

**US Army Corps of Engineers / The Morton Arboretum**  
**Section 206 Aquatic Ecosystem Restoration**  
**DuPage River East Branch**

Section 206 of the Water Resources Development Act gives the US Army Corps of Engineers authority to carry out aquatic ecosystem restoration and protection projects if the project will improve environmental quality, is in the public interest, and is cost effective.

**Executive Summary**<sup>1</sup>

The DuPage River East Branch (DREB) was first channelized in the project area during the 1920s for agricultural purposes. Since then, rapid urbanization of the watershed has increased the amount of impervious surfaces and has caused erratic riverine hydraulics. During the 1950s, the Valley View subdivision was constructed with over one hundred single-family homes within the natural floodplain of the DREB. Aside from severely affecting the riverine ecology, flood events have caused millions of dollars in damage to homes within the subdivision. To reduce these damages, extensive stream channelization was implemented during the 1970s in an attempt to relieve flooding by increasing the channel conveyance, but without success, and in turn further adversely affecting riverine ecology.

The Morton Arboretum, in partnership with the Forest Preserve District of DuPage County (FPDDC), Illinois Department of Transportation (IDOT), and Illinois Department of Natural Resources have requested that the Chicago District, US Army Corps of Engineers (USACE) initiate a Feasibility Study (FS) under the Section 206 Aquatic Ecosystem Restoration authority to ascertain the feasibility of restoration features to restore ecological integrity of the river and riparian zone on Morton Arboretum and Forest Preserve properties. This report has evaluated the feasibility and environmental effects of restoring: riverine habitat, hydrology, riparian vegetation, floodplain forest, and wetland. The scope of this study addresses the issues of altered hydrology and hydraulics, native plant community preservation, invasive species, connectivity, rare wetland communities, and native species richness.

Opportunities exist to address the following resource problems at the Morton Arboretum site:

- Altered floodplain hydrology stemming from stream channelization & vegetation clearing
- Riverine geomorphic impairment from channelization
- Riverine hydraulic impairment from channelization
- Water quality impairment stemming from waste water discharge and urbanization
- Establishment of invasive species monocultures
- Loss of conservative and rare plant and fish species

Six (6) riverine alternatives and eight (8) riparian alternatives, in addition to the No Action measure, were assessed for costs and benefits. The assessment generated 36 alternative combinations for riverine restoration and 256 alternative combinations for riparian restoration. A cost effectiveness analysis was used to ensure that certain options would be screened out if they produced the same amount or less output at a greater cost than other options with a lesser cost. Fourteen (14) riverine and 83 riparian cost effective combinations were identified, including the No Action Plan. An incremental cost analysis was performed on those plans deemed cost effective. The objectives of the incremental cost analysis are to provide information to assist in determining whether the additional output provided by each successive cost effective plan is worth the additional cost that must be incurred for implementation; that is, to assist in determining the scale of the recommended plan. This incremental cost analysis identified 6 alternative plans for riverine restoration and 8 alternative plans for riparian restoration that would be considered as best buys, including the no action plan.

---

<sup>1</sup> USACE Morton Arboretum Section 206 Aquatic Ecosystem Restoration Feasibility Study and Environmental Assessment, August 2011

