



DEPARTMENT OF THE ARMY
MISSISSIPPI VALLEY DIVISION, CORPS OF ENGINEERS
P.O. BOX 80
VICKSBURG, MISSISSIPPI 39181-0080

REPLY TO
ATTENTION OF:

CEMVD-PD-SP

29 September 2010

MEMORANDUM FOR Commander, Rock Island District, ATTN: CEMVR-PM-M

SUBJECT: Upper Mississippi River Restoration - Environmental Management Program (UMRR-EMP), Boston Bay Habitat Rehabilitation and Enhancement Project (HREP), Mercer County, Illinois, Fact Sheet

1. Reference memorandum, CEMVR-PM-M, 01 July 2010, subject as above.
2. Subject fact sheet is approved for continued HREP planning (encl 1).
3. The MVD point of contact is Elizabeth Ivy, CEMVD-PD-SP, (601) 634-5310.

A handwritten signature in black ink that reads "Charles B. Barton".

CHARLES B. BARTON
Chief, District Support Team for
St. Louis, Rock Island, and
St. Paul

Encl

BOSTON BAY
HABITAT REHABILITATION AND ENHANCEMENT PROJECT (HREP)
MERCER COUNTY, ILLINOIS

UPPER MISSISSIPPI RIVER RESTORATION
ENVIRONMENTAL MANAGEMENT PROGRAM
ROCK ISLAND DISTRICT

FACT SHEET

I. LOCATION

The proposed Boston Bay Habitat Rehabilitation and Enhancement Project (HREP) area is located on the left descending bank of the Mississippi River from approximate river mile 433 to 434. It is positioned in Pool 18, between New Boston, Illinois and the Bay Island Levee and Drainage District (figure 1).

II. EXISTING RESOURCES

Boston Bay is an approximately 920 acre backwater complex located adjacent to the lower end of the Bay Island Levee and Drainage District. The Project area contains various successional stages of bottomland forest, wetland, and aquatic habitats. The Boston Bay HREP boundary begins at Bay Bridge and travels south approximately 3 miles to where it empties into the Mississippi River near New Boston, Illinois.

The Project area is owned by the U.S. Army Corps of Engineers and is managed by the Illinois Department of Natural Resources (DNR) through a cooperative agreement with the U. S. Fish and Wildlife Service (USFWS). The site is included as part of the Mississippi River Islands State Wildlife Management Area. Figure 2 shows 1989 and 2000 land cover data for the site.

III. PROBLEM IDENTIFICATION

Sedimentation has resulted in the loss of deep water habitat and depth diversity within the Project area. Deep water habitat in conjunction with related environmental factors of dissolved oxygen, water temperature, and flow velocity are essential for fresh water fish to survive during critical winter and summer months. In addition, sedimentation has functionally isolated the Boston Bay HREP site from the Mississippi River during low seasonal flows and compromises water quality during both winter and summer.

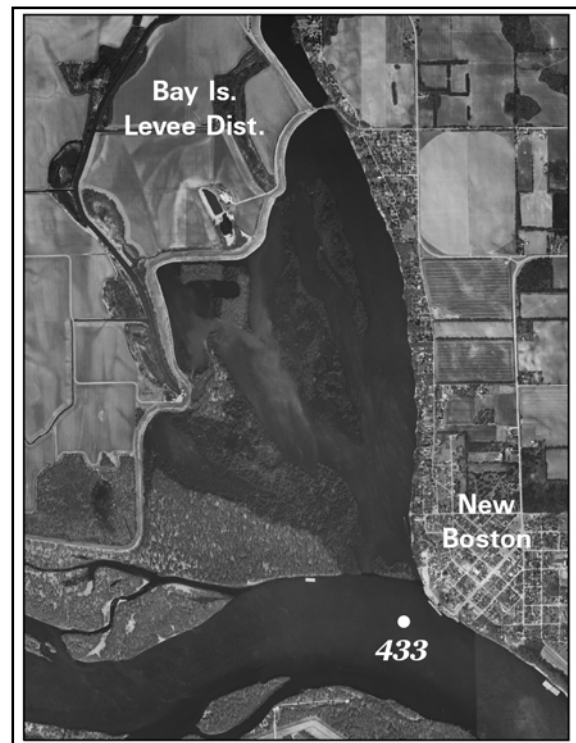


Figure 1. General Project Location

Sedimentation and water level fluctuation are suspected as the primary limiting factors negatively affecting water quality, production of desirable aquatic vegetation, fish production, and bottomland forest diversity. Managers and the public recognize a negative trend in overall habitat quality and believe these factors are threatening long term sustainability of fish and waterfowl habitat in upper Pool 18. In addition, long term monitoring of an established heron rookery in the area has indicated a decline in recent years.

