

**GENERAL ELECTRIC/HOUSATONIC RIVER  
NATURAL RESOURCE RESTORATION**

**MASSACHUSETTS HOUSATONIC RIVER WATERSHED  
RESTORATION PROGRAM**

**DRAFT ROUND 2 RESTORATION PLAN AND  
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT**

**May 6, 2010**



**PREPARED BY:  
STANTEC CONSULTING**

**FOR:  
MASSACHUSETTS SUBCOUNCIL,  
HOUSATONIC RIVER NATURAL RESOURCE TRUSTEES**

**U.S. Department of the Interior Approval  
Of the  
Draft Restoration Plan/Supplemental Environmental Assessment  
  
General Electric/Housatonic River  
Natural Resource Restoration**

**Massachusetts Housatonic River Watershed Restoration Program – Round 2**

In accordance with U.S. Department of the Interior policy regarding documentation for natural resource damage assessment and restoration projects (521 DM3), the Authorized Official for the Department must demonstrate approval of draft and final Restoration Plans and their associated National Environmental Policy Act documentation, with concurrence from the Department's Office of the Solicitor.

The Authorized Official for the Housatonic River case is the Regional Director for the U.S. Fish and Wildlife Service's Northeast Region.

The Round 2 draft Restoration Plan/Supplemental Environmental Assessment (RP/SEA) is hereby approved. This approval does not extend to the final RP/SEA. The draft RP/SEA shall be released for public review and comment for a minimum of 30 days. After consideration of the public comments received, the RP/SEA may be revised to address such comments.

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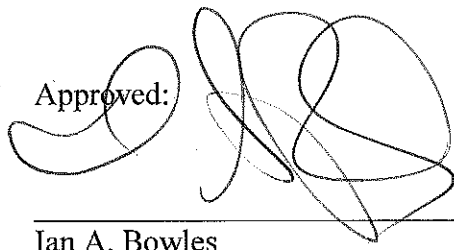
**Executive Office of Energy and Environmental Affairs  
Approval of**

***General Electric/Housatonic River Natural Resource Restoration***

***Massachusetts Housatonic River Watershed Restoration Program – Round 2  
Draft Restoration Plan/Supplemental Environmental Assessment***

In accordance with Trustee protocol regarding documentation for Natural Resource Damage Assessment and Restoration projects, the Executive Office of Energy and Environmental Affairs (EOEEA) is providing its approval of the Round 2 Draft Restoration Plan/Supplemental Environmental Assessment (RP/SEA). This approval does not extend to the Final RP/SEA.

The draft RP/SEA shall be released for public review and comment for a minimum of 30 days, as required by federal law. After consideration of the public comments received, the RP/SEA may be revised to address such comments.

Approved: 


Ian A. Bowles

May 17, 2010

Date

Secretary  
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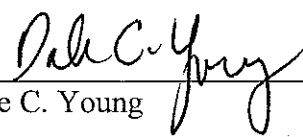
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**ACRONYMS**

ACOE	U.S. Army Corps of Engineers
ARPA	Archaeological Resources Protection Act
BEAT	Berkshire Environmental Action Team
CAPS	Conservation Assessment and Prioritization System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMR	Code of Massachusetts Regulations
CTDEP	Connecticut Department of Environmental Protection
CWA	Clean Water Act
DCR	Massachusetts Department of Conservation and Recreation
DFW	Massachusetts Division of Fisheries and Wildlife
DOI	Department of the Interior
EIR	Environmental Impact Report
ESA	Endangered Species Act
EOEEA	Executive Office of Energy and Environmental Affairs
FACA	Federal Advisory Committee Act
FWCA	Fish and Wildlife Coordination Act
GE	General Electric
HRR	Housatonic River Restoration, Inc.
HVA	Housatonic Valley Association
MADEP	Massachusetts Department of Environmental Protection
MADER	Massachusetts Division of Ecological Restoration
Mass Audubon	Massachusetts Audubon Society
MESA	Massachusetts Endangered Species Act
MEPA	Massachusetts Environmental Policy Act
MET	Massachusetts Environmental Trust
MA SubCouncil	Massachusetts SubCouncil
MBTA	Migratory Bird Treaty Act

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MOA	Memorandum of Agreement
MWPA	Massachusetts Wetlands Protection Act
M.G.L.	Massachusetts General Laws
NEPA	National Environmental Policy Act
NHESP	Massachusetts Natural Heritage and Endangered Species Program
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
NRD	Natural Resource Damages
NRDAR	Natural Resource Damage Assessment and Restoration
OHV	Off Highway Vehicle
PCBs	Polychlorinated biphenyls
PEA	Programmatic Environmental Assessment
RCRA	Resource Conservation and Recovery Act
Restoration Program	Massachusetts Housatonic River Watershed Restoration Program
RP	Restoration Plan
RPSP	Restoration Project Selection Procedure
ROR	Rest of River
SEA	Supplemental Environmental Assessment
Trustee Council	Housatonic River Natural Resource Trustees
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WNS	White-Nose Syndrome
Woodlot	Woodlot Alternatives, Inc.

## 1.0 INTRODUCTION TO THE RESTORATION PLAN / SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

This draft Restoration Plan / Supplemental Environmental Assessment (RP/SEA) was prepared by the U.S. Fish and Wildlife Service (USFWS) and the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA) (collectively, the “MA SubCouncil”<sup>1</sup>), to restore injured natural resources and resource services<sup>2</sup> resulting from the release of polychlorinated biphenyls (PCBs) and other hazardous substances from General Electric’s (GE’s) facility in Pittsfield, Massachusetts. This draft RP/SEA presents the MA SubCouncil’s preferred restoration projects for Round 2 of a compensatory restoration program in the Massachusetts portion of the Housatonic River watershed (hereinafter referred to as the Massachusetts Housatonic River Watershed Restoration Program or simply Restoration Program). Compensatory restoration projects are projects that restore, rehabilitate, replace, and/or acquire the equivalent of injured natural resources and/or the services provided by those resources.

In 2007, as part of its efforts to comply with public disclosure requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. 4321 *et seq.*, the MA SubCouncil completed a Programmatic Environmental Assessment (PEA) for the Restoration Program which evaluated potential strategies for accomplishing restoration. A “Blended Restoration Approach” was identified as the preferred alternative for the Restoration Program. The Blended Restoration Approach would achieve restoration in four restoration priority categories: Aquatic Biological Resources and Habitat, Wildlife Resources and Habitat, Recreational Uses, and Environmental Education and Outreach. The PEA also evaluated the potential environmental and socioeconomic impacts that might result from restoration projects implemented under the Blended Approach.

On October 12, 2007, the MA SubCouncil issued the Final Round 1 RP/SEA, detailing a suite of projects intended to achieve compensatory restoration in the aforementioned priority categories. A total of \$4 million was allocated in the Round 1 RP/SEA to implement 10 restoration projects. Table 1 presents a summary of funding awarded for the four restoration priority categories. Additional details related to Round 1 funding may be found in the Massachusetts Housatonic River Watershed Restoration Program Round 1 RP/SEA. The Round 1 Preferred Alternative restoration projects are in varying

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<sup>1</sup> The MA SubCouncil was established to consist of voting members from EOEEA and the USFWS and non-voting ex-officio members (see page iii). However, for purposes of this document, when regarding activities directly relating to the evaluation of proposals and identifying the proposed Preferred Alternatives, the MA SubCouncil consisted of only the voting Trustee members.

<sup>2</sup> The term “services” in this document means the physical and biological functions performed by the resource including human uses of these functions. These services are the result of the physical, chemical, or biological quality of the resource. 43 CFR § 11.14(nn). “Services” includes provision of habitat, food, and other needs of biological resources, recreation, other products or services used by humans, flood control, ground water recharge, waste assimilation, and other such functions that may be provided by natural resources. 43 CFR § 11.71(e).

states of completion.

**Table 1: Summary of Round 1 NRD Funding**

<b>Restoration Priority Category</b>	<b>Number of Projects Funded</b>	<b>Approved NRD Funding</b>
Aquatic Biological Resources and Habitat	2	\$1,306,950
Wildlife Resources and Habitat	3	\$1,034,206
Recreational Uses	3	\$792,355
Environmental Education and Outreach	2	\$866,489
<b>Approved Round 1 Funding</b>		<b>\$4,000,000</b>

On January 23, 2009, the MA SubCouncil issued the second solicitation (Round 2) targeting \$1 million in funds for restoration project proposals from the public that focus on habitat restoration. The evaluation of these submissions, the projects preferred for implementation (i.e., the Round 2 Preferred Alternatives), and elaboration on the potential environmental and socioeconomic impacts of the preferred projects are presented in this draft RP/SEA. Collectively, this document and the PEA comprise the NEPA documentation for Round 2. The use of funding-round specific SEAs tiered from the PEA is consistent with the general tiering approach for Environmental Impact Statements described in 40 Code of Federal Regulations (CFR) 1502.20. Subsequent RP/SEAs will be prepared following additional funding solicitation rounds that will also be tiered within the framework and supporting documentation provided in the PEA.

