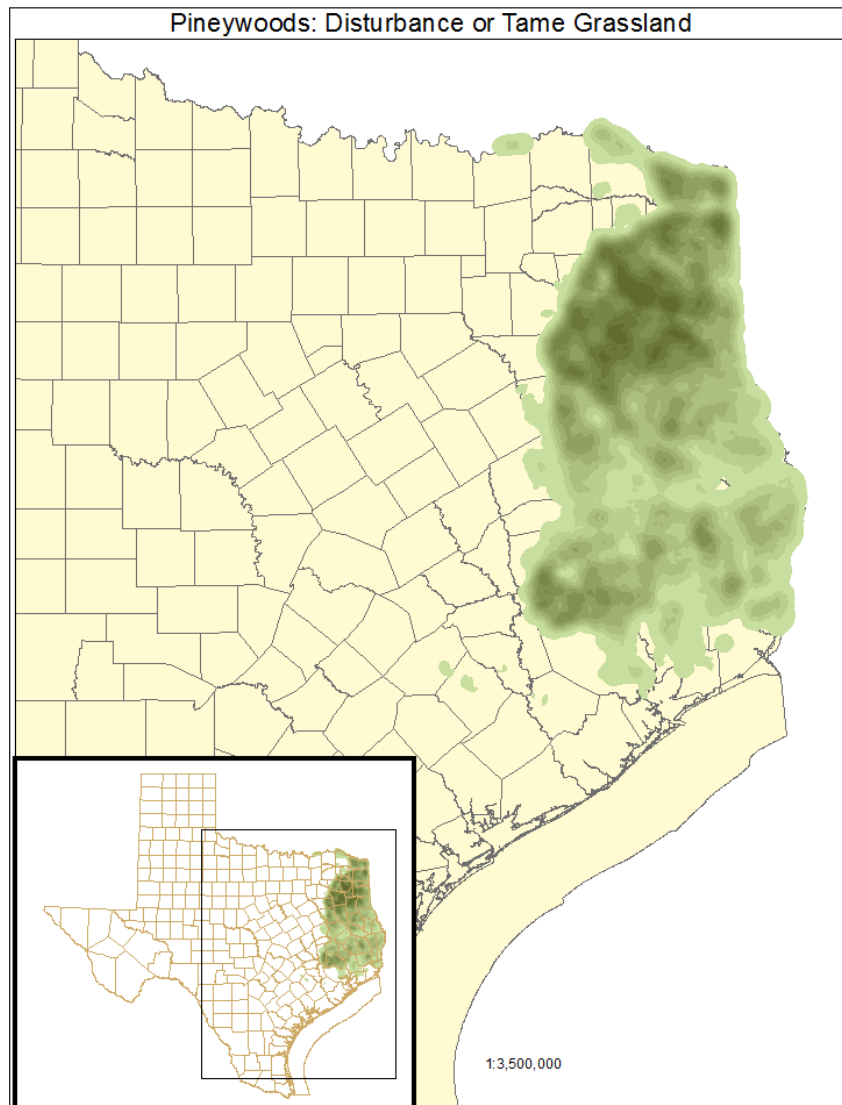
- Big Bend National Park: US National Park Service
- Big Bend Ranch State Park: Texas Parks & Wildlife Department
- Black Gap Wildlife Management Area: Texas Parks & Wildlife Department
- Copper Breaks State Park: Texas Parks & Wildlife Department
- Davis Mountains State Park: Texas Parks & Wildlife Department
- Elephant Mountain Wildlife Management Area: Texas Parks & Wildlife Department
- Fort Richardson State Park and Historical Site: Texas Parks & Wildlife Department
- Guadalupe Mountains National Park: US National Park Service
- Lake Arrowhead State Park: Texas Parks & Wildlife Department
- Lake Colorado City State Park: Texas Parks & Wildlife Department
- Las Palomas Wildlife Management Area: Texas Parks & Wildlife Department
- Possum Kingdom State Park: Texas Parks & Wildlife Department
- Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department
- Twin Butte Reservoir Recreation Area: Texas Parks & Wildlife Department

## PINEYWOODS: DISTURBANCE OR TAME GRASSLAND

**Mapping System ID:** 9197

**EMS Description:** This grass dominated vegetation type occurs within a landscape that would naturally be dominated by forest or woodland. Natural occurrences would be short-lived following natural disturbances, such as fire. The predominant cover often consists of non-native grass species such as *Cynodon dactylon* (bermudagrass), *Paspalum notatum* (Bahia grass), *Lolium perenne* (Italian ryegrass), *Schedonorus phoenix* (tall fescue), and/or *Bromus catharticus* (rescuegrass). However, native grasses such as *Schizachyrium scoparium* (little bluestem) and *Andropogon virginicus* (broomsedge bluestem) may also have significant cover. Various forbs and some woody species may also be present. These sites will develop significant woody cover in the absence of active management.

