WEST GULF COASTAL PLAIN MESIC HARDWOOD FOREST

Nature Serve ID: CES203.378

Geology: Distributed on Tertiary formations, from the Willis formation in the south, northward through Eocene formations.

Landform: Fairly restricted to rugged landscapes. Often occupies lower slope positions and adjacent steep slopes, where topographic position results in moisture accumulation and lower solar insolation. These sites may occur adjacent to bottomlands, but on more well-drained soils and/or slightly higher topographic positions.

Soils: Can occur on various soil textures, from sands to clays. These soils are often characterized by moderate to high fertility and moisture retention. Soil texture, fertility, and acidity may be controlling factors in determining the species composition of occurrences of this system.

Parent Description: This system typically occurs in fairly rugged landscapes on ravines, steep slopes and low landscape positions, often near streams. Soils characteristically have relatively high moisture retention. They can be moderately fertile, acidic to circumneutral, loams to sands, or may be more nutrient rich, somewhat calcareous, tighter soils (clays and clay loams). Sites often have significant litter accumulations. Southern expressions of this system may have *Fagus grandifolia* (American beech) and *Magnolia grandiflora* (southern magnolia) as conspicuous to dominant components of the overstory where conditions are more mesic. Northern expressions fall outside of the range of these two species. The overstory canopy is generally dominated by deciduous hardwoods including *Quercus falcata* (southern red oak), *Quercus alba* (white oak), *Nyssa sylvatica* (blackgum), *Liquidambar styraciflua* (sweetgum), and *Quercus nigra* (water oak). *Acer rubrum* (red maple), *Quercus hemisphaerica* (upland laurel oak), *Quercus shumardii* (Shumard oak), *Quercus pagoda* (cherrybark oak), *Acer barbatum* (southern sugar maple), *Fraxinus americana* (white ash), and *Carya alba* (mockernut hickory) may also be conspicuous in the canopy. *Pinus taeda* (loblolly pine), and to a lesser extent, *Pinus echinata* (shortleaf pine) may be present to co-dominant in the overstory. An understory of species such as *Ilex opaca* (American holly), *Ulmus alata* (winged elm), *Cornus florida* (flowering dogwood), *Ostrya virginiana* (American hop-hornbeam), *Carpinus caroliniana* (American hornbeam), and/or *Acer leucoderme* (chalk maple) is often present. The shrub layer is typically limited, giving the forest an open aspect. Species in the shrub layer may include *Callicarpa americana* (American beautyberry), *Ilex vomitoria* (yaupon), *Arundinaria gigantea* (giant cane), and *Viburnum acerifolium* (maple-leaf viburnum). *Vitis rotundifolia* (muscadine grape), *Smilax* spp. (greenbriers), and *Parthenocissus quinquefolia* (Virginia creeper) are commonly encountered woody vines. Some occurrences on more calcareous substrates lack *Magnolia grandifolia* (southern magnolia) and may contain species such as *Tilia americana* (American basswood) and *Styrax* spp. (snowbells) and may have a rich, more calciphilic, vernal forb flora. Such species as *Podophyllum peltatum* (mayapple), *Arisaema dracontium* (green dragon), *Arisaema triphyllum* (jack-in-the-pulpit), *Sanguinaria canadensis* (bloodroot), *Erythronium* spp. (trout lilies), *Trillium* spp. (trilliums), and *Polygonatum biflorum* (great Solomon's seal) may dominate the aspect of the forest understory in the early spring. Later in the year, these species become inconspicuous and are replaced by species such as *Chasmanthium sessiliflorum* (narrowleaf woodoats), *Mitchella repens* (partridgeberry), *Sanicula canadensis* (Canada snakeroot), *Carex* spp. (caric sedges), and *Dichanthelium* spp. (rosette grasses). Ferns, such as *Woodwardia* spp. (chain fern), *Osmunda cinnamomea* (cinnamon fern), *Athyrium filix-*

femina ssp. *asplenioides* (Asplenium ladyfern), and *Polystichum acrostichoides* (Christmas fern), may be conspicuous. The mesic nature of sites occupied by this system, along with the topography of the sites, and the limited fine fuel production in the system, results in reduced fire frequency.

