

# Forest Management Program

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The U.S. Army Corps of Engineers (Corps) - Mississippi River Project manages approximately 55,000 acres of forestland on the 314 mile reach of the Mississippi River within the Rock Island District. This stretches from Guttenberg, IA (Lock and Dam 10) to Saverton, MO (Lock and Dam 22).

Forest Management Program, the oldest within the Corps and second largest in size, originated in 1941 in support of World War II efforts. The program has been extremely successful in meeting the specified program mission and objectives and is a recognized leader in bottomland forest management.



## **Significant Resources**

As you are likely aware, the Mississippi River is a globally significant natural resource. Though you may not know it was designated a *Globally Important Bird Area* in 2001 by the American Bird Conservancy and a *Wetland of International Importance* in 2010 during the international Ramsar Convention. The Mississippi River Project is working to support this resource in part through our Environmental Stewardship mission with our Forestry and Shoreline Management programs.

Mississippi River Project lands include 8 species that are listed as federally threatened or endangered. An important global significance to the project is the connectivity of the major flyway and habitat for eagles, neo-tropical migrants, and waterfowl. This project has been recognized as a globally important bird area in Audubon and American Bird Conservancy's Important Bird Area Program. The environmental stewardship team has documented 153 species of birds in the bottomland forest community. There are 80 species of neo-tropical migrants that have been documented utilizing the floodplain forest corridor. Extensive avian monitoring continues to be conducted as an effort to document the status and trends of the community utilizing Project lands and bottomland forest management areas. The concurrent dataset includes more than 30 consecutive years of avian data collection. The Project has modified forestry prescriptions to increase desirable forested habitat for these species.

## **General Plan Lands**

In 1946, public law made Corps lands available to the U.S. Fish and Wildlife Service (FWS) for fish and wildlife purposes. The 1954 General Plan agreements specified which lands (General Plan lands) were involved. The 1963 Cooperative Agreement provided the details on how the lands would be managed with the latest version of that document being a 2001 revision. Additional agreements specify Illinois, Iowa, and Missouri state management of portions of the General Plan lands. The Cooperative Agreement with the FWS became part of the Upper Mississippi River National Wildlife & Fish Refuge, and the former Mark Twain National Wildlife Refuge.

The Corps still maintains timber rights on the trees within General Plan lands. All forest management activities are aligned with the wildlife goals of our cooperating agencies and include timber harvests to promote diversity of tree size and tree regeneration, timber stand improvement to promote health of diverse tree species, and tree planting to help maintain the presence of diverse tree stands. The Corps foresters meet annually with these cooperating agency land managers to develop and agree on work plans, habitat needs, special emphasis, and future direction.



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## Goals of Forestry Program

- A functional, sustainable floodplain ecosystem that includes a mosaic of native vegetation communities sufficient to support important wildlife habitat.
- Restore and maintain forest diversity, health, and sustainability on Project lands.
- Adaptive management

## Tools of Forest Management

To ensure continual diverse forest tree species present within the canopy layers, the Project's forestry program utilizes a variety of management techniques to accomplish this objective. Silvicultural techniques such as shelterwood harvest methods are used to remove a portion of the canopy initially, while maintaining enough shade to suppress annual and perennial herbaceous competition. Hard mast or nut producing trees such as oak and hickory species are planted in place of the trees that were removed. Over time, the remaining canopy is removed to release planted trees from shading and to allow for additional nutrient uptake.



In areas where natural regeneration of desirable species has occurred, Timber Stand Improvement (TSI) is another management technique to increase the compositional and structural integrity of desirable tree species. This method is accomplished by removing a portion of the woody competition that is directly out-competing desirable tree species. In some areas, trees are killed and left standing which overtime results in flecking and braking of the bark. Space created under the bark becomes desirable roost habitat for species like the endangered Indiana Bat (*Myotis sodalists*). Depending on forest elevation, different methods of tree plantings are executed. Planting of containerized trees is the preferred method in areas that frequently flood due to their extensive root system and vertical height which can range from 3-6 feet depending upon species. Direct or broadcast seeding is limited to areas that intermittently flood for only short periods of time. Only a small portion of Project land is high enough in elevation to allow for this method to occur. Site preparation and follow-up vegetative maintenance are integral components in order to achieve optimal growing conditions. Invasive species removal and management is also a component of forestry to increase species richness and overall forest diversity.



## Upper Mississippi River Systemic Forest Stewardship Plan

The UMR Systemic Forest Stewardship Plan was developed to provide a guide for the sustainable management of Upper Mississippi River System (UMRS) forests, including opportunities for their restoration, and to ensure that the UMRS maintains its recognition as a nationally treasured ecological resource. The Plan accomplishes this by describing the current understanding of the state of the resource and its ecological stressors; providing guidance for forest restoration activities; establishing goals and objectives; identifying opportunities and data needs; establishing a monitoring strategy through an adaptive management framework; and developing additional recommendations that will ensure the long-term sustainability of this key component of the UMRS ecosystem. More information on the Plan can be found at: [www.ourmississippi.org](http://www.ourmississippi.org).



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