### Distribution Map:



**Example:**



**Public Land Occurrence:**

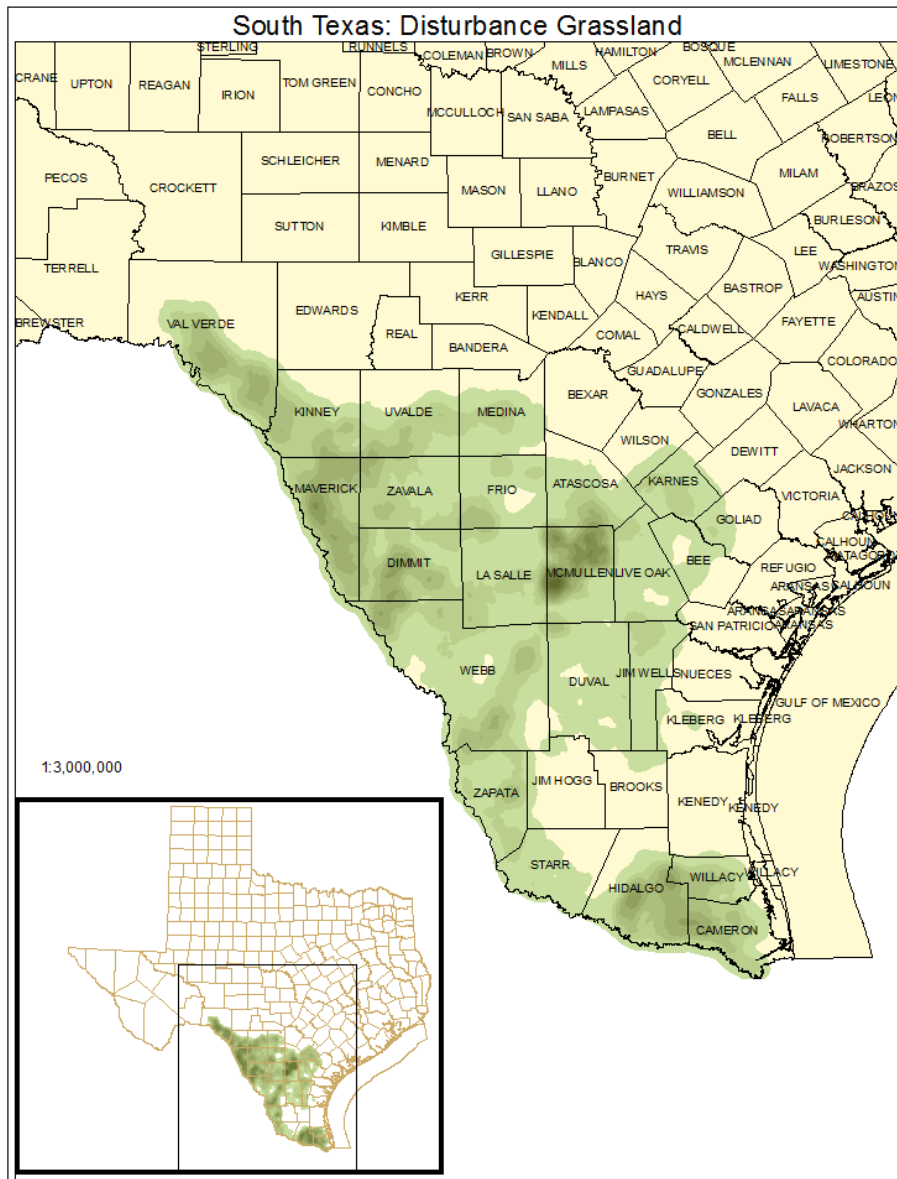
*None.*

## SOUTH TEXAS: DISTURBANCE GRASSLAND

**Mapping System ID:** 9187

**EMS Description:** A variety of mainly heavily grazed grasslands, including managed exotic pastures, are circumscribed within this type. Common dominant species include *Cynodon dactylon* (bermudagrass), *Dichanthium annulatum* (Kleberg bluestem), *Bothriochloa ischaemum* var. *songarica* (King Ranch bluestem), *Pennisetum ciliare* (buffelgrass), *Panicum coloratum* (kleingrass), *Aristida* spp. (threeawns), and *Urochloa maxima* (guineagrass). Shrubs and small trees such as *Prosopis glandulosa* (honey mesquite), *Acacia farnesiana* (huisache), *Ziziphus obtusifolia* (lotebush), and *Celtis ehrenbergiana* (granjeno) are common components.