The Round 2 Preferred Alternatives presented in this Draft RP/SEA are listed in Table 2 below. Preferred Alternatives are subject to change upon review and comment of this Draft RP/SEA. Following review and comment on this Draft RP/SEA a final RP/SEA will be issued with results of the review process incorporated.

**Table 2: Summary of Preferred Alternatives**

<b>Restoration Priority Category</b>	<b>Proposal Number</b>	<b>Title</b>	<b>Recommended NRD Allocation</b>
<b>Aquatic Biological Resources and Habitat</b>	215	<i>Habitat Continuity Project</i>	\$498,394
	212	<i>Sackett Brook Restoration Project</i>	\$396,828
<b>Wildlife Resources and Habitat</b>	207	<i>Installation of Gates Over Bat Hibernacula</i>	\$30,900
	204	<i>Invasive Species Control in the Housatonic River Watershed</i>	\$199,429
	203	<i>Bartholomew's Cobble Floodplain Forest Restoration and Habitat Improvement Project</i>	\$171,850
<b>Proposed Round 2 Funding</b>			<b>\$1,297,401</b>

## **1.1 TRUSTEE RESPONSIBILITIES UNDER FEDERAL AND STATE LAW REGARDING RESTORATION PLANNING**

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, 42 United States Code (U.S.C.) § 9601 *et seq.*, the Clean Water Act (CWA), 33 U.S.C. § 1251-1376, and the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, Massachusetts General Laws (M.G.L.) ch. 21E, provide a mechanism for state and federal governments to address natural resource damages (NRD). These acts provide that states, federally recognized tribes, and certain federal agencies, known as Natural Resource Trustees (Trustees), may assess damages to natural resources and may seek to recover those damages on behalf of the public. Trustees can bring claims against responsible parties for damages in order to restore, replace, or acquire the equivalent of natural resources that have been injured or lost by the release of hazardous substances. According to CERCLA and its associated natural resource damage assessment regulations (43 CFR Part 11), the MA SubCouncil must prepare an RP that describes how NRD funds collected from responsible parties will be used to address injured natural resources, specifically what restoration, rehabilitation, replacement, or acquisition of the equivalent resources will occur. No restoration projects, except emergency restoration, can be implemented before the RP and a public comment process is completed. This document is the draft RP for Round 2 of the Massachusetts Housatonic River Watershed Restoration Program.

The NEPA and its implementing regulations, 40 CFR Parts 1500-1508, require that federal agencies fully consider the environmental impacts of their proposed decisions on major federal actions, that appropriate steps are taken to mitigate potential environmental impacts of those actions, and that such information is made available to the public. The Massachusetts Environmental Policy Act (MEPA), M.G.L. ch. 30, sections 61 through 62H, inclusive, and the associated regulations, 301 Code of Massachusetts Regulations (CMR) § 11.00, “provide meaningful opportunities for public review of the potential environmental impacts of Projects for which Agency Action is required, and to assist each Agency in using...all feasible means to avoid Damage to the Environment or, to the extent Damage to the Environment cannot be avoided, to minimize and mitigate Damage to the Environment to the maximum extent practicable” (301 CMR § 11.01). This document, in combination with the PEA, addresses the requirements of NEPA and programmatic MEPA issues for Round 2 of the Massachusetts Housatonic River Watershed Restoration Program. After the Final RP is completed, individual projects that are determined to trigger MEPA thresholds will be required to proceed through a MEPA review. Likewise, some projects may require additional NEPA analysis once the details of the restoration project are further defined (e.g., after the completion of the feasibility/planning portion of the project). Additional NEPA analysis will be completed before project implementation and may result in project cancellation if NEPA related work and costs outweigh project benefits.

## **1.2 SUMMARY OF NATURAL RESOURCE DAMAGES SETTLEMENT**

GE reached a comprehensive agreement dated October 7, 1999, concerning NRD and cleanup of its Pittsfield, Massachusetts, facility, certain off-site properties, and the Housatonic River. The agreement was reached with the following entities: the U.S. Environmental Protection Agency (USEPA) Region 1; the U.S. Department of Justice; the Commonwealth of Massachusetts Department of Environmental Protection (MADEP), Office of the Attorney General, EOEEA; the State of Connecticut Department of Environmental Protection (CTDEP), Office of the Attorney General; the Department of the Interior (DOI); the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce; the City of Pittsfield, Massachusetts; and the Pittsfield Economic Development Authority.

The comprehensive agreement was lodged with the U.S. District Court of Massachusetts, Springfield, Massachusetts, and approved on October 27, 2000. The full text of the comprehensive agreement is contained in a Consent Decree and is available on the USEPA/GE/Housatonic River cleanup website ([www.epa.gov/region01/ge/cleanupagreement.html](http://www.epa.gov/region01/ge/cleanupagreement.html)).

As part of the settlement, the Trustees (EOEEA, DOI, NOAA, CTDEP) recovered \$15 million from GE as NRD for use in natural resource restoration projects, approximately half of which (\$7.5 million) the Trustees targeted for restoration projects in Massachusetts. Further detail regarding the Settlement is provided in Chapter 1.0 of the PEA, Chapters 1.0 and 2.0 of the Restoration Planning Strategy (Woodlot and IEC

2005a), and Chapter 1 of the RPSP.

### **1.3 SUMMARY OF SITE INJURIES AND PUBLIC LOSSES**

GE owns and operates a 254-acre facility in Pittsfield, Massachusetts, where PCBs were used in the manufacture of electrical transformers from the late 1930s to the late 1970s (Roy F. Weston 1998). During this time period, hazardous substances were released from the GE facility to the Housatonic River and Silver Lake in Pittsfield. These hazardous substances include PCBs, dioxins, furans, volatile organic compounds, semi-volatile organic compounds, and inorganic constituents (e.g., metals). In addition, a number of former oxbows along the Housatonic River that were filled when the U.S. Army Corps of Engineers (ACOE) straightened the Pittsfield reach of the Housatonic River to alleviate flooding were found to contain PCB-contaminated soils and fill. Further detail regarding the site injuries and public losses is provided in Chapter 3.0 of the PEA.

### **1.4 RESTORATION GOALS/PURPOSE OF RESTORATION**

The Purpose and Need for the MA SubCouncil's Restoration Program were explained in the PEA. The overall purpose of the Restoration Program is to make the environment and the public whole for injuries to natural resources and services resulting from the release of hazardous substances. Restoration efforts are intended to return injured natural resources and services to baseline conditions and compensate for interim losses through implementation of restoration actions that restore, rehabilitate, or replace equivalent natural resources and/or services.

Consistent with the nature and scope of the natural resource injuries in the Housatonic River watershed, the potential restoration actions are also diverse. The MA SubCouncil identified four restoration priority categories: aquatic biological resources and habitat, wildlife resources and habitat, recreational uses of natural resources, and environmental education and outreach. In the PEA, the MA SubCouncil evaluated strategies for accomplishing restoration within the Restoration Program, including a "No Action" alternative, and identified a preferred strategy. The preferred strategy is to implement projects in all four restoration priority categories (Alternative 6, "Blended Restoration Approach," in the PEA). The approach adopted by the MA SubCouncil considers the cumulative results of multiple rounds of funding to achieve the Blended Restoration Approach.

The specific goals of the Round 2 restoration planning process were to solicit, evaluate, and identify preferred projects focusing on habitat restoration to accomplish the programmatic Blended Restoration Approach and to provide a total \$1.0 million for project implementation. In addition, the programmatic goals and objectives of the MA SubCouncil, as first described in the Restoration Project Selection Procedure (RPSP) and listed below, are also relevant to Round 2:

- Restore, enhance, protect, conserve, replace and/or acquire the equivalent of natural resources and services that were injured as a result of the release of hazardous substances, including PCBs, in the Housatonic River environment;
- Provide for sustainable and measurable benefits to injured natural resources and services;
- Avoid adverse impacts resulting from restoration projects;
- Integrate public participation in the restoration process;
- Implement a suite of projects that cumulatively:
  - Benefit each of the restoration priority categories and
  - Employ a variety of restoration project types;
- Conduct restoration projects in a phased manner so that projects with a potential to interact with yet-to-be-determined remedial activities are not excluded from funding until those potential interactions can be determined (i.e., the remedial actions are known).

