BLACKSTONE RIVER WATERSHED
HIGH PRIORITY WETLAND RESTORATION SITES BY TOWN
February 2007

I. INTRODUCTION

The US Army Corps of Engineers, New England District (USACE/NAE), as part of its overall Blackstone River Watershed Restoration Study, conducted a multi-year evaluation to identify watershed restoration opportunities in the Blackstone River Basin in Massachusetts. USACE/NAE efforts in combination with work performed by the Massachusetts Wetlands Restoration Program identified a total of 334 restoration opportunities in wetlands, riparian areas, streams, ponds and impoundments throughout the Blackstone River Watershed in Massachusetts. The objective of this document is to consolidate and reevaluate these sites to provide the Blackstone River Watershed Coalition (and other sub-watershed groups and interested parties) a limited number of high benefit restoration sites with which to get started in restoration efforts. The restoration of wetlands within the Blackstone River Watershed is consistent with the Blackstone River Watershed Coalition Campaign priority initiatives to restore wetland and riparian areas towards the goal of a "Fishable/Swimmable Blackstone River by 2010".

A list and a brief summary and scope of the USACE/NAE work and the Massachusetts Wetlands Restoration Program report as follows:

Army Corps of Engineers New England District (USACE/NAE). 2003. Blackstone River Feasibility Study Task A Volume I and Volume II. Prepared by Epsilon Associates, Inc. (Epsilon), 150 Main Street, Maynard, Massachusetts 01745-0700 for Battelle Duxbury Operations (Battelle), 397 Washington Street, Duxbury, Massachusetts 02332 under Contract No. DACW33-96-D-0005. Delivery Order No. 39. January 6, 2003

Task A included a comprehensive inventory of wetlands, riparian buffers, riparian habitat, streams, and ponds to identify and assess restoration opportunities within the Blackstone River Basin. The geographic range of the Task A work was restricted to the southern portion of the Blackstone River Watershed including 18 towns; Attleboro, Bellingham, Blackstone, Douglas, Franklin, Hopedale, Hopkinton, Mendon, Milford, Millville, North Attleboro, Northbridge, Oxford, Plainville, Upton, Uxbridge, Webster, and Wrentham. There were 97 potential restoration sites that were assessable identified in Task A. Task A Volume I contains the Final Report and Attachments A. References, B. Final Site List, C. Orthophoto GIS Maps, D. Site Photographs, E. Inaccessible sites List and F. Inaccessible Sites Map. Task A Volume II contains Attachments G., Modified Site Ranking System, Blank Field Forms and I. Completed Field Forms.

Army Corps of Engineers New England District (USACE/NAE). 2003. Blackstone River Feasibility Study Addendum to Task A: Ponds. Prepared by Epsilon Associates, Inc. (Epsilon), 150 Main Street, Maynard, Massachusetts 01745-0700 for Battelle Duxbury Operations (Battelle), 397 Washington Street, Duxbury, Massachusetts 02332 under Contract No. DACW33-96-D-0005. Delivery order No. 39. January 6, 2003

The addendum to the Task A report provides results for ponds. Ponds were included in Task A, however, the field component was completed separately. The addendum contains the Ponds Final Report and similar attachments (A. through I.) as listed for Task A Volume 1 and II. There were a total of 5 potential restoration sites (ponds) that were assessable inventoried in the southern portion of the Blackstone River Watershed.

Army Corps of Engineers New England District (USACE/NAE). 2003. Blackstone River Feasibility Study Task B Volume 1. Prepared by Epsilon Associates, Inc. (Epsilon), 150 Main Street, Maynard, Massachusetts 01745-0700 for Battelle Duxbury Operations (Battelle), 397 Washington Street, Duxbury, Massachusetts 02332 under Contract No. DACW33-96-D-0005. Delivery Order No. 39. January 6, 2003

Task B included a comprehensive inventory of impoundments and assessment of existing habitat and recreational value of each identified impoundment. The geographic range of the Task B work was the entire area of the Blackstone River Watershed, which includes the 18 southern Blackstone River Watershed towns listed for Task A, plus 12 additional municipalities in the Upper Blackstone River Watershed; the towns of Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Paxton, Shrewsbury, Sutton, Westborough, West Boylston, and Worcester. A total of 111 potential restoration sites that were assessable were identified in Task B. The information contained in the Task B Volume 1 and Volume II reports was organized similar to the Task A Volume 1 and Volume II reports.

