WESTERN GULF COASTAL PLAIN LARGE RIVER FLOODPLAIN FOREST

Nature Serve ID: CES203.488

Geology: Typically occupying Quaternary Alluvium along major rivers including the Trinity (downstream of Cobb Creek), Neches, Angelina, Sabine, Sulphur, and San Jacinto, and a few of their major tributaries.

Landform: Broad floodplains with significant development of bottomland soils. These areas include an array of local geomorphic features such as natural levees, point bars, meander scrolls, oxbows, terraces, and sloughs.

Soils: This system occupies soils of various textures derived from alluvial processes of the associated rivers. The hydrology of these soils is variable, including temporary, seasonal, semi-permanent flooding regimes.

Parent Description: This system is typically represented by forests that vary relative to the flooding regime, which is often controlled by local topographic variation and proximity to the river. Swamps are typically represented by forests of *Taxodium distichum* (baldcypress), with other species such as *Nyssa aquatica* (water tupelo), *Gleditsia aquatica* (water honeylocust), and *Carya aquatica* (water hickory) also present. Some semi-permanently flooded sites may also be dominated by *Planera aquatica* (water elm). Floating aquatics, such as *Lemna minor* (common duckweed), *Potamogeton* spp. (pondweeds), *Ceratophyllum demersum* (coontail), and *Nymphaea odorata* (American waterlily) may also be present at those sites. *Quercus lyrata* (overcup oak) is characteristic of seasonally flooded bottomlands, but numerous other species are also important components of the canopy, including *Taxodium distichum* (baldcypress), *Quercus phellos* (willow oak), *Fraxinus pennsylvanica* (green ash), *Liquidambar styraciflua* (sweetgum), *Nyssa biflora* (swamp tupelo), *Fraxinus caroliniana* (Carolina ash), and *Quercus similis* (bottomland post oak). Commonly encountered, and sometimes dominant, species of temporarily flooded sites include *Liquidambar styraciflua* (sweetgum), *Quercus nigra* (water oak), and *Fraxinus pennsylvanica* (green ash). Numerous other species, such as *Quercus laurifolia* (laurel oak), *Quercus michauxii* (swamp chestnut oak), *Quercus pagoda* (cherrybark oak), *Celtis laevigata* (sugar hackberry), *Acer rubrum* (red maple), *Ulmus crassifolia* (cedar elm), *Ulmus americana* (American elm), and *Carya illinoinensis* (pecan) may also be important components of the canopy. *Platanus occidentalis* (American sycamore), *Populus deltoides* (eastern cottonwood), *Betula nigra* (river birch), and *Salix nigra* (black willow) are more conspicuous as early successional species along the riverfront. Understory and shrub cover is variable, but is typically relatively low, particularly in more frequently flooded sites and sites with significant overstory canopy. The understory may have small individuals of the overstory, as well as species such as *Alnus serrulata* (smooth alder), *Arundinaria gigantea* (giant cane), *Carpinus caroliniana* (American hornbeam), *Ilex decidua* (possumhaw), *Ilex opaca* (American holly), *Callicarpa americana* (American beautyberry), *Crataegus viridis* (green hawthorn), *Crataegus marshallii* (parsley hawthorn), *Crataegus opaca* (riverflat hawthorn), *Styrax americanus* (American snowbell), *Ditrysinia fruticosa* (sebastian-bush), *Sambucus nigra* ssp. *canadensis* (common elderberry), *Cephalanthus occidentalis* (common buttonbush), *Forestiera acuminata* (swamp privet), *Planera aquatica* (water elm), and/or *Sabal minor* (dwarf palmetto). Where the overstory canopy is open, *Planera aquatica* (water elm), *Cephalanthus occidentalis* (common buttonbush), or *Forestiera acuminata* (swamp privet) may form dense stands. Woody vines that may be encountered include *Berchemia scandens* (Alabama supplejack),

Smilax bona-nox (saw greenbrier), *Vitis rotundifolia* (muscadine grape), *Toxicodendron radicans* (poison ivy), and *Campsis radicans* (trumpet creeper). Herbaceous species may include *Boehmeria cylindrica* (false nettle), *Saururus cernuus* (lizard's tail), *Saccharum baldwinii* (narrow plumegrass), *Elymus virginicus* (Virginia wildrye), *Onoclea sensibilis* (sensitive fern), *Carex cherokeensis* (Cherokee sedge), *Carex intumescens* (bladder sedge), *Carex joorii* (cypress swamp sedge), *Carex debilis* (spindlefruit sedge), other *Carex* (sedge) species, *Chasmanthium latifolium* (creek oats), *Chasmanthium sessiliflorum* (narrowleaf woodoats), *Justicia ovata* (looseflower waterwillow), *Bidens aristosa* (bearded beggarticks), *Panicum hemitomon* (maidencane), *Leersia virginica* (Virginia cutgrass), and numerous others. *Pinus taeda* (loblolly pine) may be found, particularly on some better drained sites, and where it has been planted. *Triadica sebifera* (Chinese tallow) sometimes invades this system.