The Project area was an extremely valuable and critical overwintering site for many species of fresh water fish in Upper Pool 18 where few backwaters exist. Due to its highly productive and diverse aquatic vegetation, the area formerly supported a large population of migratory waterfowl.

IV. PROJECT GOALS AND OBJECTIVES

Project goals are derived from the Environmental Pool Plans, Pools 11 through 22; the Habitat Needs Assessment; and Reach Planning efforts. These goals are consistent with the systemic goals adopted by the Environmental Management Program Coordinating Committee and the Navigation Environmental Coordination Committee in January of 2008.

Protect, Enhance, and Restore Quality Habitat for All Native and Desirable Plant, Animal and Fish Species:

- restore seasonal aquatic refuge and access (i.e. overwintering)
- maintain seasonal dissolved oxygen levels greater than 5 mg/l annually
- restore submersed aquatic vegetation coverage to greater than 50 percent of bathymetric areas 0.1 to 1.0m deep annually (or 3 out 5 years)
- achieve desirable mast tree species canopy of 12 to 14 percent of total forest land class by target year 25

Enhance, Restore and Emulate a Sustainable Ecosystem (Natural Water Levels, Sediment Transport and Deposition Regime, and Distribution of Water Flows Across the Mississippi River Floodplain):

- achieve secchi disc depths of 30cm or better between June 1st and September 30th annually (or 3 out 5 years)
- achieve and maintain depths of 2m average in 5 percent of open water land class by target year 25
- maintain Boston Bay's complex connection to the main channel border throughout the annual hydrograph

V. PROPOSED PROJECT FEATURES

Proposed Project features include rerouting discharge water and sediment load from the Bay Island Levee and Drainage District; dredging Boston Bay from the New Boston boat ramp to Bell's Pocket and Swede Lake; constructing a low berm to deflect Mississippi River sediment and reforest with desirable hardwoods; utilizing Looser Bridge as a water control structure to create a marsh and trap sediment; creating wildlife protection zones; riprapping critical erosion areas; performing a temporary small scale drawdown to increase aquatic vegetation reestablishment; utilizing dredged material

placement sites to increase aquatic vegetation and reforestation; and constructing a sediment basin east of the County Highway 14 bridge.

Changes in landcover composition and water quality noted above would be expected to provide favorable conditions and increase resident and migratory species occupancy of the Project area. The proposed changes would restore aquatic conditions representative of the earlier post-impoundment period by offsetting a portion of the long-term effects of sedimentation, and would create floodplain conditions more typical of unimpounded bottomlands. Response times of species to physical changes would be variable. Positive fish response to aquatic habitat improvements would occur shortly after completion, while mast tree species establishment and canopy closure could take 25 years or more. Interannual variation in the composition and extent of aquatic and wetland vegetation response would be normal; however, the improvement in bathymetric diversity is expected to contribute to water clarity and vascular plant establishment. Figure 3 shows the proposed Project features.

VI. IMPLEMENTATION CONSIDERATIONS

The Natural Resources Conservation Service previously proposed to complete an Erosion and Sediment Inventory for the Eliza Creek Watershed. This inventory will help determine the feasibility of the Project.

VII. FINANCIAL DATA

All Project lands are federally-owned by the Corps of Engineers and are managed by the U.S. Fish and Wildlife Service (USFWS) as part of the Mark Twain National Wildlife Refuge Complex. The estimated cost for the general planning, design, and construction of the actions noted in Section V is \$5,500,000. Since this Project is located on a National Wildlife Refuge, it is 100 percent federally funded. The USFWS is the Project sponsor and is responsible for operation and maintenance costs. The DNR manages the site through a cooperative agreement with the USFWS.

VIII. STATUS

The Project was submitted to the Fish and Wildlife Interagency Committee on January 12, 2006, and accepted by the River Resources Coordinating Team on January 24, 2006 and reaffirmed in May 2010.

The Illinois DNR and the USFWS will serve as the Project sponsors.