Massachusetts Wetlands Restoration Program (MWRP). 2003. Final Upper Blackstone River Watershed Wetland Restoration Plan. Prepared by the Massachusetts Executive Office of Environmental Affairs Wetlands Restoration Program. June 2003

Concurrent with the work being completed on Task A and B for the USACE/NAE, the Massachusetts Wetlands Restoration Program (MWRP) was working with the University of Massachusetts to complete an inventory of wetlands restoration opportunities in the 12 Upper Blackstone River Watershed towns (as listed for Task B). The survey area also included the town of Northridge (which was previously included as part of the southern Blackstone River Watershed towns in Task A). A total of 71 potential wetland restoration sites were identified by the MWRP. This work was completed and a report was submitted to the USACE/NAE in 2002 for use in the overall inventory of the Blackstone River Watershed.

Army Corps of Engineers New England District (USACE/NAE). 2004. Blackstone River Feasibility Study Task C. Prepared by Epsilon Associates, Inc. (Epsilon), 150 Main Street, Maynard, Massachusetts 01745-0700 for Battelle Memorial Institute (Battelle), 397 Washington Street, Duxbury, Massachusetts 02332 under Contract No. DACW33-03-D-0004. Delivery Order No. 03. March 24, 2004

Task C included the inventory for habitats in the Upper Blackstone River Watershed that were not previously inventoried in Tasks A and B or by the Massachusetts Wetland Restoration Program (which inventoried wetland restoration opportunities). The Task C report provided a comprehensive inventory and habitat assessment of riparian buffers, riparian habitat, streams and

ponds consistent with the methodology employed in the previous Tasks. The Task C study area included the 12 municipalities that make up the Upper Blackstone River Watershed; Auburn, Boylston, Grafton, Holden, Leicester, Millbury, Paxton, Shrewsbury, Sutton, Westborough, West Boylston, and Worcester. Task C contained information about each restoration site similar to the previous Task A and Task B reports. There were a total of 50 potential restoration sites that were assessable to investigators inventoried in Task C.

II. TYPES OF RESTORATION OPPORTUNITIES

Six resource types were targeted for potential restoration opportunities in the Blackstone River Watershed restoration sites evaluation including wetlands, riparian buffer, riparian habitat, streams, ponds and impoundments. The definition of each resource types is described below:

Wetlands: The identification of potential restoration opportunities was focused on previously disturbed wetlands such as filled wetlands, wetlands with altered hydrology, and wetlands that have been invaded by invasive species such as phragmites (*Phragmites australis*), European buckthorn (*Rhamnus frangula*), Japanese knotweed (*Polygonum cuspidatum*), and purple loosestrife (*Lythrum salicaria*). In addition, the possibility of constructing new wetlands was be evaluated in highly disturbed areas (e.g., gravel pits). Only restoration sites greater than 0.5 acres were identified and field visits were only conducted at sites greater than 1 acre in size.

Riparian Buffers: Opportunities that were identified to restore wooded buffers greater than 50 feet wide along the Blackstone River, its perennial tributaries, and impoundments greater than 5 acres in size. Potential restoration sites were defined as lengths of riparian area where a 50-foot wide buffer was lacking for a linear distance of more than 250 feet. Disturbed land in undeveloped to moderately developed areas of the watershed were targeted for analysis (as discussed with USACE/NAE). Site visits were conducted at all riparian areas where the potential exists to restore a vegetated buffer along an area greater than 1,000 feet in length.