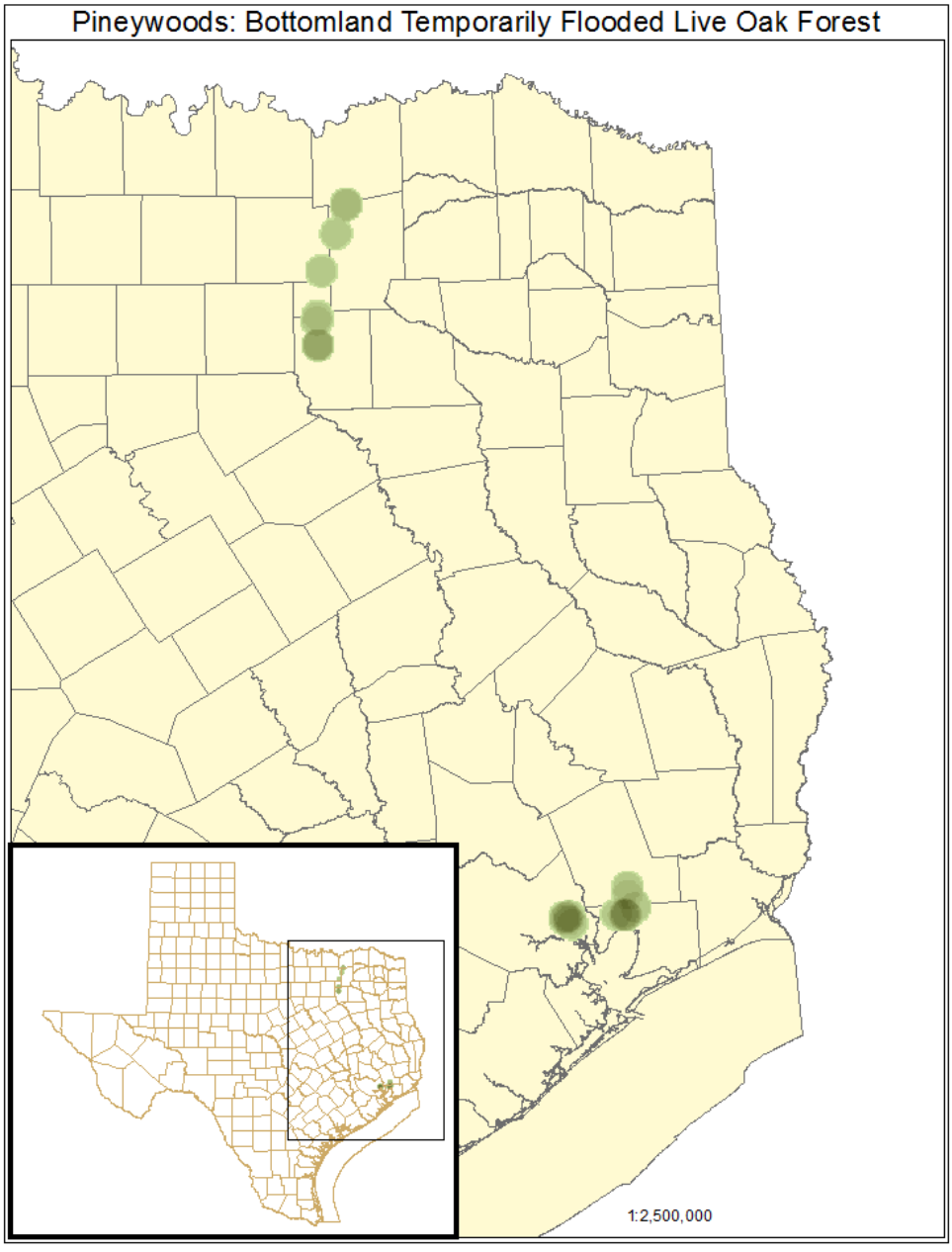
ECOLOGICAL MAPPING SYSTEMS:

PINEYWOODS: BOTTOMLAND TEMPORARILY FLOODED LIVE OAK FOREST

Mapping System ID: 4902

EMS Description: This very minor component of the system is dominated by broadleaf evergreen species. However, some cold deciduous species that retain their leaves for extended periods, such as *Quercus nigra* (water oak) and *Quercus laurifolia* (laurel oak), may actually dominate these sites.

Distribution Map:



Example:

Not available at this time.

Public Land Occurrence:

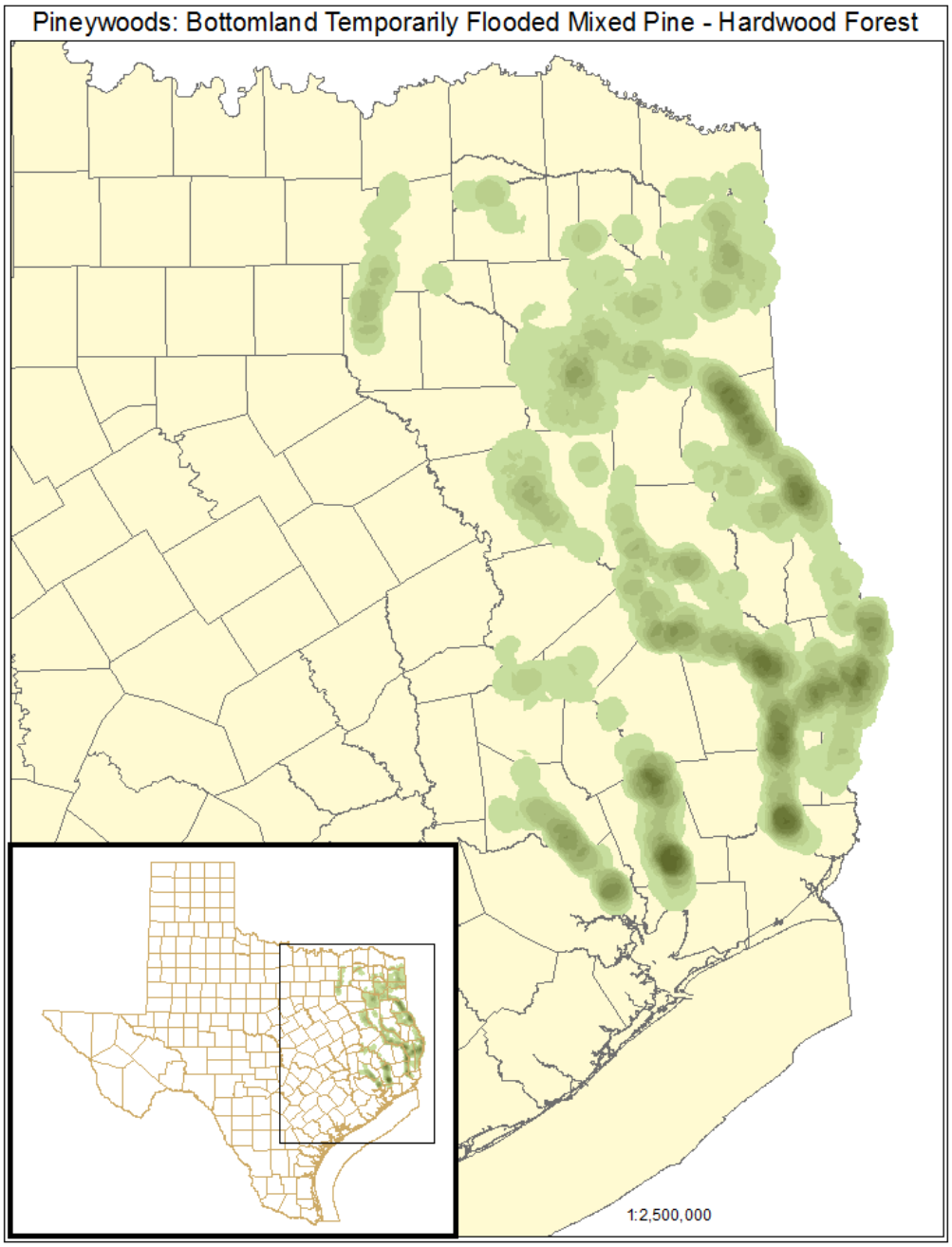
None.