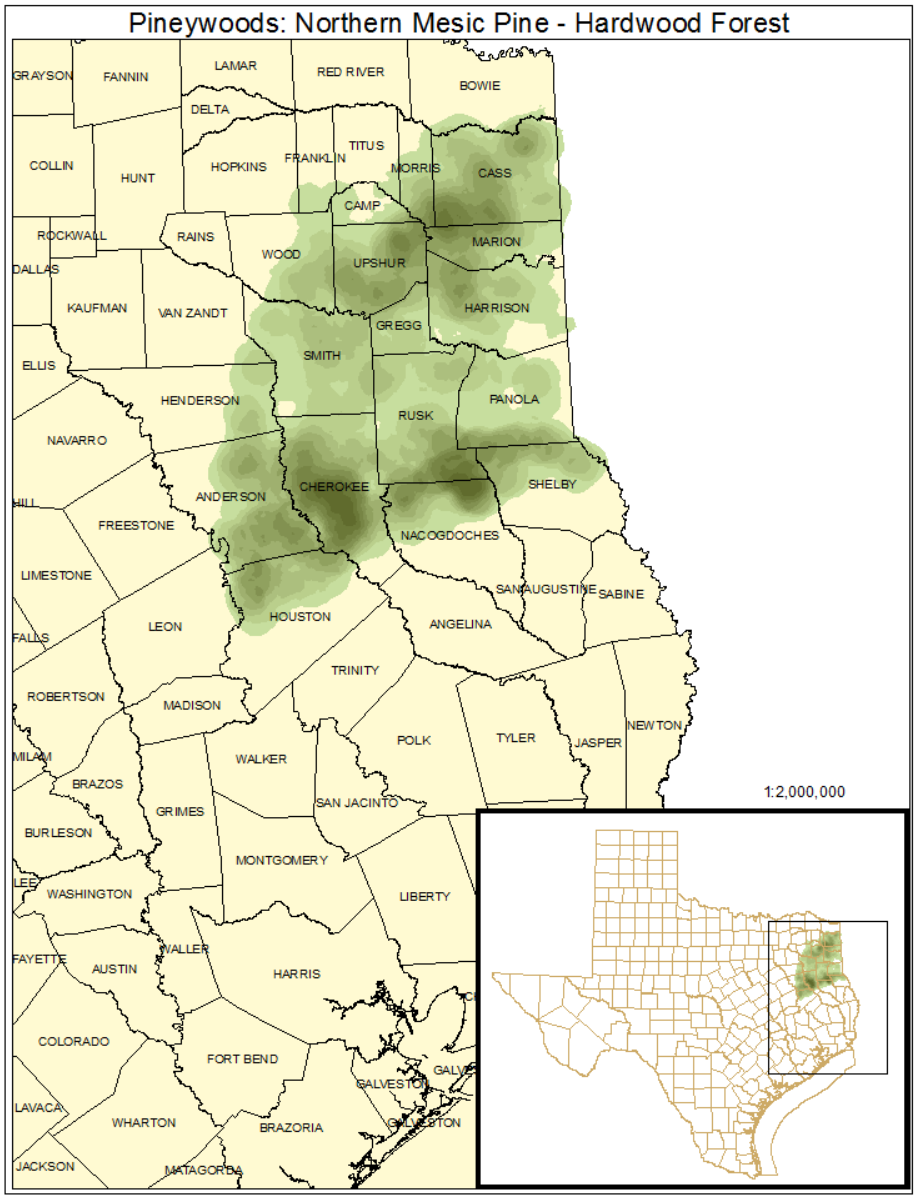
ECOLOGICAL MAPPING SYSTEMS:

PINEYWOODS: NORTHERN MESIC PINE / HARDWOOD FOREST

Mapping System ID: 3303

EMS Description: Approximately 11% of this system is mapped as this mixed deciduous evergreen forest. It occupies areas north of the range of *Fagus grandifolia* (American beech), and is co-dominated by *Pinus taeda* (loblolly pine) and/ or *Pinus echinata* (shortleaf pine) and various deciduous hardwoods including *Quercus alba* (white oak), *Liquidambar styraciflua* (sweetgum), *Nyssa sylvatica* (blackgum), and others as described above.