Riparian Habitat: Opportunities were identified to restore large (greater than 2 acre) continuous tracts of riparian habitat along the Blackstone River, its perennial tributaries, and impoundments greater than 5 acres in size (as discussed with USACE/NAE). Disturbed land in undeveloped or lightly developed areas of the watershed were targeted for analysis. Likely restoration sites include agricultural land, junkyards, borrow pits, and unnecessary parking lots. Field visits were conducted for all sites greater than 5 acres in size.

Streams: Perennial streams where the potential exists for instream habitat restoration and streambank stabilization/erosion control projects were identified and documented. Restoration opportunities typically included streams that have been channelized, have eroded banks, or exhibit excessive sedimentation of the substrate.

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 were identified and documented.

Impoundments: All impoundments on perennial tributaries within the Massachusetts portion of the Blackstone River Watershed were identified. Impoundments associated with the following areas were excluded from the inventory as directed by USACE/NAE; impounded public water supplies identified in the Massachusetts Surface Water Quality Standards (314 CMR 4.06); impoundments on the mainstem of the Blackstone River; and USACE/NAE Flood Control Projects (West Hill Flood Control Project in Uxbridge).

III. METHODOLOGY

To identify potential restoration sites in the Blackstone River Basin, a three phased approach was used for Tasks A, B and C. The first phase involved the procurement of existing information from a variety of sources such as resource maps, watershed studies, aerial photography and other ongoing studies and projects. The second phase involved analyzing this information to identify potential restoration sites, determining the size of sites to determine if sites met predetermined size requirements. Once potential sites were identified, their locations were placed on a base map, including those to be visited in the field, and field packets for the site evaluation phase were prepared. The third phase involved field visits to each site for the purpose of collecting additional information and evaluating sites as potential restoration opportunities.

As part of the ranking of sites for overall restoration potential for Tasks A, B and C, field staff gathered site information and scored and ranked various site characteristics while at the site. Categories evaluated to determine the final restoration potential score included impairment, benefits, impacts, and costs. Impairment scores were recorded for a variety of impairment factors observed at each potential restoration site such as percentage of adjacent area developed, erosion and sedimentation, illegal dumping, and coverage of exotic species. Potential benefits of the restoration project were evaluated for improvements to water quality, fisheries/wildlife habitat, flood control recreation, and groundwater recharge/discharge. Indicators of potential negative impacts were evaluated for impact to fisheries or rare species habitat, loss of agricultural land, and negative impacts to commercial uses. Potential indicators of cost to restore a potential restoration site were evaluated including ownership, re-grading, fill removal, and revegetation (because the cost of a restoration project is a factor of its size, the total number of indicators of cost was weighted by a size factor). Scores were tallied for impairment, benefits, impacts, and costs to produce a total score for the quality of the restoration opportunity. The total score was used to rank the site as low, medium or high based on the range of possible scores that might be recorded.

Although the methodology used by the Massachusetts Wetland Restoration Program (MWRP) to identify and evaluate potential restoration sites was slightly different than the USACE/NAE Task A, B and C data (i.e. variations in subwatershed boundaries, assessment categories, etc.), all restoration sites were categorized by Town and ranked for restoration benefits in a similar fashion. Therefore, the wetland restoration sites identified by the MWRP were incorporated into the total list of identified sites and included in the selection of highest priority sites.

A total of 334 potential restoration sites were identified in the Blackstone River Watershed as contained in the USCOE/NAE Task A, B and C reports and the Massachusetts Wetlands Restoration Program (MWRP) report (see Appendix A for the total list of 334 potential restoration sites and restoration opportunity ranking). All restoration types; wetlands, riparian buffer, riparian habitat, streams, ponds and impoundments were used in ranking the highest priority sites presented in this document. The sites that investigators were unable to assess, view from a distance or did not meet size criteria (and therefore were not evaluated in detail) were listed separately as secondary restoration potential opportunities. These secondary or inaccessible sites are not listed in this report and were not included in the consolidated list used to determine the highest priority restoration sites. It should also be noted, there were duplicate restoration site numbers when consolidating the Task A (and Task A Addendum) (southern Blackstone River Watershed) and Task C (Upper Blackstone River Watershed) data; RB5, RH12 and P2, (RB=Riparian Buffer, RH= Riparian Habitat and P=Ponds). The supplemental information included on Table 1 – Top Priority Sites By Town (i.e. Task and Town) will be necessary to differentiate these sites.