PINEYWOODS: BOTTOMLAND TEMPORARILY FLOODED MIXED PINE / HARDWOOD FOREST

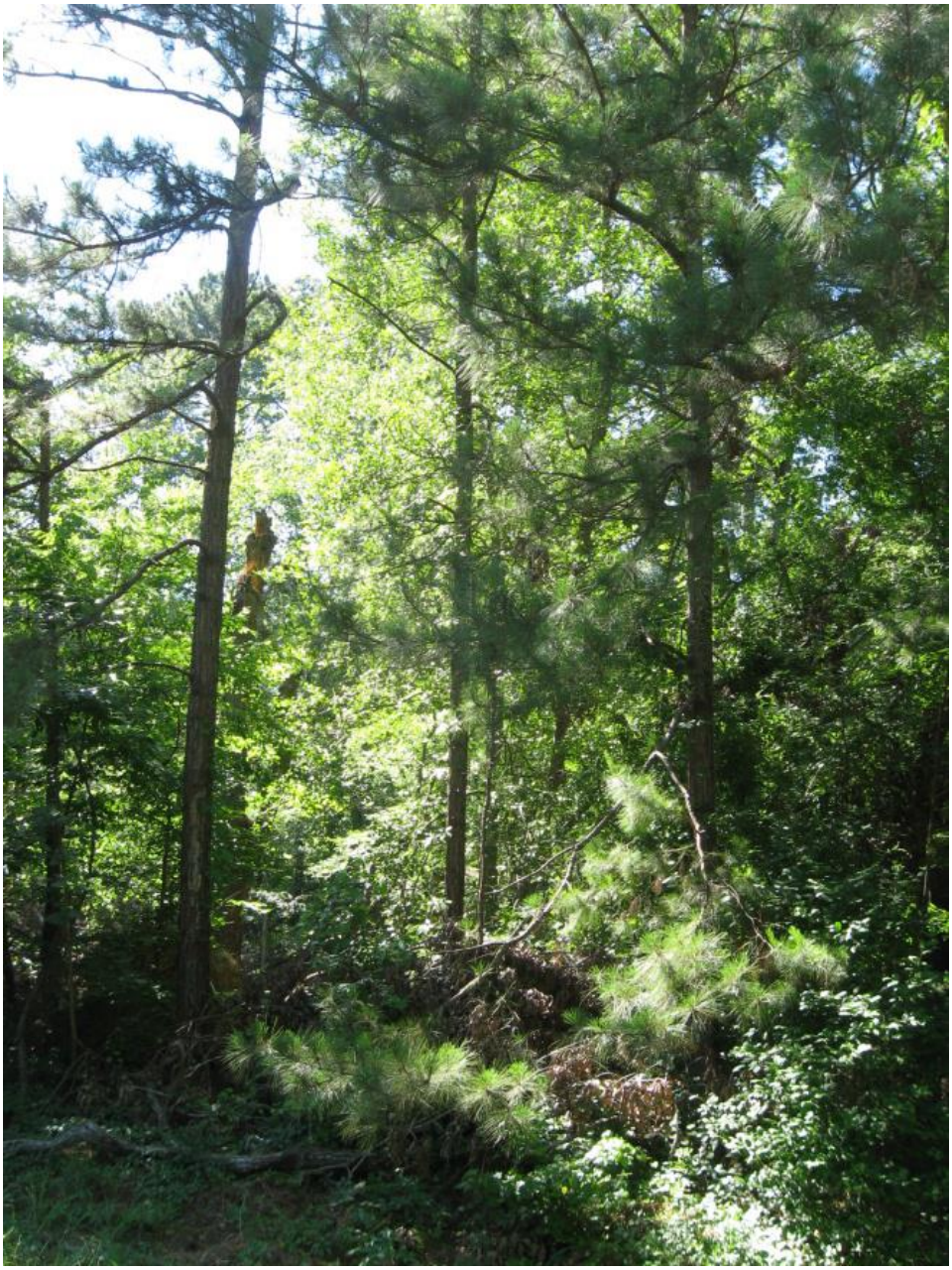
Mapping System ID: 4903

EMS Description: *Pinus taeda* (loblolly pine) forms a significant portion of the canopy in this type. Areas that are clearly dominated by pine, typically *Pinus taeda* (loblolly pine), are mapped as Pine Plantation.

Distribution Map:



Example:



Public Land Occurrence:

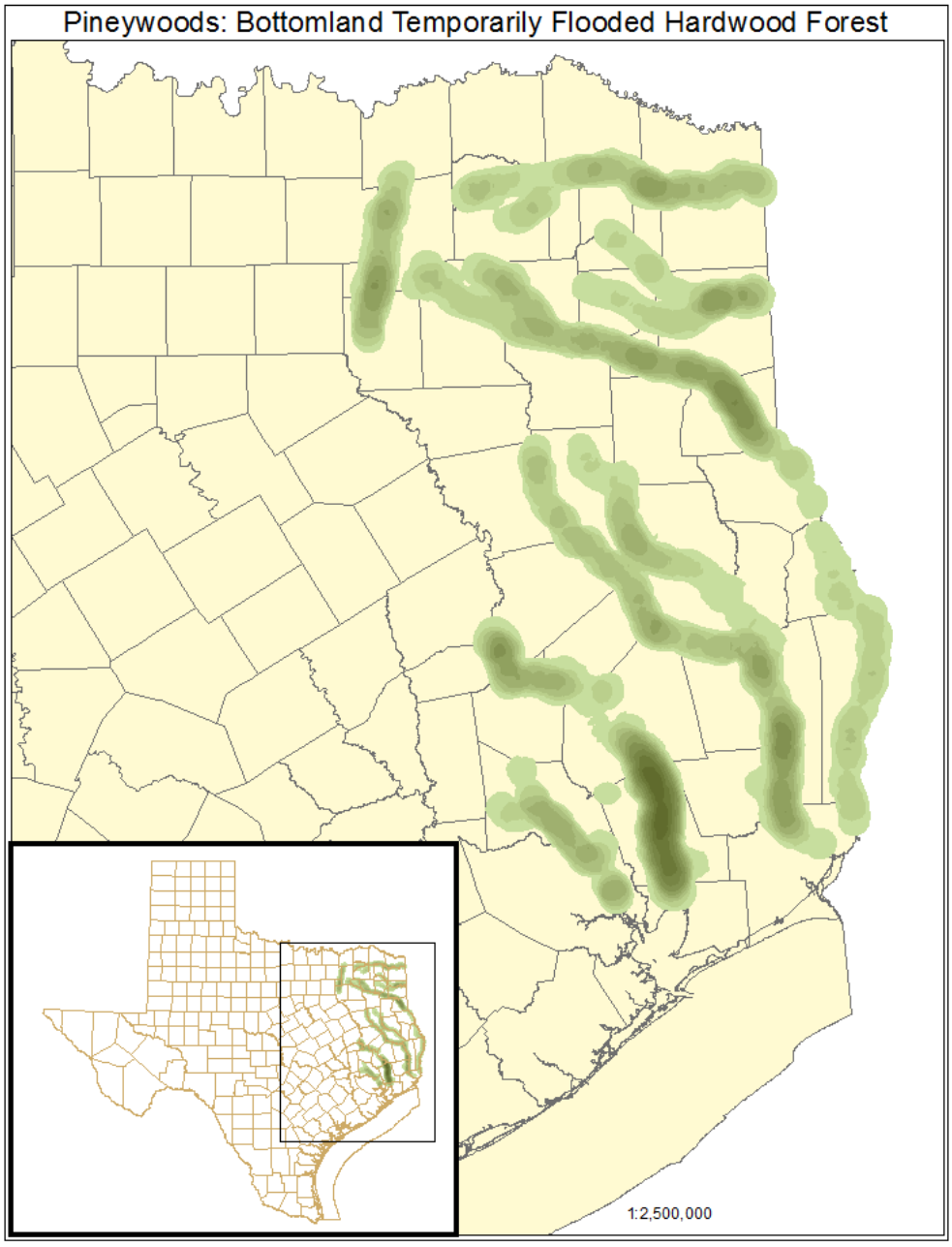
Angelina National Forest: US Forest Service
Big Thicket National Preserve: US National Park Service
Jim Chapman Lake/Cooper Dam: US Army Corps of Engineers
Davy Crockett National Forest: US Forest Service
Dwight D. Eisenhower Park: City of San Antonio
Sabine National Forest: US Forest Service

PINEYWOODS: BOTTOMLAND TEMPORARILY FLOODED HARDWOOD FOREST

Mapping System ID: 4904

EMS Description: This mapped type makes up a significant percentage of the system as it is mapped. The common canopy species are *Liquidambar styraciflua* (sweetgum), *Quercus nigra* (water oak), and *Fraxinus pennsylvanica* (green ash), although numerous other species may be important to dominant components. *Triadica sebifera* (Chinese tallow) may be a canopy dominant within this mapped type.

Distribution Map:



Example:

Public Land Occurrence:

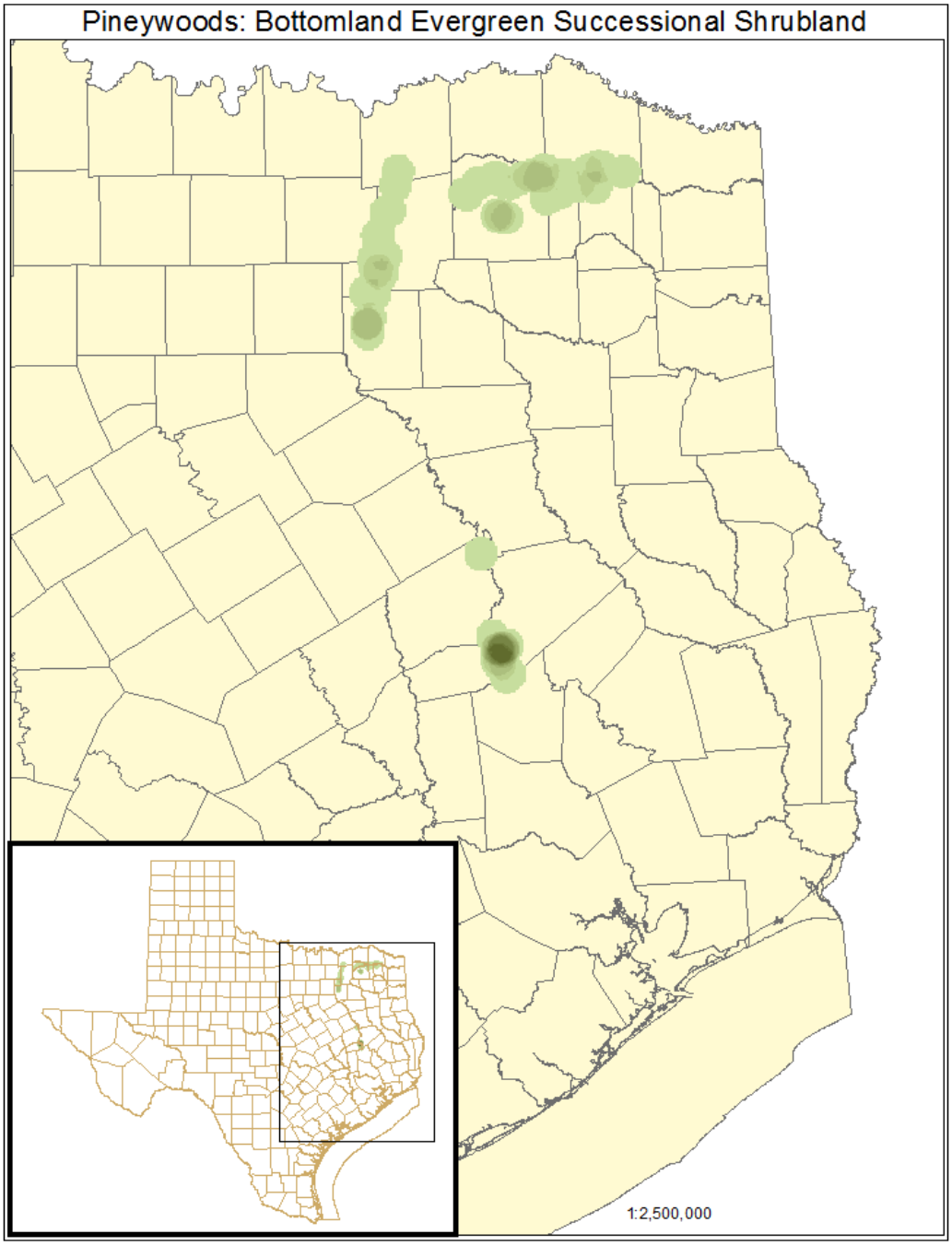
Big Thicket National Preserve: US National Park Service
Caddo National Grasslands Wildlife Management Area: Texas Parks & Wildlife Department
Davis Hill State Park: Texas Parks & Wildlife Department
Old Sabine Bottom Wildlife Management Area: Texas Parks & Wildlife Department
Sabine National Forest: US Forest Service
Trinity River National Wildlife Refuge: US Fish and Wildlife Service
White Oak Creek Wildlife Management Area: Texas Parks & Wildlife Department
Wright Patman Lake: US Army Corps of Engineers