## **1.5 COORDINATION AND SCOPING**

### **1.5.1 Trustee Council Organization and Activities**

The Trustees for the GE/Housatonic River case consist of: the EOEEA, the CTDEP, the DOI (acting through the USFWS), and NOAA. A Memorandum of Agreement (MOA) among these parties was executed in January 2002. The MOA ensures the coordinated handling of activities relating to cleanup, remediation, and restoration activities in the Housatonic River environment. The MOA also provides a framework for intergovernmental coordination among the Trustees and for implementation of Trustee responsibilities under CERCLA and other applicable federal, state, and common laws.

The MOA provided for the establishment of the MA SubCouncil, which is responsible for authorizing the expenditure of NRD monies allocated to the geographic region of Massachusetts.

The MA SubCouncil currently consists of the following:

- Dale Young, EOEEA (voting member, state Trustee)
- Veronica Varela, USFWS (voting member, federal Trustee)
- Dean Tagliaferro, USEPA Region 1 (non-voting advisor)

NOAA has chosen not to actively exercise its decision-making role on the MA SubCouncil pursuant to an October 2004 resolution to the MOA.

The non-voting USEPA Region 1 advisor facilitates coordination with remedial activities.

### **1.5.2 Public Notification**

Local public libraries, newspapers, radio, and television were used as outlets for public announcements related to the Restoration Program. Libraries where public documents

were sent are listed in Appendix A. Newspaper, and radio and television stations used for public outreach are listed in Appendix B. In addition, the MA SubCouncil created a website ([www.ma-housatonicrestoration.org](http://www.ma-housatonicrestoration.org)) to provide public access to background information, MA SubCouncil member contact information, program activity updates, and draft documents for public review and comment.

### **1.5.3 Summary of Public Involvement**

The MA SubCouncil conducted several public meetings during the development of the Restoration Program to obtain public input on the strategy for restoration planning and the process and criteria by which potential restoration projects would be solicited and evaluated. Also, specific points of public involvement for Round 2 occurred as follows:

- September 25, 2008: Public planning meeting to discuss Round 2 allocations and timeline.
- January 23, 2009: MA SubCouncil issued a Request for Responses to solicit project proposals from the public for Round 2 of the Restoration Program.
- February 25, 2009: MA SubCouncil held Round 2 Applicant Conference to address public questions and comments on the Round 2 Request for Response.
- April 23, 2009: MA SubCouncil received 15 submissions by the deadline.
- June 29, 2009: MA SubCouncil posted the 15 submitted proposed projects on its web site for public informational purposes.

### **1.5.4 Administrative Record**

One complete administrative record is available at Lenox Library (address in Appendix A).

## 2.0 AFFECTED ENVIRONMENT

This chapter briefly describes the biological and socioeconomic environment in which restoration activities would be implemented. The purpose is to summarize the current conditions in the Housatonic River watershed and provide a foundation for assessing the impacts of the alternatives considered. A more detailed description of the affected environment was provided in the PEA. The majority of the content on the affected environment in the PEA was drawn from the reports listed below. Readers who are interested in greater detail on the biological and socioeconomic features of the Housatonic River watershed may wish to consult these sources.

- *Ecological Characterization of the Housatonic River* (Woodlot 2002a). This report represents the most recent, comprehensive study of the biological environment surrounding the Housatonic River and focuses on the river reach from Pittsfield to Lee, Massachusetts. It was prepared for the USEPA Region 1.
- *Ecological Characterization of the Housatonic River Downstream of Woods Pond* (Woodlot 2002b). This report characterizes the biological environment from Lee, Massachusetts, to southern Connecticut. It was also prepared for the USEPA Region 1.
- *Housatonic River 5-Year Watershed Action Plan* (EOEA 2003).

## 2.1 BIOLOGICAL ENVIRONMENT

The Massachusetts portion of the Housatonic River watershed is located in the southwestern region of the Commonwealth in Berkshire County and is bordered by the watersheds of the Hudson River to the north, the Westfield River to the northeast, and the Farmington River to the southeast. The Housatonic River watershed exhibits diverse hydrology, including swift streams, a meandering river, productive aquifers, extensive wetlands, and 119 lakes and ponds. Because of the varied topography of Berkshire County, ponds, peatlands, and marshes are abundant. An estimated three percent of the county is considered to be occupied by palustrine communities (i.e., wetlands not associated with rivers, lakes, or tidal waterbodies).

Most of the undeveloped landscape in the Housatonic watershed is forested, except where disturbance or permanent flooding (i.e., river channel and backwater slough) inhibit tree growth. Portions of the watershed have been cleared for various purposes, primarily agriculture, residences, and various rights-of-way (e.g., roads, railroads, power lines).

The Housatonic River watershed features a prolific biological community with 117 rare plant and 33 rare animal species, as well as the occurrence of 18 significant natural communities. Analyses conducted for USEPA's ecological characterization identified 20 plants of state conservation concern that are known or thought to occur in the upper portion of the watershed, while a separate inventory developed for the Great Barrington Open Space Plan identified 23 additional species of concern. Approximately 173 avian

species, 42 mammalian species, 41 fish species, 13 snake species, and seven turtle species are known to occur in the Massachusetts reach of the Housatonic River (Woodlot and IEC 2005b).

While the GE facility has been a significant source of pollution in the Housatonic River watershed, a variety of other water quality concerns have been identified, including pesticide and fertilizer runoff from agricultural land, management of household hazardous waste, indirect discharges from septic systems and landfills, pesticide runoff from railroad beds, and abandoned industrial facilities (HRR 1999, 2003). In addition to river-based pollution, lakes and ponds in the Housatonic watershed face advancing eutrophication problems associated with nutrient loading.

In addition to factors affecting water quality, other ecological stressors affect terrestrial and riparian habitat in the watershed. Residential and commercial development continues to diminish the quality and abundance of wildlife habitat. While the population of Berkshire County has decreased in the last decade, the number of housing units has grown from about 64,300 to 66,600, with at least some of this trend attributable to construction of vacation and retirement homes. Likewise, invasive species such as purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), and other non-native plants crowd out native plants that provide forage for waterfowl and other wildlife.

## 2.2 SOCIOECONOMIC ENVIRONMENT

Eighteen towns and one city in Berkshire County are located wholly or partially in the Housatonic River watershed. With a population of 42,652, Pittsfield is the largest city, accounting for roughly one-third of the population in Berkshire County in 2008. Both Pittsfield and Berkshire County as a whole have seen a decrease in population over the last decade due to farm abandonment, loss of manufacturing jobs, and general migration to other population centers. The economy of the Housatonic River watershed was once heavily dependent upon manufacturing and timber harvesting, and the loss of jobs in these sectors still appears to affect economic well-being (i.e., the percent of families living below the poverty line in Pittsfield is significantly higher than in the County or in Massachusetts overall). The median income in the region is lower and the unemployment rate is somewhat higher than in Massachusetts as a whole.

The upper third of the Housatonic River watershed, including Pittsfield, is urbanized, while the remaining two-thirds of the watershed are rural in character and largely forested. Current land uses in the watershed include industrial, agricultural, residential, and recreation/wildlife management. In Pittsfield, Lenox, and Lee, the river is used primarily as a natural area, with much of the area contained in the Housatonic River Valley State Wildlife Management Area used primarily by outdoor recreation enthusiasts.

### 3.0 RESTORATION EVALUATION PROCESS AND CRITERIA

CERCLA and NRD regulations require that restoration activities restore, rehabilitate, replace, or acquire the equivalent of the resources and services that were injured or lost, but do not address which restoration projects are preferred. Such decisions are left to the discretion of the Trustees. However, the DOI regulations recommend the following factors be considered in the evaluation and selection of preferred alternatives (43 CFR 11.82).

- (1) Technical feasibility.
- (2) The relationship of the expected costs of the proposed actions to the expected benefits from the restoration, rehabilitation, replacement, and/or acquisition of equivalent resources.
- (3) Cost-effectiveness.
- (4) The results of any actual or planned response actions.
- (5) Potential for additional injury resulting from the proposed actions, including long-term and indirect impacts, to the injured resources or other resources.
- (6) The natural recovery period.
- (7) Ability of the resources to recover with or without alternative actions.
- (8) Potential effects of the action on human health and safety.
- (9) Consistency with relevant Federal, State, and tribal policies.
- (10) Compliance with applicable Federal, State, and tribal laws.

The MA SubCouncil previously developed a RPSP and the PEA that described the process for soliciting, evaluating, and selecting individual restoration projects (Woodlot and IEc 2005b). The MA SubCouncil incorporated the ten factors described above into its Threshold and Evaluation Criteria. The RPSP and PEA established the format and content of submissions for parties requesting funds for restoration projects. Among the requirements, applicants were asked to complete NEPA checklists that help identify potential environmental and socioeconomic impacts of their project. If non-negligible impacts were expected, the applicant was required to outline steps that would be taken to reduce the severity of the project's impacts.