Distribution Map:



TEXAS PARKS & WILDLIFE

Example:

Public Land Occurrence:

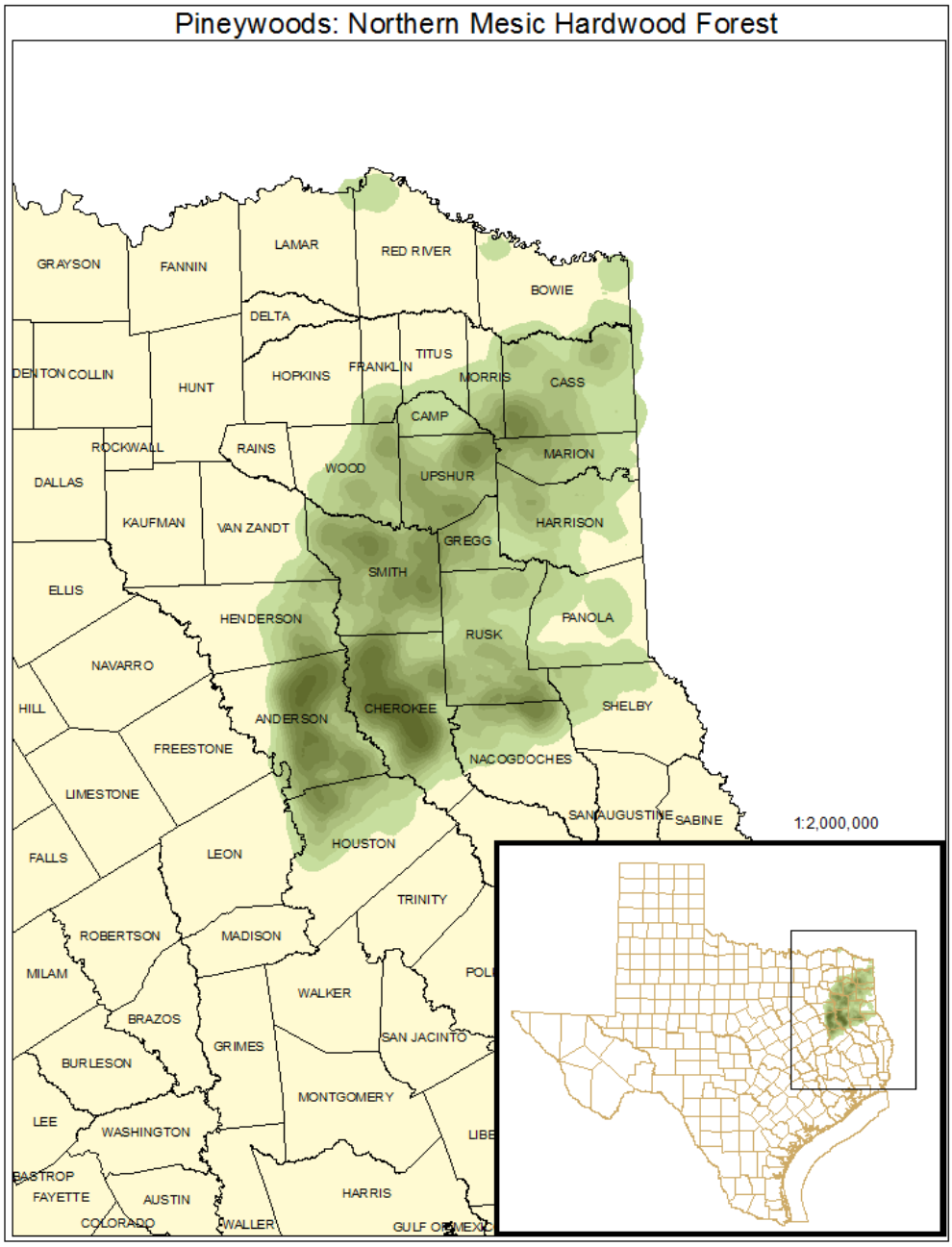
Davy Crockett National Forest: USDA Forest Service
Sabine National Forest: USDA Forest Service
Wright Patman Lake: US Army Corps of Engineers

PINEYWOODS: NORTHERN MESIC HARDWOOD FOREST

Mapping System ID: 3304

EMS Description: The majority (~62%) of the system is mapped as the primarily deciduous forest type. It occupies areas north of the range of *Fagus grandifolia* (American beech), and is dominated by hardwood species as described above. *Pinus taeda* (loblolly pine) and/or *Pinus echinata* (shortleaf pine) may be present, but do not form conspicuous elements of the canopy.