PINEYWOODS: BOTTOMLAND EVERGREEN SUCCESSIONAL SHRUBLAND

Mapping System ID: 4905

EMS Description: This minor component of the system represents transitional sites that may be dominated by *Juniperus virginiana* (eastern redcedar), or may be young planted *Pinus taeda* (loblolly pine).

Distribution Map:



Example:

Public Land Occurrence:

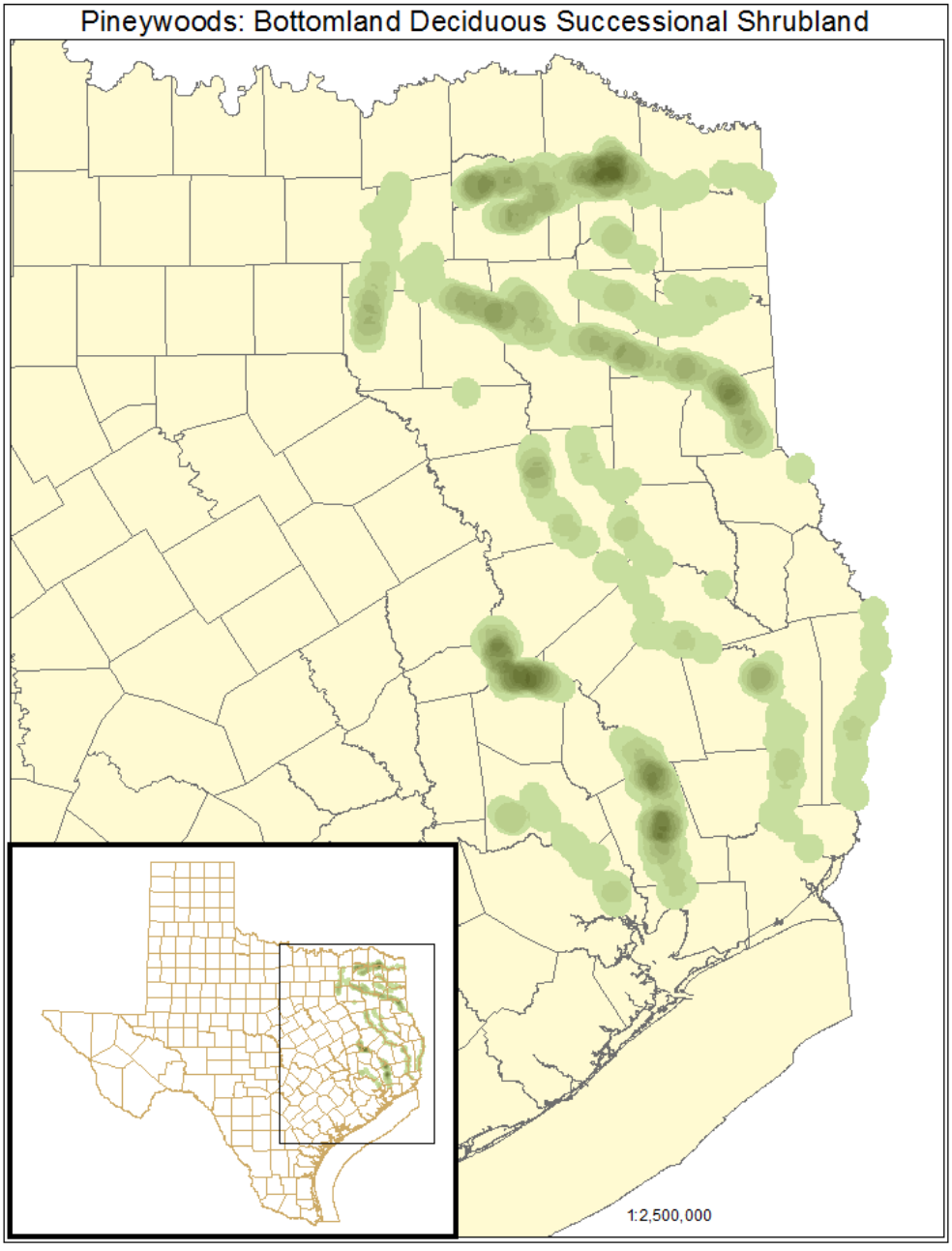
None.

PINEYWOODS: BOTTOMLAND DECIDUOUS SUCCESSIONAL SHRUBLAND

Mapping System ID: 4906

EMS Description: This mapped type may be composed of young trees, especially early successional species such as *Salix nigra* (black willow), *Fraxinus pennsylvanica* (green ash), *Platanus occidentalis* (American sycamore), *Acer negundo* (boxelder), or others. Shrublands may be dominated by species such as *Cephalanthus occidentalis* (common buttonbush), *Forestiera acuminata* (swamp privet), or *Ilex decidua* (possumhaw).