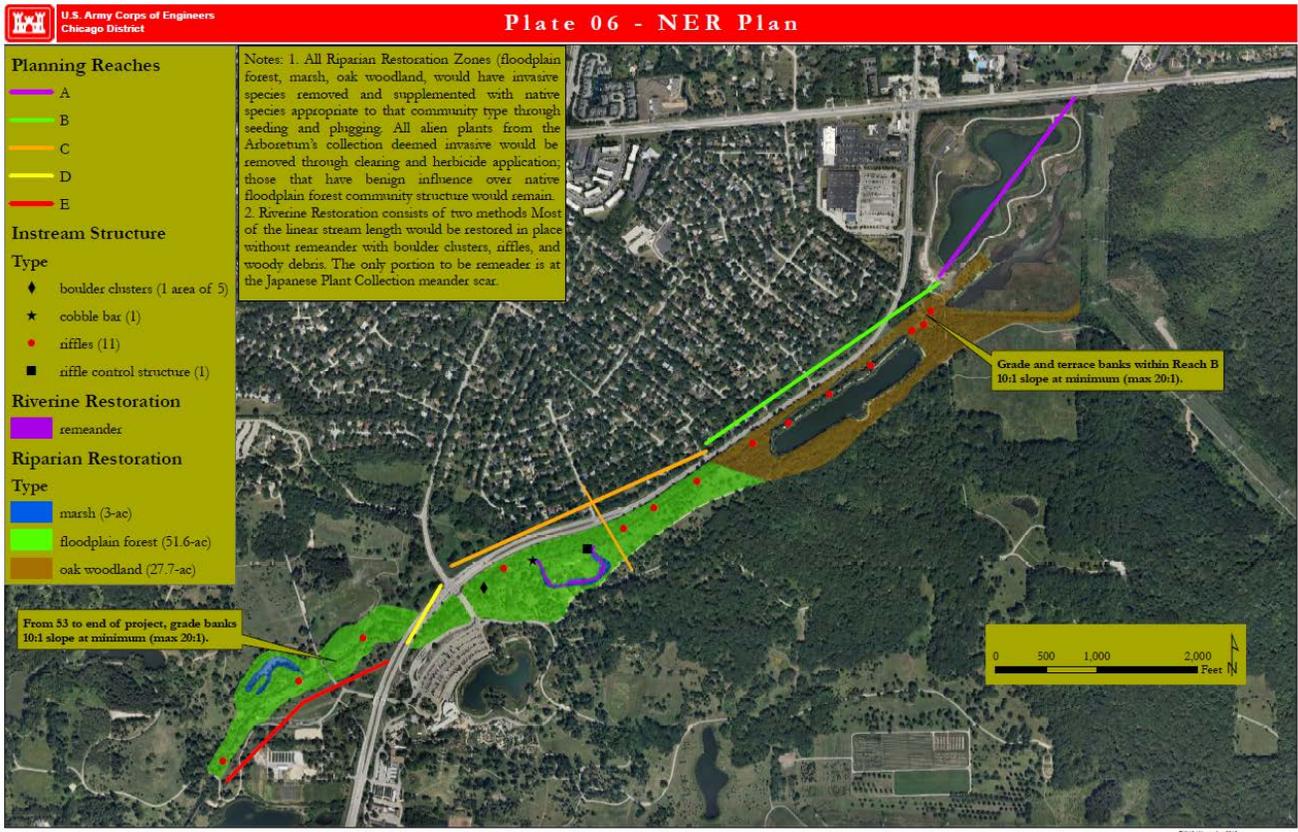
# US Army Corps of Engineers / The Morton Arboretum

## Section 206 Aquatic Ecosystem Restoration

### DuPage River East Branch

#### Recommended Plan for Implementation

The National Ecosystem Restoration (NER) plan is shown below.



#### Status and Funding

The *Feasibility Study and Environmental Assessment* has been approved and the project is currently in the Project Partnership Agreement (PPA) phase. The Design & Implementation phase has funding and will commence once PPA is completed. The Morton Arboretum will be responsible for 35 percent of the total project costs including all lands, easements, rights-of-way, relocations, and disposal areas (LERRDs) for the project, as well as operating and maintaining the project at 100 percent non-Federal expense.

#### Relationship to IDOT's IL 53 and IL 56 Improvement

Since IL 53 is located within the floodway and floodplain of the DREB, the IDOT and USACE projects have overlapping study areas. The area to be vacated by the IL 53 roadway shift will become part of the restoration area. Landscaping will be coordinated with the USACE and Morton Arboretum. In addition, IDOT has shared data and analysis from the IL 53 and IL 56 project which USACE incorporated into their studies.

#### Contact Information

Frank M. Veraldi  
Fish Biologist / Restoration Ecologist  
US Army Corps of Engineers- Environmental Planning Section  
111 N. Canal Street, Suite 600  
Chicago, IL 60606  
(312) 846-5589 or [Frank.M.Veraldi@usace.army.mil](mailto:Frank.M.Veraldi@usace.army.mil)

Additional information on the USACE/Morton Arboretum project is available at [www.il53-56study.com](http://www.il53-56study.com) under Project Documents