Distribution Map:



Example:

Public Land Occurrence:

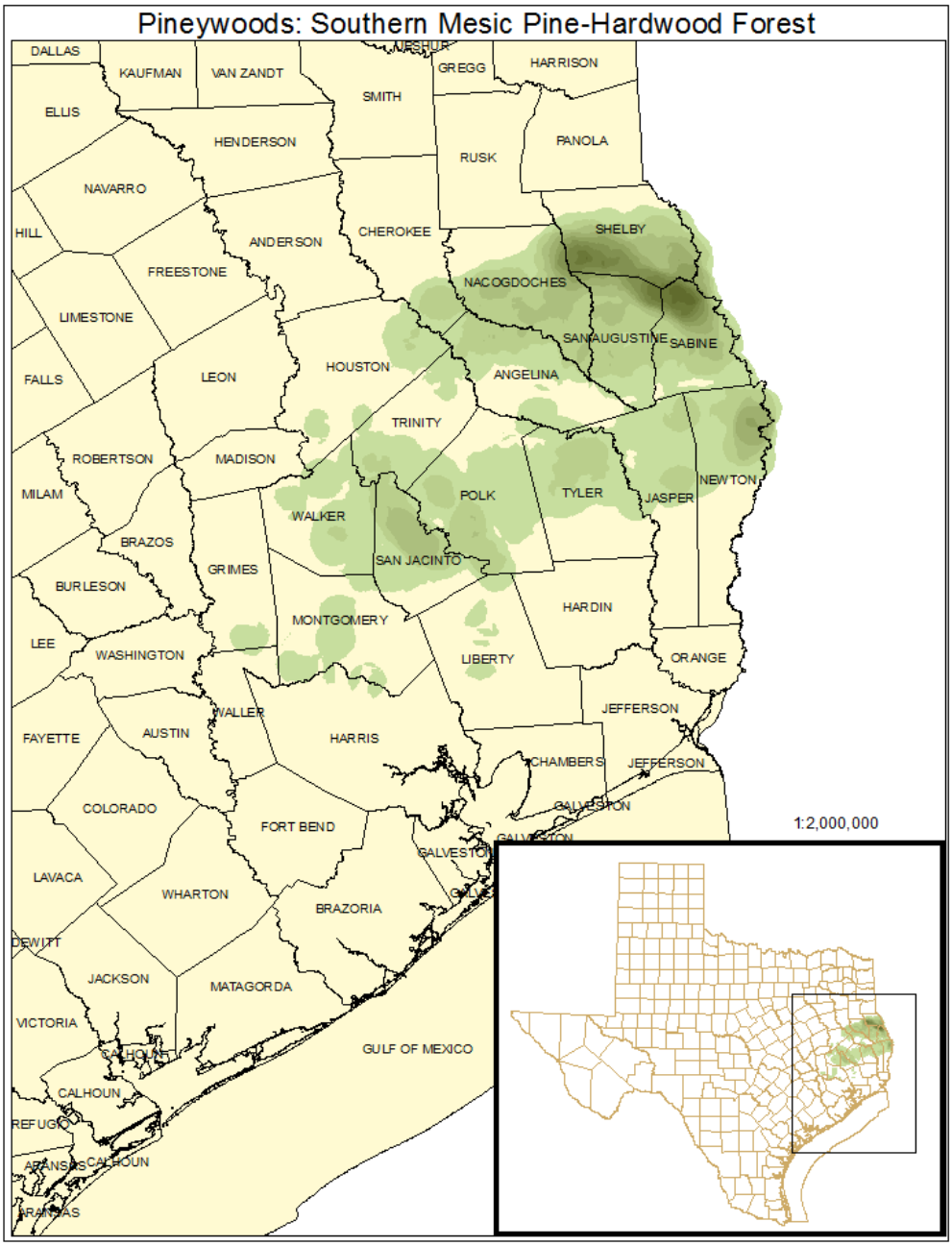
Caddo National Grasslands Wildlife Management Area: Texas Parks & Wildlife Department
Davy Crockett National Forest: USDA Forest Service
Old Sabine Bottom Wildlife Management Area: Texas Parks & Wildlife Department
Tyler State Park: Texas Parks & Wildlife Department
White Oak Creek Wildlife Management Area: Texas Parks & Wildlife Department
Wright Patman Lake: US Army Corps

PINEYWOODS: SOUTHERN MESIC PINE / HARDWOOD FOREST

Mapping System ID: 3403

EMS Description: About 8% of the system is mapped as this mixed forest type. Occurrences lie within the range of *Fagus grandifolia* (American beech), and it and *Magnolia grandiflora* (southern magnolia) may be present to dominant. *Pinus taeda* (loblolly pine) and/or *Pinus echinata* (shortleaf pine) share dominance with deciduous canopy species as described above.