Distribution Map:



Example:

Public Land Occurrence:

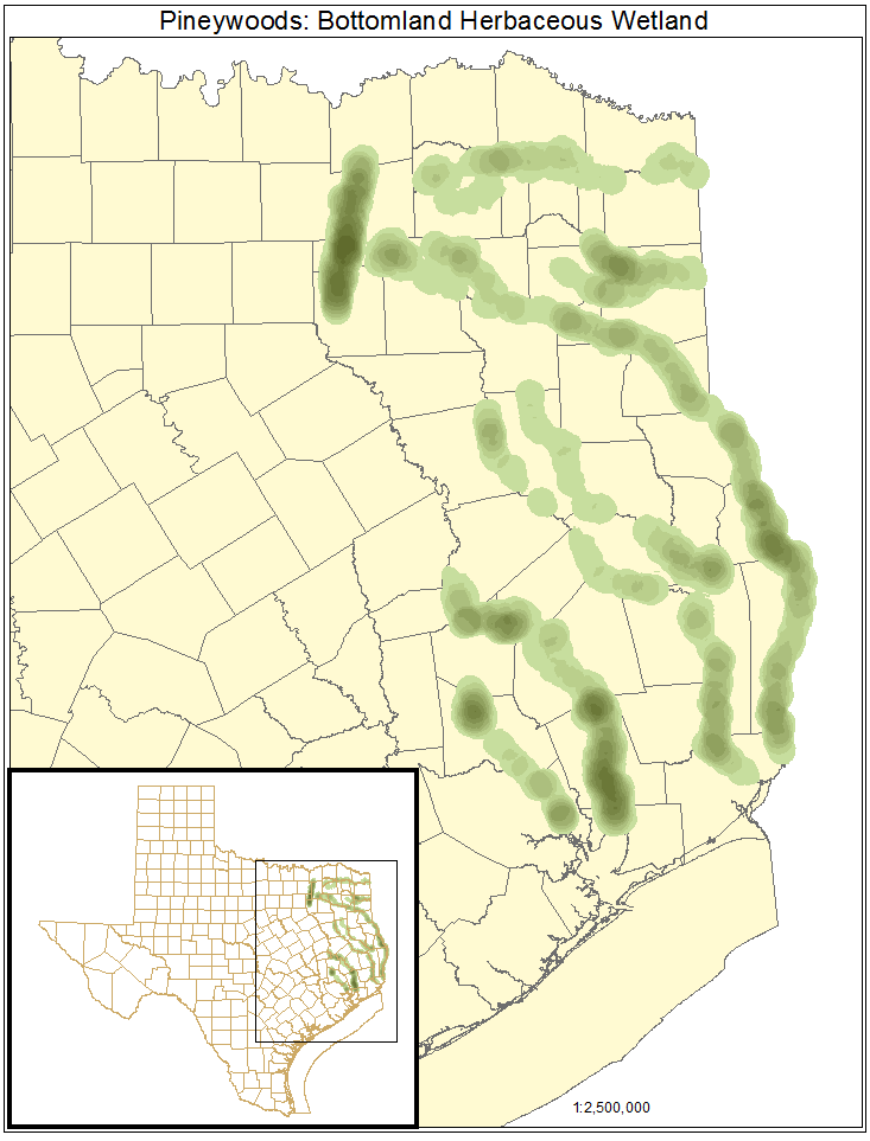
None.

PINEWOODS: BOTTOMLAND HERBACEOUS WETLAND

Mapping System ID: 4907

EMS Description: This mapped type corresponds to marsh landcover that occurs on bottomland soils. Occurrences may consist of graminoids such as *Eleocharis* spp. (spikerushes), *Typha* spp. (cattails), *Rhynchospora* spp. (beaksedges), *Juncus* spp. (rushes), *Scirpus cyperinus* (woolgrass bulrush), *Panicum hemitomon* (maidencane), *Zizaniopsis miliacea* (marshmillet), *Saccharum baldwinii* (narrow plumegrass), and/or *Carex* spp. (caric sedges). *Nymphaea odorata* (American waterlily), *Ludwigia* spp. (primroses), *Polygonum* spp. (smartweeds), *Heteranthera* spp. (mudplantains), *Echinodorus cordifolius* (heartleaf burhead), *Sagittaria* spp. (arrowheads), and other herbaceous wetland plants may also be common. These occurrences tend to be somewhat wetter than Pineywoods: Bottomland Wet Prairie.

Distribution Map:



Example:

Public Land Occurrence:

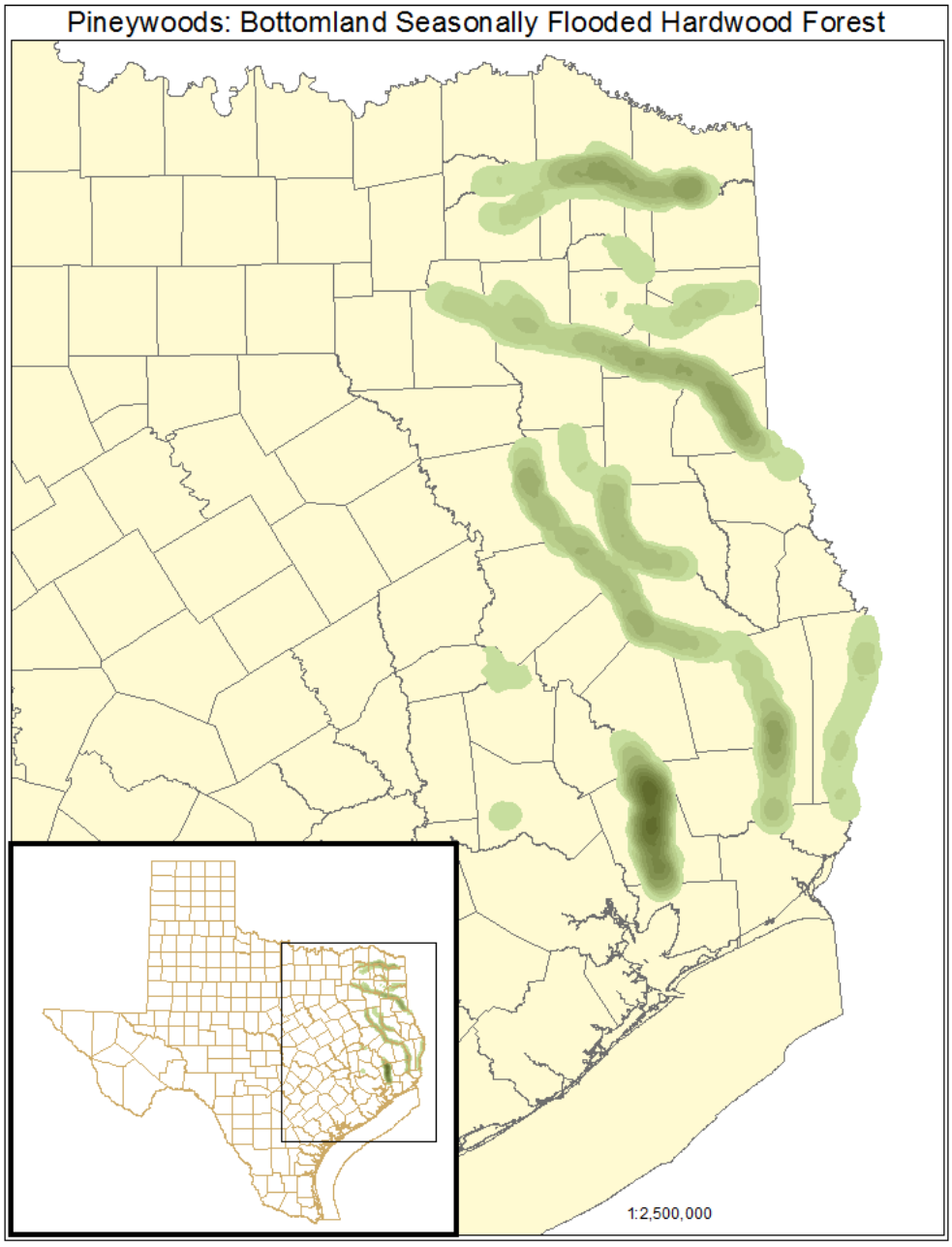
Angelina National Forest: US Forest Service
Big Thicket National Preserve: US National Park Service
Little Sandy National Wildlife Refuge: US Fish and Wildlife Service
Sabine National Forest: US Forest Service
Sam Houston National Forest Wildlife Management Area: Texas Parks & Wildlife Department
Trinity River National Wildlife Refuge: US Fish and Wildlife Service

PINEYWOODS: BOTTOMLAND SEASONALLY FLOODED HARDWOOD FOREST

Mapping System ID: 4914

EMS Description: This mapped type tends to be occupied by species that are better adapted to flooded soil conditions such as *Quercus lyrata* (overcup oak), *Carya aquatica* (water hickory), *Quercus phellos* (willow oak), *Acer rubrum* (red maple), *Quercus laurifolia* (laurel oak), *Salix nigra* (black willow), and *Taxodium distichum* (baldcypress). However, less flood tolerant species or species with broad tolerances may also be present.

Distribution Map:



Example:

Public Land Occurrence:

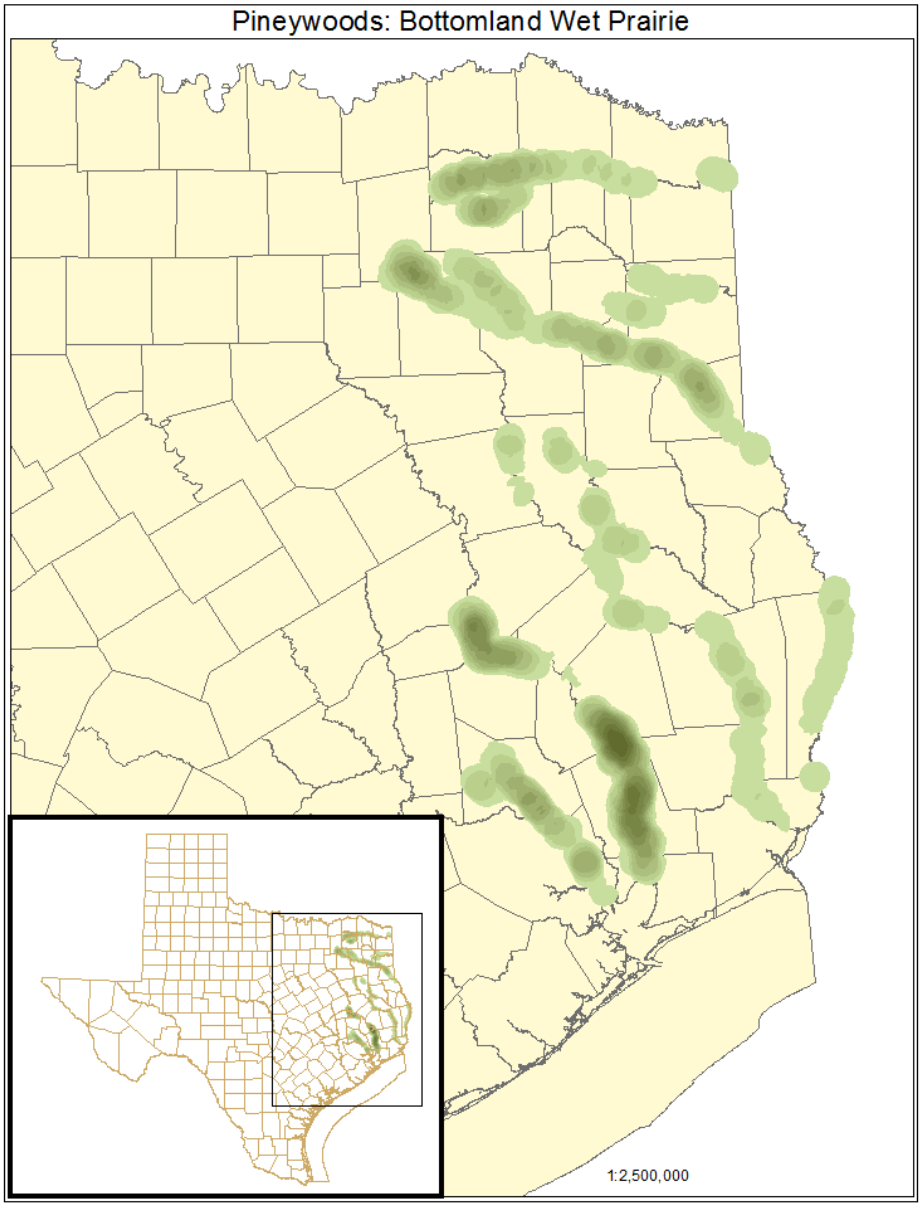
Alazan Bayou Wildlife Management Area: Texas Parks & Wildlife Department
Angelina National Forest: US Forest Service
Big Thicket National Preserve: US National Park Service
Little Sandy National Wildlife Refuge: US Fish and Wildlife Service
Old Sabine Bottom Wildlife Management Area: Texas Parks & Wildlife Department
Trinity River National Wildlife Refuge: US Fish and Wildlife Service
White Oak Creek Wildlife Management Area: Texas Parks & Wildlife Department