Watershed boundary designation (nomenclature and geography (i.e. watershed versus sub-watershed)) varied slightly between Tasks A, B and C and the Massachusetts Wetlands Restoration Program (MWRP) report. There was also some variation with the watershed boundary designations depending on the type of restoration (i.e. streams, ponds, etc.) and therefore, potential restoration sites were organized by Town, a data field common to all of the 334 identified restoration sites. The objective of the consolidation and reevaluation of this information is to provide the Blackstone River Watershed Coalition (and other sub-watershed groups and interested parties) a limited number (up to 5 per Town) of high benefit restoration sites with which to get started in restoration efforts.

The 334 total potential restoration sites identified were initially consolidated and then organized by Town (see Appendix A for the entire list). The number of sites was reduced by over half in two steps; by 1) eliminating low and medium ranked sites if there were adequate numbers (over 5) of high ranked sites in a Town and, 2) eliminating sites that investigators listed as having “no fix” in the “Fix Type” category. This effort reduced the total number of sites to 162. Top priority sites were then determined by reviewing and individual sites and considering the site-specific characteristics for each site. The characteristics that were considered important to top priority sites (when there were more than 5 sites in a town) included a high restoration ranking, public ownership, endangered species or flood plain concerns. The number of sites was reduced to 92 sites (most town retained 5 top priority sites) as listed in Table 1 – Top Priority Sites By Town.

IV. RESULTS AND DISCUSSION

The purpose of this report was to identify up to five potential wetland restoration sites for each Town in the Blackstone River Basin. A total of 92 high ranked sites were determined using a combination of factors (as described in the previous section) to identify sites with the greatest environmental benefits and highest probably for successful restoration. However, further

evaluation will be necessary to determine the feasibility of restoration and to fully reclaim the aesthetic quality, fish and wildlife habitat and/or recreational value of these areas.

Restoration proposals that have solid landownership and community support, plus significant ecological benefits may be eligible for financial assistance through The Massachusetts Office of Coastal Zone Management, Wetland Restoration Program. Potential applicants are strongly urged to discuss any project ideas with the Wetland Restoration Program before making a formal application. Additional information may be found at the following web address: http://www.mass.gov/czm/wrp/projects_pages/project_funding.htm

Additional information on potential financial assistance may also be obtained from Margherita Pryor (COP) at the Environmental Protection Agency, New England, One Congress Street, Boston MA 02114 or by phone at 617-918-1597 or email at pryor.margherita@ epa.gov. Another point of contact for wetland restoration assistant is Richard Ribb, Director of the Narragansett Bay Estuary Program, University of Rhode Island, Bay Campus, Box 27,Narragansett RI 02882 by phone at 401-874-6233 or 401-222-4700, x7271 or by email at rribb@gso.uri.edu