The MA SubCouncil issued a Request for Responses on January 23, 2009, to solicit proposed projects from the public for Round 2 of the Restoration Program. The SubCouncil received 15 proposed projects by the April 23, 2009, deadline. Public comments received with the proposed project applications are provided in Section 9.0. The MA SubCouncil posted the 15 proposed projects on its website for public informational purposes on June 29, 2009.

The MA SubCouncil internally evaluated all 15 project proposals via the Stage One Threshold Criteria process, as described below. The proposals that passed Stage One then went through the Stage Two Evaluation, as further described below, before Preferred Restoration Projects were selected.

### 3.1 STAGE ONE: THRESHOLD CRITERIA

The first step in evaluating proposed projects was to identify projects that met the minimum requirements for consideration as restoration projects. These “Threshold Criteria,” listed below, were consistent with the goals of the MA SubCouncil, federal regulations, and other applicable federal, state, and local regulations and laws. Threshold Criteria are described in detail in the RPSP.

1. Does the application contain the information necessary to proceed with an evaluation as described in the RPSP? (Answer must be “YES” to pass.)
2. Does the proposed project restore, rehabilitate, replace, and/or acquire the equivalent of natural resources or natural resource services that were injured by the release of PCBs or other hazardous substances? (Answer must be “YES” to pass.)
3. Is the proposed project, or any portion of the proposed project, an action that is presently required under other federal, state, or local law? (Answer must be “NO” to pass.)
4. Is the proposed project, or any portion of the proposed project, inconsistent with any federal, state, or local law, regulation, or policy? (Answer must be “NO” to pass.)
5. Will the proposed project, in terms of its cost, be consistent with the stated goals of the MA SubCouncil to retain sufficient funds to 1) accomplish restoration over at least three rounds of proposal solicitations and 2) serve a wide geographic area that benefits the restoration priority categories? (Answer must be “YES” to pass.)
6. Will the proposed project, or any portion of the proposed project, be inconsistent with any ongoing or anticipated remedial actions (i.e., primary restoration) in the Housatonic River watershed? (Answer must be “NO” to pass.)

The Trustee representatives of the MA SubCouncil were solely responsible for determining whether a proposed project met the Threshold Criteria. The MA SubCouncil developed a document summarizing the evaluation of Threshold Criteria for projects not passing the Threshold Criteria Evaluation. This document included brief abstracts that described why proposed projects did not pass the Stage One evaluation and are summarized below (Appendix C – Final Results of Round 2 Threshold Criteria Evaluation). Proposed projects that met all Threshold Criteria were termed “Project Applications” and were advanced to Stage Two of the evaluation process.

#### 3.1.1 Threshold Criteria Results

Three of the 15 applications received in response to the Round 2 solicitation did not meet the initial Threshold Criteria review. The reasons these applications did not pass are described below.

*3.1.1.1 Proposal No. 202 – Horsekeeping Best Management Practices for Water Quality Protection and Restoration*

The MA SubCouncil determined that the proposed project did not propose to restore, rehabilitate, replace, and/or acquire natural resources or natural resource services that were injured by the release of PCBs or other hazardous substances (Threshold Criterion No. 2).

Evaluation of the proposed project indicated that the intent of the proposal was to reduce non-point source contaminants and restore riparian habitat through an Environmental Education and Outreach program targeted at the community of horse owners in the Housatonic River watershed.

Although the MA SubCouncil considers protection of resources through outreach to be a valuable endeavor, environmental education was not a primary restoration category in Round 2. This proposal was therefore eliminated from consideration for this funding round. Projects focused on environmental education may potentially be considered for funding during subsequent funding rounds, but the restoration categories for later NRD funding have not been defined to date.

*3.1.1.2 Proposal No. 205 – Proposal for Aquatic Invasive Species Management in the Housatonic River*

The MA SubCouncil determined that the intent of this project, as detailed in the project proposal, was to implement an invasive species monitoring network that would focus on zebra mussels (*Dreissena polymorpha*), quagga mussels (*Dreissena bugensis*), fishhook water fleas (*Cercopagis penguii*), spiny water fleas (*Bythotrephes longimanus*), and rock snot (*Didymosphenia geminate*).

This proposal was eliminated from consideration because it did not directly restore, rehabilitate, replace, and/or acquire the equivalent of natural resources or natural resource services that were injured by the release of PCBs or other hazardous substances (Threshold Criterion No. 2).

The stated emphasis of this project was to monitor for the presence of aquatic invasive species within the Housatonic River Watershed. As stated by the applicant, “Once populations of these species are established in a water body, there is no accepted, legally permissible method to actively control or eradicate them.” The proposal presented a means for establishing a regional monitoring network, but there were no assurances that actions could be taken to eradicate or control populations of invasive species if observed.

The MA SubCouncil believes that control of invasive species detrimental to aquatic ecosystems is critical, however until there is an established mechanism for responding to new introductions, efforts should be directed towards informing the public on how to best avoid transferring these species between water bodies.

### 3.1.1.3 Proposal No. 211 – Housatonic River Restoration Ecostation

The MA SubCouncil determined that intent of this project, as detailed in the proposal abstract, was to develop an integrated natural treatment system to be installed along the Housatonic River to restore the aquatic resources and habitat contaminated with hazardous materials, including PCBs.

The project proposal was eliminated from consideration because the primary stated goals were PCB elimination and remediation and the proposed project was not consistent with the USEPA Region 1-approved East Street design at the proposed “EcoStation” location. The project was viewed to be inconsistent with ongoing remedial actions (Threshold Criterion No. 6). Also, because the proposal did not appear to be coordinated with USEPA Region 1 and GE, the proposal did not have information necessary to proceed with evaluation (Threshold Criterion No. 1).

## 3.2 STAGE TWO: EVALUATION CRITERIA

At the completion of Stage One, the MA SubCouncil assigned Project Applications to members of the Review Team for review and evaluation. The Review Team consisted of staff from departments within EOEEA, USFWS, and Stantec Consulting Services Inc. (Stantec), with expertise relevant to the MA SubCouncil’s primary habitat restoration categories.

Each Project Application was evaluated by one representative from EOEEA and one representative from USFWS, representing a range of technical expertise and relevant experience, and a Stantec staff member. Reviewers did not evaluate Project Applications on which they were listed as the applicant or for which they had submitted letters of support. A rating system (i.e., scores associated with High, Medium, and Low) was used to apply the Evaluation Criteria to each Project Application. Each rating was associated with a number of points that varied depending on the question, allowing certain criteria to be weighted more heavily than others. Project Applications were evaluated and scored individually using the following categories of criteria. Detailed explanations of the Evaluation Criteria are provided in the RPSP.

- Relevance and Applicability of Project
  - Natural Recovery Period
  - Location of Project
  - Sustainable Benefits
  - Magnitude of Ecological Benefits
  - Human Health and Safety
  - Benefits to Multiple Restoration Categories
  - Enhancement of Remediation/Response Actions
- Technical Merit
  - Technical/Technological Feasibility
  - Technical Capacity of Applicant and Project Team
  - Potential for Adverse Environmental Impacts

- Measurable Results
- Contingency Actions
- Administrative Capacity of Applicant and Project Team
- Project Budget
  - Relationship of Expected Costs to Expected Benefits
  - Implementation-oriented
  - Budget Justification and Understanding
  - Leveraging of Additional Resources
  - Coordination and Integration
  - Comparative Cost-effectiveness
- Socioeconomic Merit
  - Enhancement of Public's Relationship with Natural Resources
  - Fostering Future Restoration and Stewardship
  - Community Involvement
  - Potential for Adverse Socioeconomic Impacts
  - Complementary with Community Goals
  - Public Outreach
  - Diverse Partnerships

Each reviewer independently applied the Evaluation Criteria to their assigned Project Applications and arrived at an individual score for each project. Then all reviewers for a Project Application met to discuss the project's merits and derive a single, consensus-based score for each Project Application. The review of each Project Application was recorded in an evaluation summary memo that was made available to the MA SubCouncil and included the following: the consensus-based score for the project, the Review Teams' rationale for the final consensus-based score, individual scores provided by each reviewer, and the agency affiliation of each Review Team member assigned to the Project Application.

### **3.2.1 Evaluation Criteria Results**

The Review Teams' consensus-based scores are summarized in Table 3. These scores were advisory to the MA SubCouncil. The MA SubCouncil identified the proposed Preferred Alternatives by considering the Review Team scores, public comment, independent analysis of the proposals, and the goals of Round 2 (e.g., implementing a suite of projects that address at least one of the two habitat restoration priority categories).