### Distribution Map:





**Example:**



**Public Land Occurrence:**

Amistad National Recreation Area: US National Park Service

Chaparral Wildlife Management Area: Texas Parks & Wildlife Department

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

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

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

Lower Rio Grande Valley National Wildlife Refuge- La Joya Unit: 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- Los Fresnos Banco Unit: US Fish and Wildlife Service

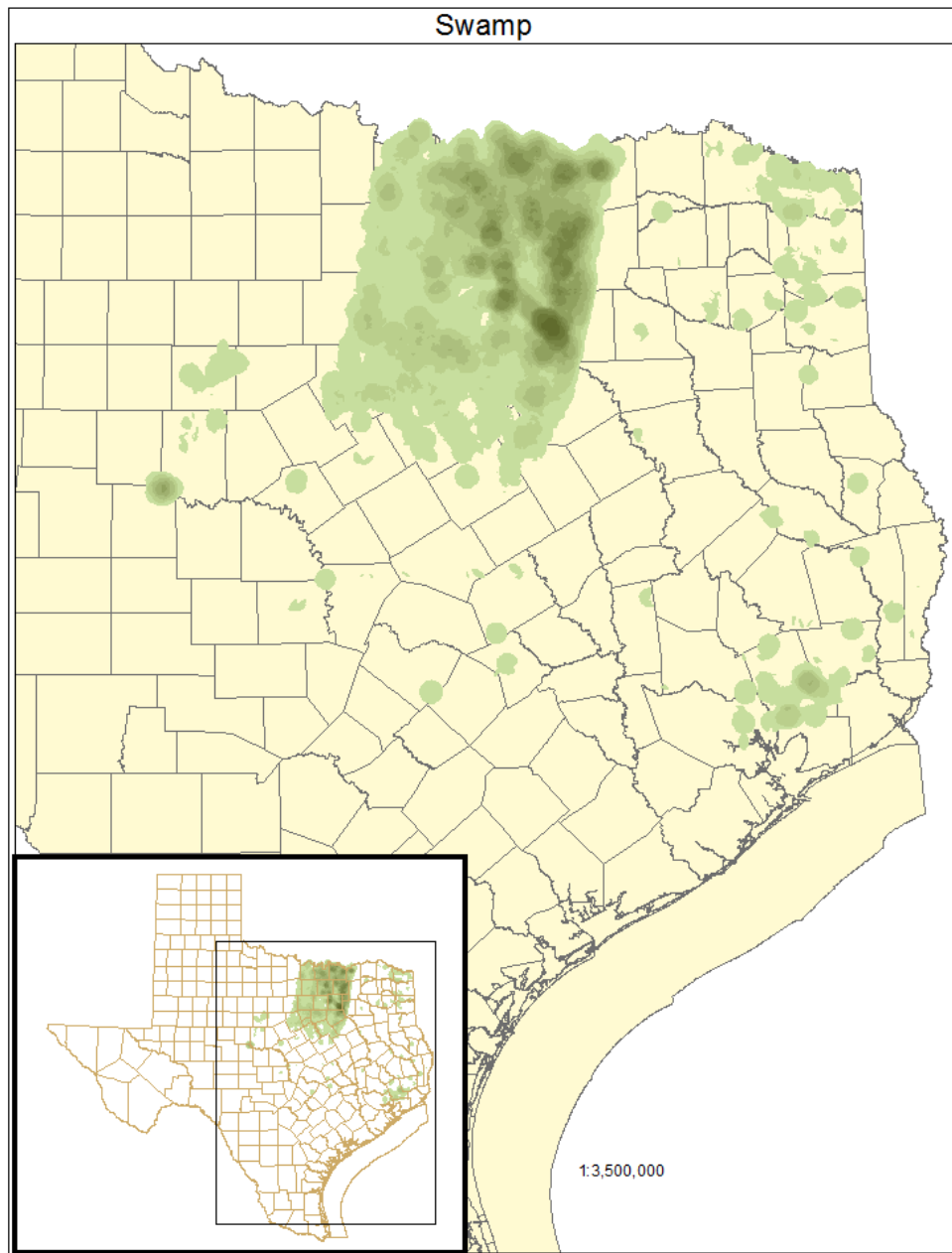
Seminole Canyon State Park/State Historic Site: Texas Parks & Wildlife Department

## SWAMP (or NON-RIVERINE SWAMP)

**Mapping System ID:** 9004

**EMS Description:** Typically forested, wet or alternately wet and dry soils at the upper ends of reservoirs, or on stock tanks or ponds. A variety of species, including *Taxodium distichum* (baldcypress), *Ulmus americana* (American elm), *Ulmus crassifolia* (cedar elm), *Salix nigra* (black willow), *Quercus macrocarpa* (bur oak), and *Quercus nigra* (water oak), *Liquidambar styraciflua* (sweetgum), or *Cephalanthus occidentalis* (common buttonbush) may be present.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Caddo National Grasslands – Lake Fannin: US Forest Service

Fort Worth Nature Center: Tarrant County

Grapevine Lake Recreation Area: US Army Corps of Engineers

Hagerman National Wildlife Refuge: U. S. Fish and Wildlife Service

Lake Lewisville Recreation Area: US Army Corps of Engineers

Lavon Lake Recreation Area: US Army Corps of Engineers

Mountain Creek Lake Park: City of Duncanville

Ray Roberts Lake Wildlife Management Area: Texas Parks & Wildlife Department