

Upper Mississippi River Forestry Partnership Bottomland Hardwood Reference Site

State: Illinois

Name: Long Island Division

Ownership: U.S. Army Corps of Engineers and managed by U.S. Fish and Wildlife Service

Acres: 6300

Designations:

Mark Twain National Wildlife Refuge, Long Island Division - 1958
Illinois Natural Areas – 1977

Location: Mark Twain National Wildlife Refuge, Long Island Division, six miles north of Quincy, IL in Pool 21, between river mile 332 and river mile 341, Adams County, IL.

Access Considerations: The USACE maintains two boat ramps near the Long Island Division: Canton Chute Public Access Area and Bear Creek Public Use Area. The Long Island Division is open to the public year round and hunting and fishing are allowed in accordance with Illinois state seasons and regulations.

Other Access Considerations:

- No camping is allowed on the refuge.
- Bicycling is allowed on refuge roads unless otherwise posted.
- Waterfowl and coot hunting is allowed only from blinds constructed on sites posted by IDNR.

Detailed Map: See Figure 1 in Appendix

Landscape Considerations: Long Island Division is located within the Mark Twain National Wildlife Refuge, near the midpoint of Pool 21. The Long Island Division is a 7 mile long complex of several islands, sloughs, backwater lakes, and floodplain in the Mississippi River. The major islands are Long, Flannigan, Shandrew, LaGrange, and Barnes. This division also includes the Bear Creek Unit which consists of formerly agricultural land and floodplain forest. The western side of the island unit is bordered by the Mississippi River and the eastern side is bordered by Canton Chute. The Bear Creek Unit is located on the east bank of the Mississippi River and the Canton Chute forms the western boundary. Its eastern boundary is maintained by the Sny Levee District.

Forest Type: Wet bottomland forest and mesic bottomland forest

Observational Composition:

Overstory – The canopy is dominated by silver maple (*Acer saccharinum*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), and shellbark hickory (*Carya laciniosa*).

Other species include pin oak (*Quercus palustris*), bur oak (*Quercus macrocarpa*), Kentucky coffeetree (*Gymnocladus dioicus*), and pecan (*Carya illinoensis*), but to a lesser extent.

Understory – The shrub layer is dominated by American elm (*Ulmus americana*), hackberry (*Celtis occidentalis*), and red mulberry (*Morus rubra*). The herbaceous layer includes wood nettle (*Laportea canadensis*). Common vines in the understory include riverbank grape (*Vitis riparia*), poison ivy (*Toxicodendron radicans*), greenbriar (*Smilax spp.*), and trumpet creeper (*Campsis radicans*).

Detailed Species List: See Mark Twain National Wildlife Refuge Complex Comprehensive Conservation Plan App. B at: http://www.fws.gov/midwest/planning/marktwain/final_appB.pdf

Soils:

Table 1: Soil Map for Mark Twain NWR – Long Island Division, Adams County, IL

Adams County, Illinois (IL001)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3877L	Blake-Slacwater silt loams, 0 to 2 percent slopes, frequently flooded, long duration.	NA	NA
3368L	Raveenwash silt loam 0 to 2 percent slopes, frequently flooded, long duration.	NA	NA
W	Water	NA	NA

Detailed Soils Map: See Figure 2 in Appendix

Current Management:

- Long Island Division is currently owned by the USACE and managed by the USFWS. Both agencies have management strategies for the refuge.
 - o USACE – Habitat Rehabilitation and Enhancement Project
 - Reduce forest fragmentation
 - Increase bottomland hardwood diversity
 - Reduce island erosion
 - Increase habitat for overwintering fish
 - Reduce sedimentation in side channels
 - o USFWS – Mark Twain National Wildlife Refuge Complex Comprehensive Conservation Plan (in the implementation phase)
 - Converting remaining agricultural land into mesic bottomland forest.
 - Detailed information on the goals of CCP is available from the USFWS.

Management Challenges:

- River impoundment has affected the hydrology of the site.

- Flood of 1993 degraded the quality of this once outstanding site.
- Fish and wildlife management
 - o Endangered and threatened species
 - o Migratory birds
 - o Invasive species
- Recreational opportunities
 - o The Long Island Division is open to the public year round
 - o Hunting and fishing are allowed in accordance with Illinois State rules and regulations.
- Forest Management
 - o Improving bottomland forest composition to a pre-Flood of 1993 condition.
 - o Converting remaining agricultural land to desirable bottomland hardwoods.

Comments: The Long Island Division of the Mark Twain NWR was named a significant site by the Illinois Natural Areas Inventory in 1977. This site gained this designation because it was composed of relatively undisturbed old growth timber with good species composition. Lower elevation sites were dominated by silver maple (*A. saccharinum*), while higher ridges supported more mesic species, such as oaks and hickories. At one point in time the complex of islands and sloughs contained about 2500 acres of high quality bottomland forest. However, the Flood of 1993 degraded the site's quality in terms of species composition. High mortality was experienced by less flood tolerant species such as pin oak (*Q. palustris*) and hackberry (*C. occidentalis*). Although high quality bottomland forest still exists in the refuge, the extent has greatly decreased. Therefore, activities that promote the establishment and regeneration of desirable bottomland species, particularly mast species, are integral in the process of restoring the condition of this site.