Table 1 – Top Priority Sites By Town

Site #	Source of Information	Town	Owner Type	Impact Type	Fix Type	Rare Species Habitat	Invasive Species	100-Year Flood-plain	Adjacent Land Uses	Final Rank of Restoration Opportunity (score)	Comments
I-118	Task B - Impoundments	Attleboro	Public	INV SP, SD, SE, OF, NP	Dredging, NP Control	No				High	
RH-14	Task C - Final Site List	Auburn	Private	Fill	Vegetate, Treat Erosion	No	No	Yes	Commercial, Residential	High	Construction activity, restoration might occur anyway
I-40	Task B - Impoundments	Auburn	Private	INV SP, NP	Treat INV SP, NP Control	Yes				Medium	
I-43	Task B - Impoundments	Auburn	Private	INV SP	Treat INV SP	Yes				Medium	
42	MA Wet Restoration Program	Auburn	Public	Fill	remove fill	No			ballfield	Medium	
74	MA Wet Restoration Program	Auburn	Uncertain	Fill	remove fill	Yes			mixed	Medium	
W-22	Task A Final Site List - Southern	Bellingham	Public	Fill	remove fill, vegetate	No	Yes	Yes	Mod Res, Forested Wetland	High	
RH-2	Task A Final Site List - Southern	Bellingham	Private	Old Drive-In	Old Drive-In	No	No	No	Dense Res	Medium	
S-15	Task A Final Site List - Southern	Bellingham	Private	Lawn	vegetate	No	Yes	No	Dense Res	Medium	no photo
I-115	Task B - Impoundments	Bellingham	Public	INV SP, NP	Treat INV SP, NP Control	No				Medium	Public Beach
RH-33	Task A Final Site List - Southern	Bellingham	Private	Tilled Field	vegetate	Yes	No	No	Light Res, Agriculture, Forest	Low	
RH-31	Task A Final Site List - Southern	Blackstone	Public	Abandoned Lot	remove fill and vegetate	No	No	Yes	Dense Res, Lawn	Medium	
RH-32	Task A Final Site List - Southern	Blackstone	Private	Abandoned Lot	remove fill, regrade, vegetate	No	No	Yes	Mod Res, Industrial	Medium	
S-14	Task A Final Site List - Southern	Blackstone	Private	Erosion	stabilize banks	No	No	Yes	Roadway, Industrial	Medium	ANP Blackstone
RB-9	Task A Final Site List - Southern	Blackstone	Private	Gravel Pit	regrade, vegetate	No	No	Yes	Gravel Pit, Forest	Low	ANP Blackstone PP
S-13	Task A Final Site List - Southern	Blackstone	Public	Erosion	stabilize banks	Yes	No	Yes	Mod Res, Roadway, Forest	Low	Conservation Land

Table 1 – Top Priority Sites By Town (continued)

Site #	Source of Information	Town	Owner Type	Impact Type	Fix Type	Rare Species Habitat	Invasive Species	100-Year Flood-plain	Adjacent Land Uses	Final Rank of Restoration Opportunity (score)	Comments
P-1	Task C - Final Site List	Boylston	Private	Residential	Minor Residential Impacts	No	No	No	Residential	Medium	
I-16	Task B - Impoundments	Boylston, Shrewsbury	Private	INV SP	Treat INV SP	Yes				Medium	Canoers Observed
P-2	Task C - Final Site List	Boylston	Private	Residential / Recreational	Residential Impacts	Yes	Yes	Yes	Residential	Low	NHESP Rare Sp. - Wood Turtle
I-87	Task B - Impoundments	Douglas	Private	INV SP, NP Control	Remove Dam, Treat INV SP	No				High	
I-87A	Task B - Impoundments	Douglas	Public	INV SP, Eutrophication, Outfall, NP	Remove Dam, NP Control	No				Medium	
RH-40	Task A Final Site List - Southern	Douglas	Private	Runoff	treat runoff, vegetate	No	No	Yes	Dense Residential, Roadway	Medium	Large outfall just upstream
RB-7	Task A Final Site List - Southern	Douglas	Private	Runoff	vegetate	No	Yes	Yes	Light Residential and Commerical	Medium	Horse Field
RH-29	Task A Final Site List - Southern	Douglas	Private	Field	vegetate	Yes	No	Yes	Roadway, Light Res., Open Water	Low	Some stone structures in stream downstream of site, possibly an old mill
RH-12	Task C - Final Site List	Grafton	Private / Public	Former Gravel Pit,	Bank Stabilization, Vegetate	No	Yes	Yes	Residential, Agriculture, Industrial	High	
S-6	Task C - Final Site List	Grafton	Public	Culvert	Remove Culvert	No	Yes	Yes	Forest	High	Cold Water Stream
52	MA Wet Restoration Program	Grafton	Mixed	fill	remove fill	No		Yes	residential/open space	High	
95	MA Wet Restoration Program	Grafton	Private	fill/altered	remove fill/ further investigate	No		Yes	dam	High	
96	MA Wet Restoration Program	Grafton	Public	fill/altered	remove fill/ further investigate	No		Yes	cemetary/sewage treatment plant	High	