**Table 3: Review Team Consensus-Based Scores  
(Rank-Order by Restoration Priority Category)**

<b>Restoration Priority Category</b>	<b>Proposal Number</b>	<b>Title</b>	<b>Consensus Evaluation Score</b>
<b>Aquatic Biological Resources and Habitat</b>	214	<i>Columbia Mill Dam Removal</i>	224
	212	<i>Sackett Brook Restoration Project</i>	204
	215	<i>Habitat Continuity Project</i>	181
	210	<i>Secum Brook: Habitat and Geomorphic Assessment and Habitat Implementation</i>	164
	208	<i>Upper Hathaway Brook Dam Removal Project</i>	153
	213	<i>Springside Pond Restoration Project</i>	117
<b>Wildlife Resources and Habitat</b>	207	<i>Installation of Gates Over Bat Hibernacula</i>	213
	204	<i>Invasive Species Control in the Housatonic River Watershed</i>	185
	206	<i>Pittsfield State Forest Skyline Restoration Project</i>	173
	203	<i>Bartholomew's Cobble Floodplain Forest Restoration and Habitat Improvement Project</i>	170
	201	<i>Sheffield Covered Bridge Park</i>	166
	209	<i>Proposal for Riparian Corridor Enhancement Along the Housatonic River</i>	160

## 4.0 PREFERRED ALTERNATIVES

Consistent with the nature and scope of the natural resource injuries in the Housatonic River watershed, the potential restoration actions are also diverse. The alternatives considered in this RP/SEA reflect a broad array of possible restoration approaches. The “No Action” (or “Natural Recovery”) alternative was evaluated in the PEA and was not identified as the preferred alternative (see the PEA for additional information). The PEA identified a “Blended Restoration Approach” (Alternative 6) as the preferred strategy to achieve compensatory restoration. The “Blended Restoration Approach” implements projects in all four restoration priority categories. However, the MA SubCouncil decided to focus restoration efforts on habitat restoration during Round 2. Therefore, this draft RP/SEA evaluates Project Applications addressing restoration of Aquatic Biological Resources and Habitat and Wildlife Resources and Habitat received through the Round 2 public solicitation. The Preferred Alternatives for Round 2 represent a blend of a subset of these Project Applications.

The results of Evaluation Criteria scoring were used by the MA SubCouncil to provide an initial ranking of Project Applications. The diversity and magnitude of potential benefits associated with particular Project Applications as well as the funding required for groups of Project Applications from the Habitat Restoration Priority Categories were then evaluated by the MA SubCouncil. The Preferred Alternatives presented in this draft RP incorporate a set of 5 Proposed Alternatives selected from the 15 proposed projects received in response to the Round 2 funding solicitation.

The PEA evaluated the environmental and socioeconomic impacts associated with aquatic restoration and wildlife restoration projects. A summary of impacts of the preferred alternatives is provided in Table 4. Additional details on environmental and socioeconomic impacts can be found in Part D of the Project Applications. The MA SubCouncil reserves the right to modify the scope of the Preferred Alternatives and associated funding amounts at the time that funding agreements are established.

### 4.1 AQUATIC BIOLOGICAL RESOURCES AND HABITAT

The MA SubCouncil will provide \$895,222 for two projects in the restoration priority category of Aquatic Biological Resources and Habitat. These projects will assess and restore habitat continuity within the focus area upstream of Woods Pond to facilitate fish and wildlife passage, restore 1.2 acres of riparian buffer, and secondarily provide educational programs to schoolchildren and the general public.

#### 4.1.1 Restoration Project 215: Habitat Continuity Project

Applicant(s): Housatonic Valley Association (HVA), in partnership with the Berkshire Environmental Action Team (BEAT)

Location: 20 towns within the Housatonic River Watershed, Massachusetts

Requested NRD funding: \$498,394

Recommended NRD allocation: \$498,394

#### 4.1.1.1 Summary of Proposed Action

##### Project Description

The HVA in partnership with the Berkshire Environmental Action Team (BEAT), with input and assistance from the Department of Natural Resources Conservation at the University of Massachusetts, the Massachusetts Division of Ecological Restoration (MADER; formerly Riverways Program), American Rivers, Trout Unlimited, and Foresight Land Services will assess culvert barriers inhibiting fish and wildlife passage within the project focus area.

After assessment of habitat continuity barriers within the region is completed the project team, using Conservation Assessment and Prioritization System (CAPS) software, will prioritize habitat continuity barriers caused by culverts and identify high-priority culverts in need of replacement. Up to three high-priority culverts will be replaced to allow safe and effective passing for fish and wildlife.

##### Timeframe

The Habitat Continuity project will occur over a period of 30 months. The anticipated schedule for the various components of the Habitat Continuity project is as follows:

- Culvert Location and Assessment – Years 1-2
- CAPS Modeling – Year 1
- Pre-Replacement Monitoring – Year 2
- Develop Best Management Practices for Culvert Implementation – Years 2-3
- Replacement of Priority Culverts – Years 2-3
- Post-Replacement Monitoring – Year 3

##### Monitoring Program and Performance Criteria

Note: The project states that a final monitoring plan has yet to be decided. Monitoring is not clearly described in the proposal and a final monitoring plan should be further developed.

The project proposes several potential functional parameters to be monitored, including community change following improvement of culverts, evidence of terrestrial animal movement through improved culverts, and changes to water quality below improved culverts. Structural parameters to be monitored include photo documentation of culverts, placement of culvert, and retention of culvert shape under stress. The Trustees suggest that guidelines presented in the Gulf of Maine Council on the Marine Environment's Stream Barrier Removal Monitoring Guide (Collins *et al.* 2007).

#### 4.1.1.2 Project Evaluation

##### Environmental Impacts

Benefits to Resources: Replacement of improperly situated culverts acting as habitat continuity barriers will restore instream flow, provide beneficial impacts to surface water quality, improve connectivity to adjacent wetlands, increase abundance and diversity of aquatic species, and increase diversity and abundance of terrestrial wildlife species.

Adverse Impacts: This project may have several short-term negative impacts to environmental parameters. Culvert replacement may have significant short-term adverse impacts to surface water quality in the form of increased turbidity, erosion, and sediment release during the construction phase. However, through the regulatory permitting process, measures will be outlined to control turbidity during construction and methods will be employed to reduce the chance of sediment discharges into streams. Pre-construction activities will require adequate erosion control and minimization of sediment migration. Culvert replacement activities may influence the population and diversity of aquatic wildlife species during the construction period. These populations will be monitored during the pre-construction phase and efforts will be made during construction to allow for animal migration away from temporary impact areas. Aquatic and terrestrial plant species will be impacted due to riverbank disruption and some plants may not survive impacts from construction activities.

Permits will be required describing how impacts will be mitigated. Necessary permits may include MEPA Review by Secretary of EOEEA, state water quality certification, ACOE permits for sediment removal, Massachusetts Wetlands Protection Act (MWPA) Orders of Conditions, Massachusetts Historic Commission review, and Massachusetts Endangered Species Act (MESA).

#### Socioeconomic Impacts

Benefits to Community: River restoration is a priority for the community. This project will have a beneficial impact on the local sense of community and well-being. Restored continuity may allow native brook trout to breed naturally in streams and improve the quality of fishing. Culvert replacement sites may provide educational opportunities to educators wishing to use the sites as components of their environmental curriculum. Through the cooperative arrangement with the various organizations, this restoration project will be well publicized on websites maintained by HVA and BEAT, and provide opportunity for technology transfer to other communities who are considering culvert replacement projects. This project may provide a short-term commercial economic benefit through employment in the engineering and construction trades. Additionally positive benefits to recreational businesses and property values may result from this project.

Adverse Impacts: During construction, there will be minimal adverse impacts to the aesthetic quality and recreational use of the culvert replacement sites for a short period of time.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Aquatic and riparian wildlife and their habitats were lost or injured due to PCB contamination of the Housatonic River. This project will identify barriers to stream continuity and remove up to three of these barriers. Removal of improperly situated culverts will re-establish a natural sediment transport regime and improve general biological functions of the impaired streams.

### Letters of Support

Letters of support were received with the proposal from the MADER, The Nature Conservancy, the Berkshire Regional Planning Commission, and State Senator Benjamin B. Downing. No negative comments were received.

### Review Team

The Consensus Review Team score for this Project Application was above average within this category. Reviewers noted that the project incorporates a blend of research and implementation activities and reflects a diversity of contributing project partners and resources.

### *MA SubCouncil Requested Adjustments to Proposal*

As a condition for funding, HVA will work with the MA SubCouncil to develop quantified performance goals for the monitoring program that will document, using measurable endpoints, the success of the continuity assessment and replacement of culverts. Culvert replacement should prioritize streams with the highest potential for aquatic habitat improvement for the greatest diversity of species and/or those species of highest conservation concern. The MA SubCouncil is specifically requesting a targeted focus on cold-water streams in the watershed, including an evaluation of Secum Brook, to benefit brook trout and other species. Funding is subject to approval by the MA SubCouncil of individual culverts proposed for replacement. The MA SubCouncil reserves the right to negotiate final terms of the agreement with the Applicant.

