DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

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REPLY TO:
ATTENTION OF:

March 8, 2006

RC. 39041

Engineering/Planning Division
Evaluation Branch

Ms. Brona Simon, Acting Executive Director
Massachusetts Historical Commission
Massachusetts Archives Building
220 Morrissey Boulevard
Boston, Massachusetts 02125

CONCURRENCE: Brona Simon
4/3/06
BRONA SIMON
DEPUTY STATE HISTORIC
PRESERVATION OFFICER
MASSACHUSETTS
HISTORICAL COMMISSION

xc: Cheryl Andrews-Maltais-THPO
Victor T. Mastone - BUAR

Dear Ms. Simon:

The U.S. Army Corps of Engineers, New England District (NAE), is preparing an environmental assessment for a proposed Malden River Ecosystem Restoration Feasibility Study in Malden, Medford, and Everett, Massachusetts. The proposed project includes removing invasive plant species from degraded freshwater wetland areas, restoring wetland areas by planting with native wetland species, and the creation of new wetland areas, and fish spawning habitat. We would like your comments on this proposed project.

The Coastal Massachusetts Ecosystem Reconnaissance Study, the initial authority for the investigation of the Malden River, was authorized by a resolution adopted by the Committee on Transportation and Infrastructure of the U.S. House of Representatives on July 23, 1997. The reconnaissance study identified the restoration of the Malden River ecosystem as one of the ecosystem restoration areas that warranted a full feasibility investigation.

The Malden River watershed is a sub-basin of the much larger Mystic River watershed. The Malden River watershed is approximately 11 square miles, located in the communities of Wakefield, Stoneham, Melrose, Malden, Medford, and Everett. The Malden River originates from the outflow from Spot Pond in the Fells Reservation and passes beneath or through the cities of Melrose, and Malden, in underground culverts south of Malden Center and flows for approximately 2 miles as open surface water through the densely populated cities of Malden, Everett, and Medford, prior to its confluence with the Mystic River. The study area is defined where the river daylights from the underground culverts south of Charles Street, Malden, to the confluence with the Mystic River Medford, and Everett, with a lower boundary of the Amelia Earhart Dam. Within the study area, four small tributaries flow into the Malden River, Little Creek on the western side, two unnamed tributaries on the east side referred to as north Creek and South Creek, and a small drainage creek referred to as the Mall Creek (Figure 1).

The Malden River was originally an estuarine coastal stream that flowed into the Mystic River, winding through a dendritic network of tidal flats and wetland marshes. About 100 years ago, the bordering cities of Malden, Everett, and Medford, with the Federal and state governments, deepened and straightened a mile-long section of the Malden River to create a new Federal river channel for emerging chemical production, coal gasification and manufacturing firms. These industrial usages included tanneries, naval munitions storage, general petroleum storage, and diverse chemical production (Figure 2). The reconfigured channel of the Malden River became an important industrialized waterway and navigational route from Boston Harbor to the emerging industries developed on land created through the filling of tidal wetlands along its banks.

The combined effects of filling of wetlands and waterways, industrial discharges and disposal practices, channelization and dredging, and unregulated runoff from urban areas, led to the loss of most of the historic estuarine wetland habitats and their associated values to fish and wildlife resources (Figure 3). Alteration of the natural river course and degradation of historic spawning and nursery habitat areas negatively impacted anadromous fish populations. Finally, the construction of the Amelia Earhart Dam in 1966 resulted in a complete ecosystem alteration as the tidally flushing estuarine river was converted into a freshwater impoundment with poor flushing, circulation and water quality.

The proposed ecosystem restoration plan consists of the following actions: removal of 10.4 acres of invasive species along the riverbank corridor within sub-areas 3, 4, and 5; replanting of 10.4 acres with native wetland species within sub-areas 3, 4, and 5; creation of 4.75 acres of emergent wetland within the existing oxbow (sub-area 4); placement of gravel/sand substrate to create 2.76 acres of fish spawning habitat within sub-areas 1, 3, 4, 5, and 6; debris removal and disposal within all sub-areas; and, operation changes at the Amelia Earhart Dam to improve fish passage (Figure 4). The material to be excavated from Malden River wetlands has not undergone chemical testing. However, based on studies from adjacent uplands, NAE assumes the material is contaminated and will require out of state disposal at an approved landfill.

Staging areas may be established to support construction activities. These areas will be used to house temporary project offices, store construction equipment and materials, and to process material and other debris removed. Four proposed staging areas were identified during the feasibility study. All proposed staging areas were previously developed and/or disturbed upland areas. Currently, the most favorable staging site due to its approximation to the proposed work activities, lot size, availability, and estimated real estate costs is the National Grid parcel (Figure 5). Topography, landscape features, and vegetation will be restored in-kind upon completion of restoration work.

The inventory of known prehistoric sites in the hilly, upland sections of the northern Boston Basin and Mystic River drainage is limited. However, there are several clusters of prehistoric quarry/lithic workshop sites near outcrops of fine-grained rocks (rhyolite) in the Melrose and Wakefield sections of Middlesex Fells uplands. Large, base campsites were located around ponds or the head of estuaries. Smaller, task specific sites are found on small tributaries or upland areas. During the Contact Period (1520 to 1620), the Mystic River drainage was one of two concentrations or core areas of settlement in the Boston Basin, the other being on the Neponset River. The Mystic River core also probably extended inland from the estuary to include adjacent uplands with large pond (Spot Pond) and tributary stream systems, such as the Malden River. It is likely that prehistoric sites were once present along the original course of the Malden River; however, any evidence of these sites has likely been destroyed by channelization, wetland filling, and industrial development.

Industrialization along the Malden River began as early as the seventeenth century. By the mid-nineteenth century, industries lined the Malden River, including the Boston Rubber Shoe Company established by Elisha Converse, Malden Chemical Works, tanneries, dye houses, nail factories, forges, machine shops, and factories producing tinware and brittaniaware. Shoemaking became a major industry by 1837. During the late nineteenth and early twentieth centuries, the Malden River was deepened and straightened to create a new Federal river channel for these manufacturers as well as chemical manufacturers, coal gasification, and general petroleum storage (Figure 2). Tidal wetlands were filled to create land for these industries.

NAE believes that the degree of disturbance from dredging, filling, channelization, and industrialization has caused the proposed ecosystem restoration project area to lack archaeological integrity. The proposed plan is to restore some of the degraded wetlands, and create fish habitat, within areas that were historically part of the Mystic River estuarine system and that have been severely impacted by heavy industrial activity. We anticipate that the proposed restoration plan should have no effect on historic properties. We would appreciate your concurrence.

If you have any questions, please contact Ms. Kate Atwood, NAE Archaeologist at (978) 318-8537.

Sincerely,

John R. Kennelly
Chief of Planning

Enclosures