Table 1 – Top Priority Sites By Town (continued)

Site #	Source of Information	Town	Owner Type	Impact Type	Fix Type	Rare Species Habitat	Invasive Species	100-Year Flood-plain	Adjacent Land Uses	Final Rank of Restoration Opportunity (score)	Comments
I-76	Task B - Impoundments	Hopedale	Public	INV SP, NP	Treat INV SP, NP Control	Yes				Medium	Public Beach
I-77	Task B - Impoundments	Hopedale	Public	INV SP, NP	Treat INV SP, Mitigate Outfall	No				Medium	
RB-5	Task A Final Site List - Southern	Hopedale	Private	Golf Course	reroute stream, vegetate	No	No	Yes	Golf Course, Forest	Medium	
RH-14	Task A Final Site List - Southern	Hopedale	Private	Parking Lot	remove pavement, vegetate	No	No	No	Industrial	Medium	
RB-6	Task A Final Site List - Southern	Hopedale	Private	Fill, Ditched, Invasives	vegetate	No	Yes	Yes	Industrial, Cemetery	Low	May impact adjacent roadway
I-75	Task B - Impoundments	Hopkinton/ Milford/ Upton	Public	INV SP, SD, NP	Treat INV SP, NP Control	No				Medium	
P-6	Task C - Final Site List	Leicester	Private	Invasives	Invasive Removal	No	Yes	Yes	Residential	High	
I-1	Task B - Impoundments	Leicester	Private	INV SP	FP	Yes				Medium	
I-2	Task B - Impoundments	Leicester	Private	INV SP	Dam Removal, Treat INV SP	No				Medium	
RH-6	Task C - Final Site List	Leicester	Private	Dumping, Invasives	Treat invasives, vegetate	No	Yes	Yes	Industrial/Com-merical, Residential	Low	
RH-7	Task C - Final Site List	Leicester	Private	Erosion, Industrial	Vegetate	No	Yes	Yes	Industrial, Residential	Low	Adjacent to 2 hazardous waste sites
S-5	Task A Final Site List - Southern	Mendon	Private	Ditched	reroute	Yes	No	Yes	Light Res, Mixed Forest	Medium	
W-14	Task A Final Site List - Southern	Mendon	Private	Ditching	fill channels, vegetate buffer	No	No	No	Light Res, Agriculture, Forest	Medium	
RH-13	Task A Final Site List - Southern	Mendon	Private	Pasture	vegetate buffer	No	No	No	Agriculture	Medium	
S-2	Task A Final Site List - Southern	Mendon	Public	Stormwater	treat runoff	Yes	Yes	Yes	Commercial, Forest, Road	Medium	Brook Lamprey
W-23	Task A Final Site List - Southern	Mendon	Private	Sediment, Road Runoff	treat runoff,	Yes	Yes	Yes	Mod Res, Roadway	Medium	

Table 1 – Top Priority Sites By Town (continued)