Considering the above and the merits of the proposal, the MA SubCouncil preliminarily approves funding this proposal with the revisions described above.

### **4.1.2 Restoration Project 212: Sackett Brook Restoration Project**

Applicant(s): Massachusetts Audubon Society

Location: Pittsfield, Massachusetts

Requested NRD funding: \$396,828

Recommended NRD Allocation: \$396,828

*Note: The Sackett Brook Restoration Project is currently being considered as a mitigation project for wetland impacts associated with another development project within the City of Pittsfield, MA. Should this project be accepted as a mitigation project the Sackett Brook Restoration Project will be withdrawn from consideration.*

#### *4.1.2.1 Summary of Proposed Action*

### Project Description

Massachusetts Audubon Society (Mass Audubon), in partnership with the MADER, will restore a culturally-impacted section of Sackett Brook, an 8.5 mile tributary to the Housatonic River. Objectives of the project include 1) removal of Gravesleigh Pond Dam, 2) removal of a deteriorated concrete access bridge downstream of the dam, 3) restoration of 1.2 acres of riparian forest corridor by converting hayfield to native floodplain forest community, and 4) provision of educational programs to school groups and the general public. Sackett Brook is considered a high-quality, sand and gravel-bottomed coldwater stream, but its natural flow is interrupted by a dam as the brook

flows through hayfields at Canoe Meadows Wildlife Sanctuary. According to the MADER's Restoration Potential Model database, the Gravesleigh Pond Dam ranks in the top 5 percent of dams in the Commonwealth in terms of the benefit afforded by its removal.

Removal of the 37-foot long, poured concrete Gravesleigh Pond Dam, plus its concrete abutments, will open 8.5 miles of Sackett Brook upstream from the dam for fish and other organisms currently present in the Housatonic River. Restoration of 1.2 acres of forested riparian strips on the bank, in areas currently in use as hayfields, will eventually benefit the instream habitat's temperature and structure and reduce potential erosion.

Education programs targeted to school-age children will benefit approximately 1,040 students and offer field work experience to high school students and community service opportunities to the general public.

#### Timeframe

The Sackett Brook Restoration Project will occur over a three year period. The anticipated schedule for the various components of the Project is as follows:

- Conceptual Planning and Educational Programming – Spring/Summer of Year 1
- Final Engineering and Educational Programming – Winter of Year 1
- Permitting and Educational Programming – Spring of Year 2
- Dam/Bridge Removal, Riparian Restoration, and Educational Programming – Spring/Fall of Year 2
- Educational Programming – Winter of Year 2
- Completion of Riparian Restoration – Spring of Year 3
- Monitoring/Evaluation – Year 3

#### Monitoring Program and Performance Criteria

Note: The project states that a final monitoring plan has yet to be decided.

Mass Audubon will develop a monitoring and evaluation plan to document changes in structural and functional parameters due to stream restoration activities. This plan will follow the Gulf of Maine Council on the Marine Environment's Stream Barrier Removal Monitoring Guide (Collins *et al.* 2007). The final monitoring protocol will be based on the establishment of several monumented cross-sections along the reach of Sackett Brook near the restoration area. At each cross-section, several structural parameters will be measured, including the profile of the channel/impoundment and substrate grain size distribution. Photographs will be taken at fixed locations, and water quality parameters (including dissolved oxygen, conductivity, and temperature) will be measured. Vegetation structure and composition will also be monitored in fixed transects, and a longitudinal profile will be created along the stream length. Additionally, to assess the function of the restoration, benthic macroinvertebrates will be sampled using standard procedures.

#### 4.1.2.2 Project Evaluation

##### Environmental Impacts

**Benefits to Resources:** Removal of the dam and adjacent concrete access bridge will provide immediate, positive benefits with regard to instream flow by removing impediments to the natural flow of Sackett Brook, and a corresponding benefit to surface water quality through a decrease in water temperature over the long term. There will be a beneficial impact for sediment quality, as sediments that have built up behind the dam will be removed. Soil quality will be positively improved by planting the bank after removal of the two structures, reducing the potential for erosion. Groundwater quality will improve with restoration of the natural hydrology of the river and its associated groundwater, and wetlands quality and services will, over time, be restored to a more natural state that is unaffected by an artificial impoundment.

**Adverse Impacts:** Minimal adverse impacts associated with removal of the dam and concrete bridge may result in minimal short-term impacts to 1) air quality from diesel fumes from heavy machinery; 2) instream flow from rerouting the stream through a temporary bypass channel; 3) surface water quality from a temporary increase in turbidity; and 4) sediment quality from a temporary increase in suspended solids. Short-term minimal adverse impacts to wetlands quality and services may result when water levels are lowered and shallow, emergent marsh and shrublands upstream of the dam experience hydrology changes. It is anticipated that a lower water table will result in changes to wetland types and wetland communities will likely shift in relation to the change in hydrology.

Permits will be required describing how impacts will be mitigated. Necessary permits may include:

- Jurisdictional Determination Chapter 253 Permit Application for the Massachusetts Department of Conservation and Recreation Office of Dam Safety
- Project Notification Form (Chapter 254/MEPA/Section 106 Review) for the Massachusetts Historical Commission
- Notice of Intent pursuant to the MWPA for the Pittsfield Conservation Commission and MADEP
- Environmental Notification Form pursuant to MEPA for the EOEEA
- Conservation Plan pursuant to MESA for the Massachusetts Natural Heritage and Endangered Species Program (NHESP)
- 401 Water Quality Certificate for the MADEP
- Section 404 Review for the ACOE
- Chapter 91 Waterways License for the MADEP

##### Socioeconomic Impacts

**Benefits to Community:** River restoration is a priority for the state and community. This project will have a beneficial impact on aesthetics through the removal of the artificial structures and consequent restoration of the river bank. Public health and safety may benefit by removing the deteriorated bridge structure. Programs planned for the public and schoolchildren will provide beneficial impacts on education. Minority and low income populations will benefit from planned programs that are provided at no charge for

participation. Beneficial impacts to the local sense of community and well being are anticipated to result from educational programs highlighting the importance of the local watershed. Beneficial impacts on the short-term commercial economic impact of restoration are expected from hiring local firms to design and implement the Project and an increased awareness of the Canoe Meadows Wildlife Sanctuary may result in a beneficial impact on existing resource-based industries.

Adverse Impacts: Riparian restoration of 1.2 acres may have a minimal adverse effect on existing resource-based industry by removing this land from agricultural production.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Wildlife resources and habitat as well as recreational uses of natural resources were lost or injured due to degradation of the Housatonic River by PCB contamination from the GE Pittsfield facility. Dam removal will restore natural geomorphic processes, re-establish a natural sediment transport regime, and improve general biological functions of Sackett Brook which flows into the Housatonic River. Environmental education is not the major focus of this project and amounts to a minor percentage of the overall project funding. Since the education component complements the primary restoration aspects of the project, the MA SubCouncil is willing to fund the project, despite the focus of Round 2 on non-educational restoration projects.

#### Letters of Support

Letters of support from the MADER and the Massachusetts Division of Fisheries and Wildlife (DFW) were received with the Project Application.

#### Review Team

The Consensus Review Team score for this Project Application was the second highest in this category. Reviewers considered this project to potentially provide substantial socioeconomic benefit. The basis of the assigned score was positively influenced by the technical capacity of the applicant and project team, and the relationship of expected costs to expected benefits.

#### *MA SubCouncil Requested Adjustments to Proposal*

As a condition for funding, Mass Audubon will work with the MA SubCouncil to develop a final monitoring plan. The MA SubCouncil reserves the right to negotiate final terms of the agreement with the Applicant.

Considering the above and the merits of the proposal, the MA SubCouncil preliminarily approves funding this proposal with the revisions described above.

## **4.2 WILDLIFE RESOURCES AND HABITAT**

The MA SubCouncil will provide a total of \$402,179 to three projects in the restoration priority category of Wildlife Resources and Habitat. These projects will protect wildlife resources, control invasive species on over 300 acres of land, and restore 10 acres of

agricultural land to floodplain forest.