Distribution Map:



Example:

Public Land Occurrence:

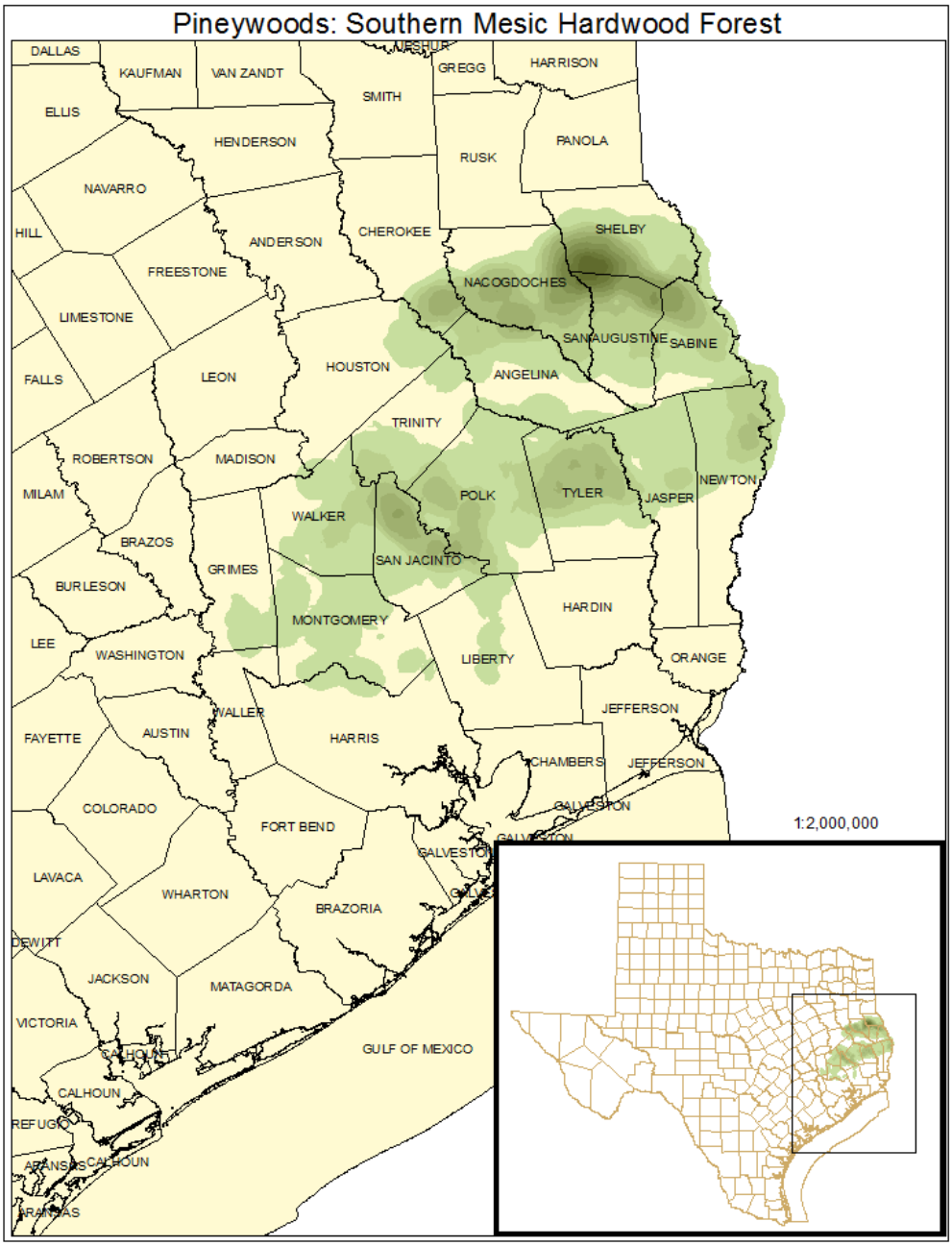
Angelina National Forest: US Forest Service
Bannister Wildlife Management Area: Texas Parks & Wildlife Department
Big Thicket National Preserve: US National Park Service
Davy Crockett National Forest: US Forest Service
Sabine National Forest: US Forest Service

PINEYWOODS: SOUTHERN MESIC HARDWOOD FOREST

Mapping System ID: 3404

EMS Description: About 19% of the system is mapped as this deciduous forest type. Occurrences lie within the range of *Fagus grandifolia* (American beech), and it and *Magnolia grandiflora* (southern magnolia) may be present to dominant. Other deciduous canopy species may dominate some occurrences, and pines may also be present.

Distribution Map:



Example:

Public Land Occurrence:

Angelina National Forest: USDA Forest Service
Big Thicket National Preserve: US National Park Service
Davy Crockett National Forest: USDA Forest Service
Sabine National Forest: USDA Forest Service
Sam Houston National Forest Wildlife Management Area: Texas Parks & Wildlife Department