Site #	Source of Information	Town	Owner Type	Impact Type	Fix Type	Rare Species Habitat	Invasive Species	100-Year Flood-plain	Adjacent Land Uses	Final Rank of Restoration Opportunity (score)	Comments
W-2	Task A Final Site List - Southern	Milford	Private	Ditching, Filling	remove fill, fill ditches	No	Yes	Yes	Forest	Medium	
53	MA Wet Restoration Program	Millbury	Private	filled/altered	remove fill	No		No	Highway	High	
70	MA Wet Restoration Program	Millbury	Uncertain	filled/altered	remove fill/riparian rest.	No		Yes	Commercial	High	
77	MA Wet Restoration Program	Millbury	Private	filled/altered	remove fill/riparian rest.	No		Yes	Powerstation	High	
RB-16	Task C - Final Site List	Millbury	Public / Private	Developed	Vegetate	No	No	No	Residential, Recreation	High	
I-34B	Task B - Impoundments	Millbury	Private	INV SP, Eutrophication	Treat INV	No				High	
RH-30	Task A Final Site List - Southern	Millville	Private	Abandoned Lot	remove fill and waste, vegetate	No	Yes	No	Dense Res, Commercial	Low	
RB-12	Task A Final Site List - Southern	North Attleboro	Private	Tilled Crops	vegetate	No	No	No	Dense and Mod Res, Forest	Medium	
RH-27	Task A Final Site List - Southern	North Attleboro	Private	Dairy Farm	vegetate	No	Yes	No	Mod Res, Agriculture, Roadway	Medium	
RH-36	Task A Final Site List - Southern	North Attleboro	Private	Gravel Pit	vegetate	No	No	No	Mod Res, Abandoned Field	Medium	
I-81	Task B - Impoundments	Northbridge	Private	SD, NP, Outfall	Mitigate Outfall	No				High	
RH-1	Task A Final Site List - Southern	Northbridge	Private	Gravel Pit	Gravel Pit	No	No	Yes	Mod Res, Surface Waters	High	
P-2	Task A - Addendum	Northbridge	Private and Public	erosion and stormwater	revegetate, treat stormwater	No	Yes	No	dense residential, industrial	Medium	High Impairments, Medium Final Restoration
RH-37	Task A Final Site List - Southern	Northbridge	Private	Fill	remove fill	No	No	No	Dense Residential, Roadway	Medium	Directed to site by MA EOEA Personnel
I-82	Task B - Impoundments	Northbridge	Public	NP, Eutrophication	Unknown	No				Medium	Public Park and Conservation Land
W-17	Task A Final Site List - Southern	Oxford	Private	Fill	remove fill	No	Yes	No	Recreation Fields	Low	Road and Gun Club Ownership

Table 1 – Top Priority Sites By Town (continued)

Site #	Source of Information	Town	Owner Type	Impact Type	Fix Type	Rare Species Habitat	Invasive Species	100-Year Flood-plain	Adjacent Land Uses	Final Rank of Restoration Opportunity (score)	Comments
10	MA Wet Restoration Program	Paxton	Private	fill	remove fill	No		No	Commercial	Low	
W-27	Task A Final Site List - Southern	Plainville	Private	Pasture	vegetate	No	No	No	Mod Res, Forest	Low	
RB-5	Task C - Final Site List	Shrewsbury	Private	Field	Vegetate	No	Yes	Yes	Abandoned Field, Light Commercial	High	Cold Water Strm.
I-17	Task B - Impoundments	Shrewsbury	Private	INV SP, Eutrophication	Remove Dam	No				HIgh	Dam partially breached
I-18	Task B - Impoundments	Shrewsbury	PRIV	INV SP, Eutrophication	Remove Dam	No				High	
18	MA Wet Restoration Program	Shrewsbury	Private	fill/altered	remove fill	No		Yes	residential	High	
20	MA Wet Restoration Program	Shrewsbury	Public	fill/altered	remove fill	No		No	ballfield	Medium	
I-59	Task B - Impoundments	Sutton	Private	INV SP, NP	Treat INV SP	Yes				High	Campground surrounds, much of the pond
112	MA Wet Restoration Program	Sutton	Private	fill/altered	remove fill	No		Yes	Golf course	High	
I-51	Task B - Impoundments	Sutton	Public	INV SP, NP	Treat INV SP, NP Control	Yes				Medium	
I-52	Task B - Impoundments	Sutton	Public	INV SP	Treat INV SP	Yes				Medium	Dam Partially Breached, WMA
I-53	Task B - Impoundments	Sutton	Public	INV SP	Treat INV, Dam Removal	Yes				Medium	Dam Breached, WMA
W-1	Task A Final Site List - Southern	Upton/Milford	PRIV	Ditching	fill channels	No	No	Yes	Mod Res, Forest, Wetland	Medium	
W-5	Task A Final Site List - Southern	Upton	Public	Fill	remove fill, regrade	No	Yes	No	Commercial, Wetland	Medium	
W-15	Task A Final Site List - Southern	Upton	Private	Ditching, Stormwater	fill channels, treat runoff	No	Yes	No	Mod Res, Roadway, Forest	Medium	
W-24	Task A Final Site List - Southern	Upton	Private	Fill, Channelized, Invasives	remove fill, increase flood storage	Yes	Yes	Yes	Mod Res, Forest	Medium	
I-71	Task B - Impoundments	Upton	Public	INV SP, NP	Treat INV SP, NP Control	Yes				Medium	