#### **4.2.1 Restoration Project 207: Installation of Gates Over Bat Hibernacula**

Applicant(s): Massachusetts Division of Fisheries and Wildlife (DFW)

Location: Chester, Rowe, and Sheffield, Massachusetts

Requested NRD funding: \$30,900

Recommended NRD allocation: \$30,900

##### *4.2.1.1 Summary of Proposed Action*

###### Project Description

The Project will install gates over mines and caves to protect hibernating bats from perturbation and provide a protected habitat for recovery from impacts caused by White-Nose Syndrome (WNS). Bats throughout the Northeast are experiencing catastrophic mortality due to WNS. In Massachusetts, WNS contributes to hibernacula mortality rates approaching 100 percent. Historically, six species of bats have wintered in caves/mines in Western Massachusetts: little brown bat (*Myotis lucifugus*), eastern pipistrelle (*Perimyotis subflavus*), big brown bat (*Eptesicus fuscus*), eastern small-footed bat (*Myotis leibii*), northern myotis (*Myotis septentrionalis*), and Indiana bat (*Myotis sodalis*). The DFW owns three of the major hibernacula in Massachusetts. Gates will be installed over these three sites and a fourth site on municipal property.

Although only 1 of the 4 sites is within the Housatonic Watershed, bats wintering in the other 3 sites likely forage in the Housatonic Watershed during the summer. In addition to impacts caused by WNS, hibernating bats are also susceptible to disturbance from human use. It has not yet been determined whether WNS may be spread between hibernacula by humans, but this is considered a potential mechanism for the spread of the disease.

Gates to be installed over hibernacula will control human access, but allow bats to enter and exit freely. Through a locking system on the gates entry to hibernacula will still be possible for researchers, biologists, and other permitted users. Protection of hibernacula will at a minimum result in reduced disturbance to hibernating bats and potentially provided protected space for future recovery of bat species.

###### Timeframe

This project will require approximately 1 year or less to implement. Gates will be designed during the first month after the contract is awarded. Installation of gates will occur during the first spring or fall after designs are complete. Signage to educate the public about the need for restricted areas will be installed during gate installation. Gates to access roads will be installed during the first dry weather after awarding the contract. Monitoring of bat populations will occur continually after gates are installed.

###### Monitoring Program and Performance Criteria

The success of the bat gates will be monitored through structural and functional parameters. Gates will be periodically monitored to assess their effectiveness at controlling access to the sites (structural parameter). Biologists from the USFWS and DFW, supported by non-NRDA funds, will monitor bat populations within the gated

hibernacula (functional parameter) as part of a larger range-wide effort to track changes in bat populations. Long-term monitoring plans are being developed by various state and federal agencies. NRD funds will not be used for monitoring bat populations within gated hibernacula.

#### *4.2.1.2 Project Evaluation*

##### Environmental Impacts

**Benefits to Resources:** Four regional hibernacula will be protected by the installation of gates. Although gates may not reduce WNS impacts, they will remove the potential for human disturbance of these critical habitats and provide long-term recovery areas.

**Adverse Impacts:** None anticipated.

Permits are not anticipated for this project, but the project will be coordinated with the NHESP for any issues related to rare and endangered species.

##### Socioeconomic Impacts

**Benefits to Community:** Installation of gates over hibernacula will have a beneficial effect on public health and safety by removing potential hazards, including vertical drops and entrapment. Educational value will be provided through signage and outreach by raising awareness of issues affecting bats. Because bats prey on insects, recreation and recreational industries may benefit from a reduction of nuisance insect species.

**Adverse Impacts:** A minimal negative result to some forms of recreation may result from the exclusion of cavers and explorers, but these activities may be permitted by DFW at certain times of the year under certain conditions that may not be harmful to bats. Minimal adverse impacts on aesthetics may result from the presence of man-made barriers in natural settings.

##### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Natural communities of the Housatonic River were lost or injured due to degradation by PCB contamination from the GE Pittsfield facility. Because bats in the Housatonic Watershed feed on many insects with an aquatic life stage, they are among the fauna that were likely harmed by the release of PCB contamination. Therefore, by protecting and enhancing the winter habitat of these animals, the project will contribute to the recovery of wildlife resources in the Housatonic Watershed.

##### Letters of Support

Due to the sensitivity of revealing hibernacula locations, the project Applicant did not solicit letters of support.

##### Review Team

The Consensus Review Team score for this Project Application was the highest within its category. There was a consensus among reviewers that this project may provide substantial net benefit from a relatively small capital investment. This project was also viewed to be relatively simple to implement with nearly all of the requested funding

directed towards project implementation.

#### *MA SubCouncil Requested Adjustments to Proposal*

No adjustments to the submitted proposal were recommended by the Trustees. However, the MA SubCouncil reserves the right to negotiate the final terms of the agreement with the Applicant.

Considering the above and the merits of the proposal, the MA SubCouncil preliminarily approves funding this proposal with the revisions described above.

### **4.2.2 Restoration Project 204: Invasive Species Control in the Housatonic River Watershed**

Applicant(s): Native Habitat Restoration

Location: Stockbridge and Sheffield, Massachusetts

Requested NRD funding: \$199,429

Recommended NRD allocation: \$199,429

#### *4.2.2.1 Summary of Proposed Action*

##### Project Description

Native Habitat Restoration will improve the condition of critical riparian buffers of the Housatonic River, floodplain forests, lowland forests habitats, and a calcareous lake basin fen through the control of invasive species. Invasive species cover will be reduced to less than 5 percent by the third year of the project on 266 acres of protected land in Stockbridge and Sheffield. In addition to 2 years of invasive species control, community education about the threat of invasive species will be provided through workshops and organized volunteer workdays. Any application of herbicide to control invasive species will be performed by professionals who are licensed pesticide applicators in the Commonwealth of Massachusetts. The project will partner with the Laurel Hill Association, the Sheffield Land Trust, the Norman Rockwell Museum, the Marian Fathers, and the Sedgwick Reserve to reduce invasive species dominance in high profile areas that support 29 rare and endangered plant and animal species.

##### Timeframe

Project implementation will occur over a three-year time period. The applicant proposed the following schedule which will require adjustment based on the revised NRD funding schedule:

- March – June Fiscal Year 1
  - Finalize invasive species management plans
  - Begin permitting
  - Perform baseline monitoring
  - Initiate pre-treatment cutting
- July – June Fiscal Year 2
  - Implement summer/fall treatment
  - Implement winter cutting and treatment
  - Remove cut vegetation
  - Conduct landowner workshops
  - Monitor first year treatment

- July – June Fiscal Year 3
  - Perform spring invasive treatment
  - Re-treat invasive species on all 5 sites
  - Remove cut vegetation
  - Monitor second year treatment
  - Conduct landowner workshops

#### Monitoring Program and Performance Criteria

Performance will be based on the reduction of invasive species cover within the project area (structural parameter). The goal is to reduce invasive species cover to less than 30 percent after the first year of treatment and to less than 5 percent after the second year of treatment. The applicant proposed monitoring light infiltration to the soil surface as a functional parameter of invasive species reduction. Because light availability may be reduced by regenerating native vegetation or influenced by ambient canopy conditions, the MA SubCouncil proposes an alternate functional parameter of monitoring percent native vegetation cover within delineated monitoring plots.

#### *4.2.2.2 Project Evaluation*

##### Environmental Impacts

**Benefits to Resources:** This project will benefit soil quality impacts by removing non-native species which negatively impact pH and nutrients in soil. Wetland quality and services will be improved by allowing native species regeneration. Plant community diversity will increase due to reduced invasive species competition, which is especially important in areas that have the potential to support rare and endangered species. Reduction of invasive species will also improve habitat value and thus contribute to the diversity and abundance of terrestrial wildlife species.

**Adverse Impacts:** No adverse impacts are anticipated.

Permits, including the filing of a Notice of Intent pursuant to the MWPA for local conservation commissions and MADEP, and a MESA Permit will be required for this project.

##### Socioeconomic Impacts

**Benefits to Community:** Invasive species removal from publicly accessible natural areas will enhance the local sense of community and well being. Public health and safety will be improved by reducing invasive species which may contribute to higher densities of Lyme disease bearing ticks. Aesthetics of areas frequently visited by the public will be improved by invasive species removal. The project will offer educational benefits by providing workshops and educational material to increase the community's awareness regarding the issue of invasive species and the importance of native habitats. Because all of the sites are publicly accessible, recreational activity will be benefited by restoring habitat, enhancing views, and offering improved native plant and wildlife viewing. Non-tribal cultural sites will benefit because visitors to the Norman Rockwell Museum will benefit by the enhancement of habitat along the Housatonic River. This project will benefit local partnerships by providing resources and project management and expertise to perform invasive species control on these sites.

Adverse Impacts: Minimal nuisance impacts may occur as a result of noise generated by equipment operation. The project will mitigate these impacts by cutting plant material between the hours of 9 am and 4 pm on weekdays.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Wildlife resources and habitat as well as recreational uses of natural resources were lost or injured due to degradation of the Housatonic River by PCB contamination from the GE Pittsfield facility. Invasive species removal will improve wildlife habitat and enhance recreational value of the Housatonic River. Environmental education is not the major focus of this project and amounts to a minor percentage of the overall project funding. Since the education component complements the primary restoration aspects of the project, the MA SubCouncil is willing to fund the project, despite the focus of Round 2 on non-educational restoration projects.