PINEYWOODS: BOTTOMLAND WET PRAIRIE

Mapping System ID: 4917

EMS Description: This herbaceous dominated mapped type is somewhat less wet than Pineywoods: Bottomland Herbaceous Wetland. Sites may be dominated by non-native species such as *Paspalum notatum* (Bahia grass), *Sorghum halepense* (Johnsongrass), and *Cynodon dactylon* (bermudagrass). Native species that may dominate these sites include *Schizachyrium scoparium* (little bluestem), *Andropogon glomeratus* (bushy bluestem), *Carex* spp. (caric sedges), *Paspalum floridanum* (Florida paspalum), *Tripsacum dactyloides* (eastern gamagrass), and *Panicum virgatum* (switchgrass).

Distribution Map:



Example:

Public Land Occurrence:

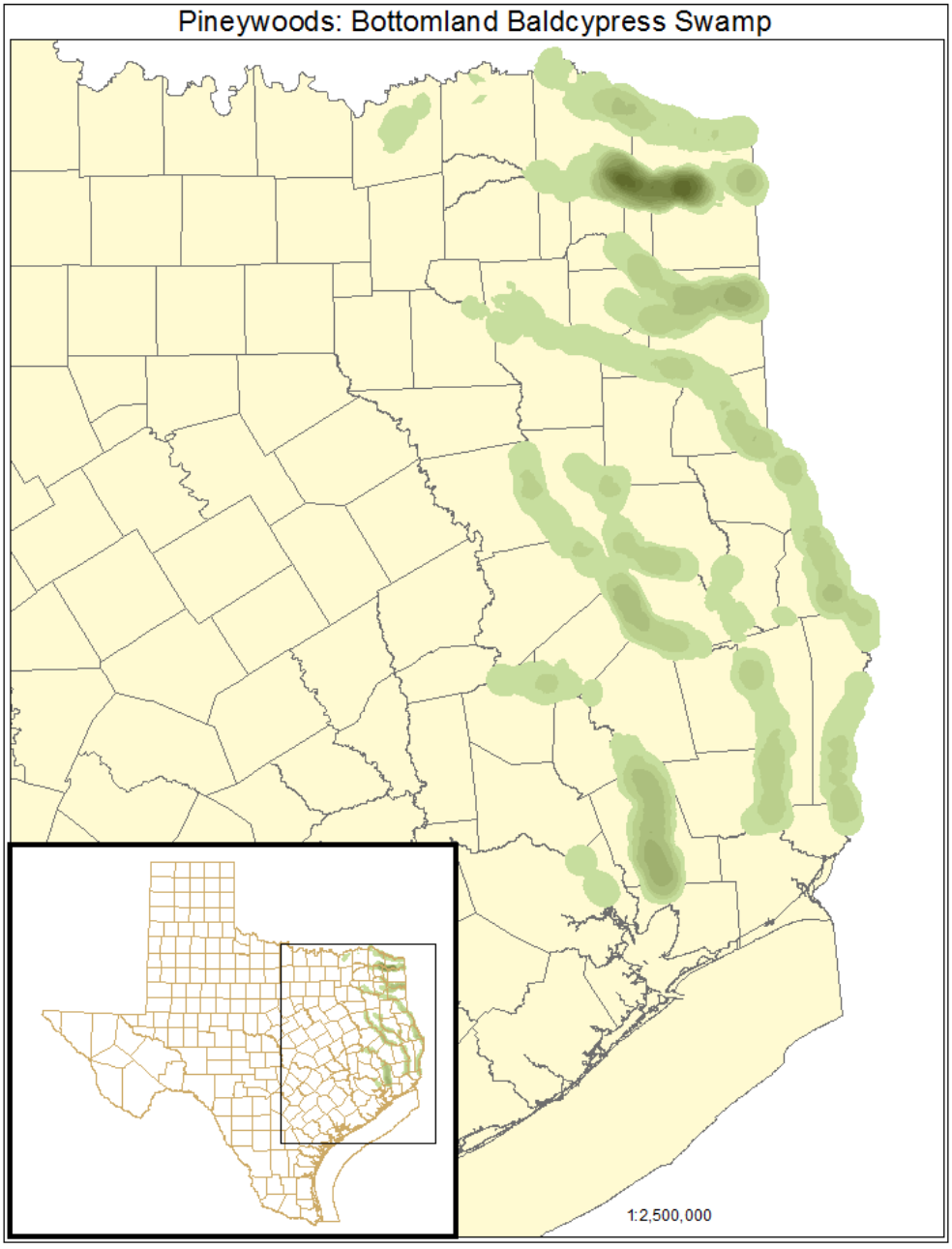
None.

PINEYWOODS: BOTTOMLAND BALDCYPRESS SWAMP

Mapping System ID: 4924

EMS Description: This mapped type occupies the semi-permanently flooded sites within the system and is typically dominated by *Taxodium distichum* (baldcypress), with lesser amounts of *Nyssa aquatica* (water tupelo), *Nyssa biflora* (swamp tupelo), *Carya aquatica* (water hickory), *Quercus lyrata* (overcup oak), *Fraxinus caroliniana* (Carolina ash), *Fraxinus pennsylvanica* (green ash), *Quercus phellos* (willow oak), and *Planera aquatica* (water elm).

Distribution Map:



Example:

Public Land Occurrence:

Angelina National Forest: US Forest Service
Big Thicket National Preserve: US National Park Service
Caddo National Grasslands Wildlife Management Area: Texas Parks & Wildlife Department
Sabine National Forest: US Forest Service
Trinity River National Wildlife Refuge: US Fish and Wildlife Service
White Oak Creek Wildlife Management Area: Texas Parks & Wildlife Department
Wright Patman Lake: US Army Corps of Engineers