IX. POINTS OF CONTACT

Marvin Hubbell, EMP Manager, U.S. Army Corps of Engineers, Rock Island District, 309-794-5428
Cathy Henry, Refuge Manager, USFWS, Port Louisa National Wildlife Refuge, 319-523-6982
Rick Mollahan, EMP Coordinator, Illinois DNR, 217-785-8264
Bob Clevestine, USFWS, 309-793-5800, ext. 205

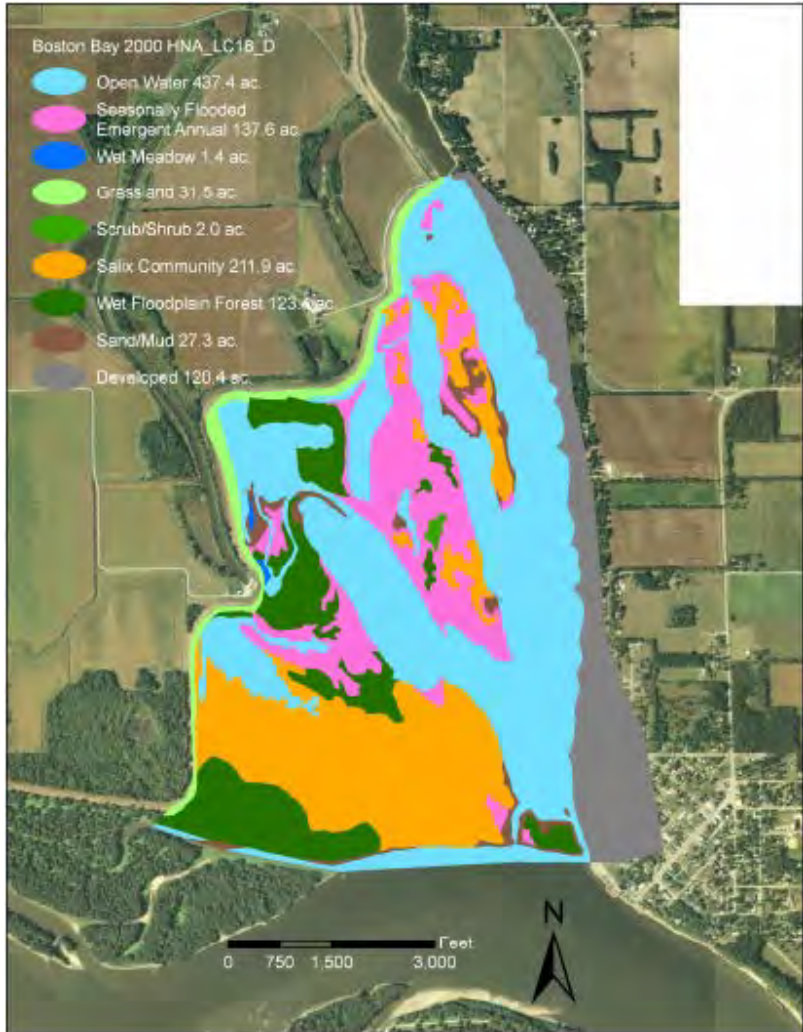
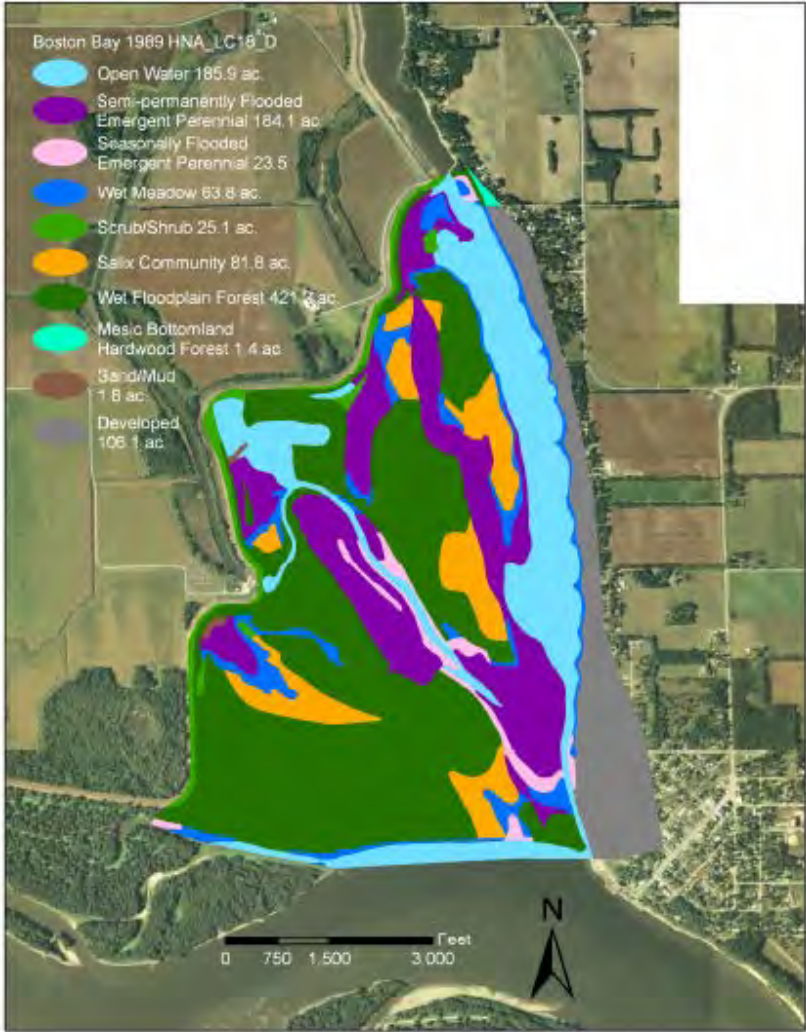


