



## Bottomland Hardwood Forest

**Rarity Rank:** S4/G4G5

**Synonyms:** Mixed Bottomland Hardwoods, Broad Stream Margins, Hardwood Bottoms

**Ecological Systems:**

CES203.512 Lower Mississippi River Bottomland and Floodplain Forest

CES203.489 East Gulf Coastal Plain Large River Floodplain Forest

CES203.065 Red River Large Floodplain Forest

CES203.488 West Gulf Coastal Plain Large River Floodplain Forest

**General Description:**

- Forested, alluvial wetlands occupying broad floodplain areas flanking large river systems
- Maintained by a natural hydrologic regime of alternating wet and dry periods that follow seasonal flooding events
- Provide important ecosystem functions including maintenance of water quality, providing productive habitat for a variety of fish and wildlife species, and regulation of flooding and stream recharge
- Soils are alluvial deposits, heavy clays to silty clays, high in organic matter and nutrients
- Dominant forest species can be aggregated into specific associations based on environmental factors such as physiography, topography, hydric soils, and hydrologic regimes
- Vegetation associations are typically mixtures of broadleaf deciduous, needleleaf deciduous, and evergreen trees and shrubs



**Plant Community Associates**

### 1). Overcup Oak - Water Hickory Bottomland Forest

*Common forest associate species include:*

*Quercus lyrata* (overcup oak),

*Fraxinus pennsylvanica* (green ash),

*Cornus foemina* (swamp dogwood),

*Planera aquatica* (planertree),

many vine species

*Carya aquatica* (water hickory),

*Celtis laevigata* (hackberry),

*Forestiera acuminata* (swamp privet),

*Cephalanthus occidentalis* (buttonbush),

### 2). Hackberry-American Elm-Green Ash Bottomland Forest

*Common forest associate species include:*

*Celtis laevigata* (hackberry),

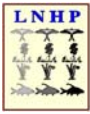
*Fraxinus pennsylvanica* (green ash),

*Quercus texana* (nuttall oak),

*Ulmus americana* (American elm),

*Carya aquatica* (water hickory),

*Q. phellos* (willow oak),



# Natural Communities of Louisiana



## Common forest associate species continued:

*Q. nigra* (water oak),  
*Liquidambar styraciflua* (sweetgum),  
*Ulmus alata* (winged elm),  
*Gleditsia aquatica* (water locust),  
*Plantanus occidentalis* (American sycamore),  
*Morus rubra* (red mulberry),

*Q. lyrata* (overcup oak),  
*Acer negundo* (box elder),  
*Acer rubrum* (red maple),  
*Cornus foemina* (swamp dogwood),  
*Crataegus* spp. (hawthorn),  
 many vines and herbaceous species

### 3). Sweetgum-Water Oak Bottomland Forest

#### Common forest associate species include:

*Liquidambar styraciflua* (sweetgum),  
*Celtis laevigata* (hackberry),  
*Ulmus americana* (American elm),  
*Acer rubrum* (red maple),  
*Ilex decidua* (deciduous holly),  
*Arundinaria gigantea* (switchcane),

*Quercus nigra* (water oak),  
*Fraxinus pennsylvanica* (green ash),  
*Q. pagoda* (cherrybark oak),  
*Sabal minor* (dwarf palmetto),  
*Crataegus viridis* (green hawthorn),  
 many vines and herbaceous species

#### Federally-listed plant & animal species:

*Ursus americanus luteolus* (Louisiana black bear) Threatened; G5T2; S2

#### Range:

Predominant in the Mississippi River Alluvial Plain, but found throughout Louisiana in all parishes. Also important in the East Gulf Coastal Plain in association with major rivers.



#### Threats & Management Considerations:

State-wide, bottomland hardwood forest loss is estimated to be 50 to 75 % of the original presettlement acreage. Old-growth examples of this habitat type are very rare. Clearing for agricultural production was the primary factor that led to fragmentation and decline of this habitat type. Large tracts of bottomland hardwood forest remain but most are either second or third growth stands. Restoration efforts have been in progress since the 1980's, and reconnecting fragmented forest blocks and restoration of wetland forest functions are the major challenges to reforestation efforts. Major factors threatening this association include hydrological alterations, construction of roads, utilities and pipelines, and invasive exotic species.

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy bottomland hardwood forests. Such management strategies should include:

- Prevent conversion of existing natural forests to other land uses
- Maintain natural species composition by following appropriate hardwood management techniques
- No harvesting during wet periods to prevent soil damage
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means
- No soil disturbance or other activities that alter natural waterflow, including from adjacent areas