Table 1 – Top Priority Sites By Town (continued)

Site #	Source of Information	Town	Owner Type	Impact Type	Fix Type	Rare Species Habitat	Invasive Species	100-Year Flood-plain	Adjacent Land Uses	Final Rank of Restoration Opportunity (score)	Comments
P-5	Task A - Addendum	Uxbridge	Public	remove invasives	treat invasives	Yes	Yes	No	mixed upland, light residential	High	Low impairments, High Restoration
S-11	Task A Final Site List - Southern	Uxbridge	Public	Channelized, No vegetation	reroute, vegetate	No	No	Yes	Roadway, Forest	High	former Wild Trout Stream
I-97	Task B - Impoundments	Uxbridge	Public	INV SP, Eutrophication, SD, NP	Treat INV SP, NP Control	Yes				High	
RH-12	Task A Final Site List - Southern	Uxbridge	Public	Gravel Pit, Junk Yard	remove fill, revegetate	No	No	Yes	Lawn, wetland	Medium	
W-16	Task A Final Site List - Southern	Uxbridge	Public	Fill	remove fill	No	No	Yes	Roadway, Forest	Medium	
S-1	Task C - Final Site List	Worcester	Private	Culvert / Channelization	Vegetate, Remove Culvert, In-Stream Cover	No	Yes	No	Dense Residential	High	Cold Water Stream
I-9	Task B - Impoundments	Worcester	Public	INV SP, NP	NP Control	No				High	City Park
2	MA Wet Restoration Program	Worcester	Mixed	fill	remove fill	No		Yes	ballfield	High	
26	MA Wet Restoration Program	Worcester	Non-profit	fill/altered	remove fill/treat INV SP/further investigation	Yes		Yes	wildlife sanctuary	High	
RB-4	Task C - Final Site List	Worcester	Public	Field	Vegetate, Treat Erosion	No	Yes	Yes	Recreation, Industrial	Medium	Cold Water Strm.
RB-11	Task A Final Site List - Southern	Wrentham	Private	Tilled Crops	vegetate	No	No	Yes	Mod Res, Forest, Wetlands	High	
W-21	Task A Final Site List - Southern	Wrentham	Private	Invasives	flood	No	Yes	No	Mod Res, Forest	High	
I-115B	Task B - Impoundments	Wrentham	Public	INV SP, Sedimentation, Algae	Remove Dam	No				High	
RH-20	Task A Final Site List - Southern	Wrentham	Private	Sedimentation	fence and vegetate	No	No	No	Mod Res, Forest	Medium	

Acronym Key

RB = Riparian Buffer
RH= Riparian Habitat
S=Stream
P=Pond
I=Impoundment

INV SP = Invasive Species
NP= Non-Point
SD=Sediment
FP=Fish Passage

NHESP=Natural Heritage Endangered Species Program
EOEA=Executive Office of Environmental Affairs