Figure 2. 1989 and 2000 Land Cover Data

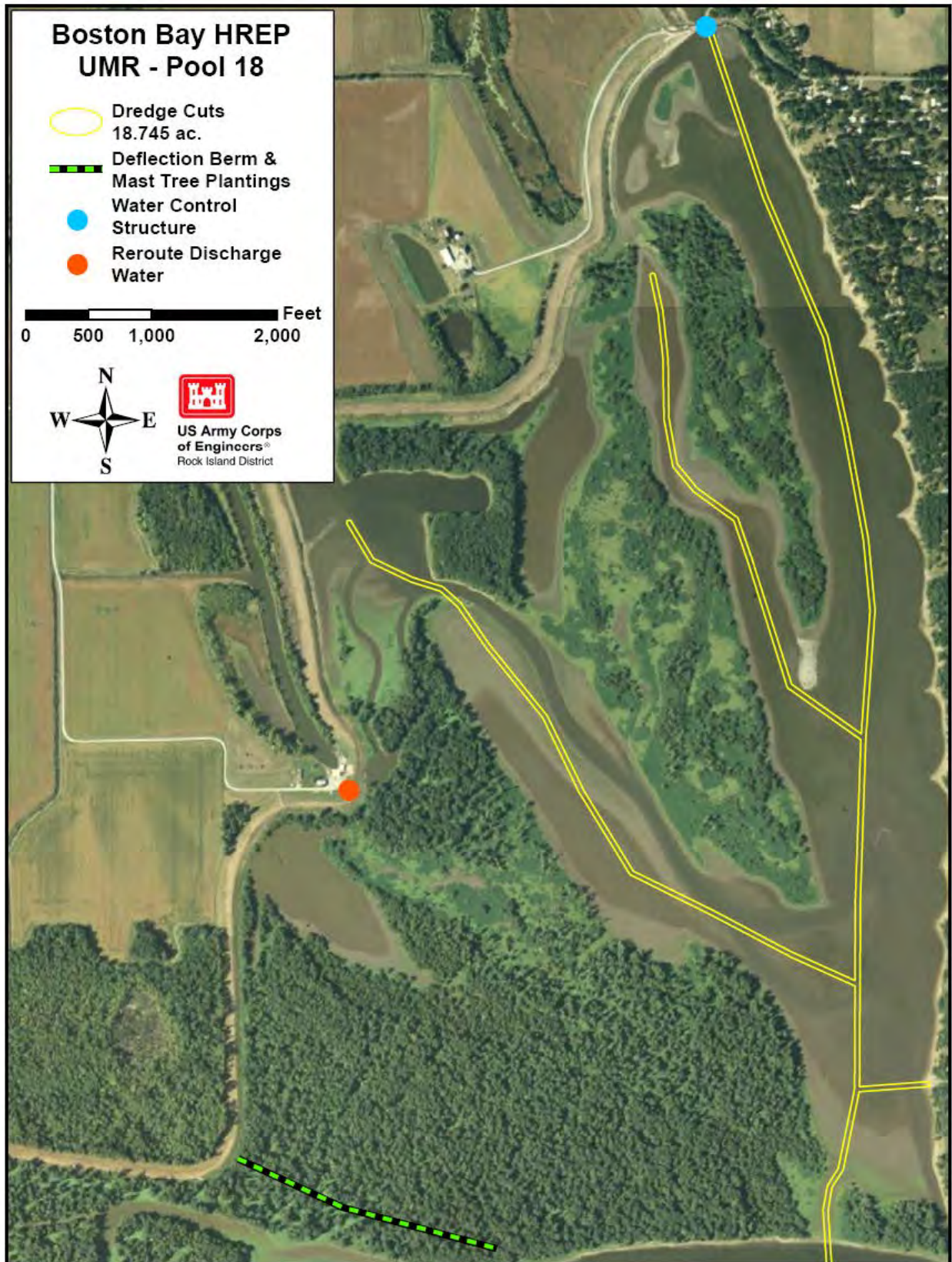


Figure 3. Proposed Project Features