Sources of Information:

US Fish and Wildlife Service
 Great River National Wildlife Refuge
http://www.fws.gov/midwest/GreatRiver/Long_Island.html

US Army Corps of Engineers-Rock Island District
 Long Island (Gardner) Division Habitat Rehabilitation and Enhancement Project
<http://www.mvr.usace.army.mil/EMP/hrep/GardnerDivision.htm>

Mark Twain National Wildlife Refuge Comprehensive Conservation Plan
<http://www.fws.gov/midwest/planning/marktwain/index.html>

Natural Resource Conservation Service
 Web Soil Survey
<http://websoilsurvey.nrcs.usda.gov/app/>

Illinois Natural Heritage Database
<http://dnr.state.il.us/conservation/naturalheritage/inhd.htm>

Appendix



Figure 1: Site Map of the Long Island Division

Appendix (Cont'd)

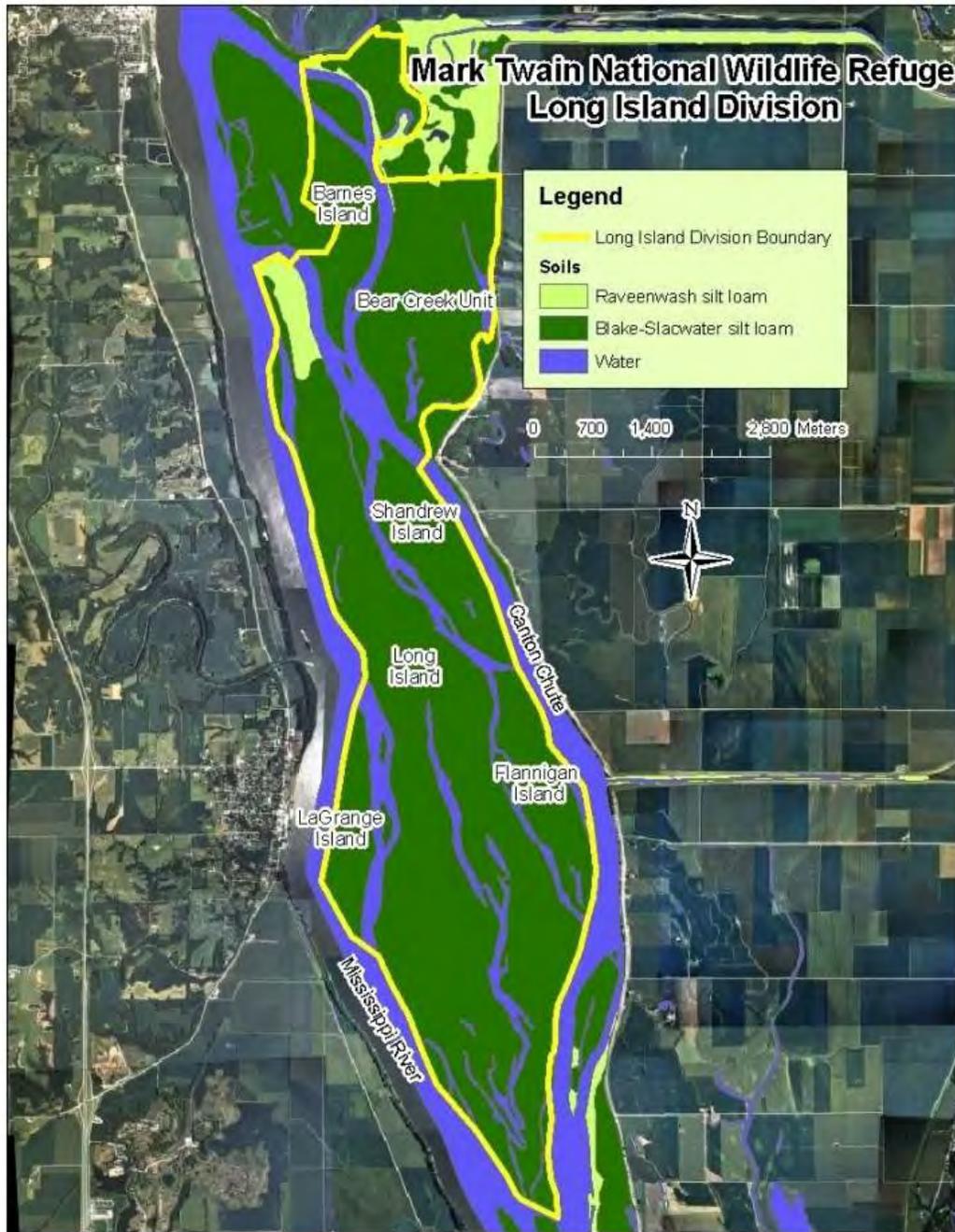


Figure 2: Location of soil types within the Long Island Division