

BLACKSTONE RIVER FEASIBILITY STUDY

TASK A FINAL REPORT (ADDENDUM)

This addendum to the Task A Report provides the results for ponds. Ponds were included as part of Task A, however, the field component for ponds was completed separately.

1.0 Introduction and Purpose

The US Army Corps of Engineers, New England District (USACE/NAE) is conducting a multi-year feasibility study to identify watershed restoration opportunities in the Blackstone River Basin in Massachusetts. The goals of this study are to identify environmental restoration needs and opportunities in the basin, develop plans and cost estimates for restoration projects, assess benefits and costs of alternative restoration plans, select a recommended watershed restoration plan, and prepare appropriate NEPA documentation.

Epsilon Associates, Inc. has been subcontracted by Battelle to perform Task A as identified in the Scope of Work (SOW) for the Blackstone River Feasibility Study (USACE/NAE July 20, 1999). As defined by USACE/NAE, Task A includes a comprehensive inventory of wetlands, riparian areas, streams, and ponds to identify and assess restoration opportunities within the Blackstone River Basin.

2.0 Study Area

The Task A study area includes 18 municipalities that make up the central and southern portion of the Blackstone River Basin located in Massachusetts. For the purpose of this evaluation, the Task A study area is assumed to include all or a portion of the following municipalities: Attleboro, Bellingham, Blackstone, Douglas, Franklin, Hopedale, Hopkinton, Mendon, Milford, Millville, North Attleboro, Northbridge, Oxford, Plainville, Upton, Uxbridge, Webster, and Wrentham.

The northern portion of the Blackstone River basin was excluded from Task A because the University of Massachusetts is conducting an investigation in this area to identify similar wetland restoration opportunities. As a result the following 12 municipalities have been excluded from Task A: Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Paxton, Shrewsbury, Sutton, Westborough, West Boylston, and Worcester.

3.0 Site Selection Criteria

The SOW for Task A identifies five resource types that have been targeted for potential restoration opportunities in the Blackstone River Basin. These resource

areas are described in the Task A Final Report. The SOW has identified specific site selection criteria for ponds are described below.

Ponds: Ponds greater than 1 acre in size (as discussed with USACE/NAE) within the study area that would benefit from habitat enhancement, invasive species control, and eutrophication reduction through the use of dredging will be identified and documented.

4.0 Project Methodology

The project methodology is described in the Task A Final Report.

5.0 Discussion and Results

Field work for the ponds portion of Task A was conducted in October 2000. While the other resource areas for Task A were investigated in the fall/winter of 1999, the field investigation for ponds was postponed because indicators of impairment could be best observed during the growing season. In addition, the field work for ponds was similar to that for impoundments and it was practical to complete the field work for these two areas at the same time.

The field team relied on *The Inventory of Lakes, Ponds, and Reservoirs of Massachusetts – Worcester County* (TILPRM-WC) to confirm if a particular water body was a natural pond or an impoundment. The inventory showed that there are relatively few natural ponds in the Blackstone Watershed.

The field team gained access to five pond sites. Information collected on these sites is summarized in the final site list provided in Attachment B. Locations of these sites are identified on a USGS Map provided in Attachment C. Photographs of each site are included in Attachment D. Indicators of impairments at the visited sites were limited to aquatic invasive species and stormwater runoff. Two of the sites visited showed little restoration opportunity.

In addition to those listed in Attachment B, eleven other ponds were identified during using TILPRM-WC. Permission to access these sites was attempted during site visits. When permission could not be obtained during the site visit, future attempts were abandoned. These sites are listed in Attachment E and mapped in Attachment F. Because these ponds were generally remote, the likelihood for these sites to provide a restoration opportunity did not appear to be high.

As determined for the other resource areas, the project team elected to modify the ranking system upon reviewing the initial site scores. The original ranking system was developed to consider all potential scores that could theoretically be attained. For example, it included the highest degree of impairment for a pond site; such a site would have scored high for coverage of exotic plants, species of exotic plants,

eutrophication, erosion and sedimentation, shoreline development, wetland fill, outfalls, illegal dumping, hazardous waste site, and nonpoint source pollution. It also included the lowest score for these categories. Because the sites identified in the field exhibited only one or a few of these impairments, the original ranking system ranked all sites as “low,” even though indicators of impairment were conspicuous. As a result, the field data was diluted by the theoretical restoration sites, which are rare even in the most comprehensive of studies. The solution to this problem was to rank each site against each other, thereby comparing indicators of impairments and potential benefits among the sites actually observed in the field. The modified scoring and ranking system scales are provided in Attachment G. A copy of the blank field form used during site investigations is provided as Attachment H and the forms completed for ponds visited are provided as Attachment I.