#### Letters of Support

Letters of support from the Sheffield Land Trust, the Norman Rockwell Museum, the Laurel Hill Association, and the Sedgwick Reserve were received with the Project Application.

#### Review Team

The Consensus Review Team score for this Project Application was the second-highest within its category. There was a consensus among reviewers that this project would provide substantial benefit and should be considered for funding. Reviewers commented that invasive species would be removed from several locations within the Housatonic watershed and several of the proposed invasive removal areas are in areas highly visible to the public with notable cultural and/or environmental resources.

#### *MA SubCouncil Requested Adjustments to Proposal*

As a condition for funding, Native Habitat Restoration will work with the MA SubCouncil to develop a monitoring program that includes appropriate and functional parameters to document native species-regeneration. The MA SubCouncil reserves the right to negotiate final terms of the agreement with the Applicant.

Considering the above and the merits of the proposal, the MA SubCouncil preliminarily approves funding this proposal with the revisions described above.

#### **4.2.3 Restoration Project 203: Bartholomew's Cobble Floodplain Forest Restoration and Habitat Improvement Project**

Applicant(s): Project Native and Trustees of Reservations

Location: Sheffield, Massachusetts

Requested NRD funding: \$285,410

Recommended NRD allocation: \$171,850

#### 4.2.3.1 *Summary of Proposed Action*

##### Project Description

The Bartholomew's Cobble Floodplain Forest Restoration and Habitat Improvement Project will restore 10 acres of floodplain forest and control invasive species on an additional 75 acres of habitat adjacent to the Housatonic River in Sheffield, MA. Project Native, in partnership with the Trustees of Reservations will implement the restoration at Bartholomew's Cobble, which has been designated as a National Natural Landmark by the National Park Service. Any application of herbicide to control invasive species will be performed by professionals who are licensed pesticide applicators in the Commonwealth of Massachusetts. The Project will convert open field habitat back to its original habitat of floodplain forest which was historically present within the project area. The project area is also located within Massachusetts NHESP Habitat. In addition to the restoration, an educational kiosk describing the restoration project will be developed and installed near the floodplain forest restoration site.

##### Timeframe

Anticipated schedule for the following tasks:

- Year 1: Biological mapping of existing 10-acre floodplain forest.  
Establish baseline of invasive and native species cover.  
Develop floodplain forest restoration plan for 10-acre field.  
Obtain necessary permits.  
Invasive species control.
- Year 2: Continue invasive species control.  
Prepare fields for restoration.  
Monitor invasive and native species cover.  
Develop and install educational kiosk.
- Year 3: Implement restoration plan of 10-acre field.  
Continue invasive species control.  
Monitor performance.

##### Monitoring Program and Performance Criteria

Structural parameters to be monitored include percent cover of invasive species within the project area and successful establishment of native trees within the 10-acre forest floodplain restoration area. Functional parameters to be monitored include percent cover of native vegetation following removal of invasive species and percent cover and composition of native vegetation following planting within 10-acre floodplain forest restoration area. Monitoring plots will be established randomly within restoration sites. Pre-treatment baseline data will be collected to determine percent cover of invasive and native species. The performance criteria to be evaluated include a reduction of invasive species cover to less than 5 percent within the project area. Also, the MA SubCouncil recommends using an 80 percent survivability performance standard for planted trees within the floodplain forest restoration area.

#### 4.2.3.2 *Project Evaluation*

##### Environmental Impacts

Benefits to Resources: The removal of invasive, non-native species and restoration of floodplain forest will improve the quality of soil and groundwater and enhance the diversity of plant communities. The protection of native plant communities will preserve the habitats of local terrestrial wildlife species and enhance their ability to thrive in the Housatonic Valley. The project will help protect the diversity and abundance of more than 25 rare species and priority natural communities present at Bartholomew's Cobble.

Adverse Impacts: A subset of terrestrial wildlife may be adversely impacted as habitats are changed from existing fields to floodplain forest. Extensive field habitats will remain elsewhere on the reservation, ensuring that open habitat species will remain on the property. Short-term minimal adverse soil quality impacts may result from soil disturbance resulting from planting native species, however these impacts will be temporary and minor compared to agricultural practices currently implemented at the restoration site.

Permits, including the filing of a Notice of Intent and MESA Permit will be required for this project.

#### Socioeconomic Impacts

Benefits to Community: Removal of invasive species from the Bartholomew's Cobble area will benefit recreation activity and possibly benefit public health due to a reported positive correlation between Lyme disease and invasive species cover. Restoration of floodplain forest will benefit aesthetics by returning the area to a more natural condition. Removal of invasive species will improve the viewshed from the Ashley House, listed on the National Register of Historic Places, and the African American Heritage Trail, thus benefiting non-tribal cultural sites. The project will benefit local partnerships and collaborative efforts by providing opportunities for Project Native and the Trustees of Reservations to work together during the restoration of Bartholomew's Cobble. Significant investments in staffing and contraction services drawn from the local community will result in positive short-term commercial economic impacts.

Adverse Impacts: Some individuals may view the conversion of agricultural land to floodplain forest negatively, thus minimal adverse impacts to aesthetics may result from the restoration project. Because the proposed floodplain forest restoration site is currently devoted to hay production, minimal adverse impacts to existing resource-based industry may occur.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Natural communities of the Housatonic River were lost or injured due to degradation by PCB contamination from the GE Pittsfield facility. The proposed activities will restore degraded wildlife habitat in 85 acres of floodplain forest, control invasive species, and re-establish native plants along the Housatonic River.

#### Letters of Support

Letters of support were not received with the Project Application.

### Review Team

The Consensus Review Team score for this Project Application was slightly below the mean value in this category. There was a consensus among reviewers that the resulting magnitude of ecological benefits would be substantial if the Project were successfully implemented.

### *MA SubCouncil Requested Adjustments to Proposal*

The original scope of work for this project included: 1) restoration of degraded habitat at Bartholomew's Cobble resulting from sediment laden storm water runoff on Weatogue Road; 2) establishment of an educational native plant nursery and demonstration garden at the Bartholomew's Cobble Visitor's Center; 3) construction of a pond for irrigation purposes and propagation of wetland plant species at the Project Native facility in Great Barrington, MA; and 4) creation of a wetland seed bank at the Project Native facility. When the proposal application was submitted, Project Native anticipated that funds would be available from the Massachusetts Environmental Trust (MET) to construct appropriate storm water control structures on Weatogue Road and eliminate future sedimentation to Bartholomew's Cobble. Because funding for the repair of Weatogue Road was not awarded by the MET, the MA SubCouncil believes that any habitat restoration performed to remediate damage from stormwater runoff would likely be undone during future storm events and therefore proposes not to fund this activity. The remaining tasks, although potentially providing benefit, are not proposed for funding because they do not directly contribute to the restoration of the Bartholomew's Cobble property and provide no assurances that they will restore, replace, or acquire injured natural resources. Based on this reduction of the scope of work the MA SubCouncil proposes to award funding solely for the floodplain forest restoration, invasive species control, and installation of an educational kiosk on the Bartholomew's Cobble property.

Also, the MA SubCouncil recommends modifying the proposed monitoring program by adding a performance standard of 80 percent survivability for planted trees within the floodplain forest restoration area. The MA SubCouncil reserves the right to negotiate final terms of the agreement with the Applicant.

Considering the above and the merits of the proposal, the MA SubCouncil preliminarily approves funding this proposal with the revisions described above.

## **4.3 SUMMARY OF ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS OF PREFERRED ALTERNATIVES**

Table 4 presents a summary of impacts for the selected projects as determined by the MA SubCouncil.

**Table 4: Project Impacts – Preferred Alternatives**

<i>Impact Category</i>	<i>Impact</i>	<i>Proposal Number</i>				
		<b>203</b>	<b>204</b>	<b>207</b>	<b>212</b>	<b>215</b>
<b>Environmental</b>	Air quality	NE	NE	NE	MA	MA
	Instream flow	NE	NE	NE	MA,B	B
	Surface water quality	B	NE	NE	MA,B	B
	Sediment quality	B	NE	NE	MA,B	B
	Soil quality	B	B	NE	B	NE
	Groundwater quality	B	NE	NE	B	NE
	Wetlands quality and services	B	NE	NE	MA,B	B
	Diversity and abundance of aquatic species	B	B	NE	B	B
	Diversity and abundance of terrestrial wildlife species	B	B	B	B	B
	Diversity of plant communities	B	B	NE	B	NE
Other: Diversity of rare species	-	B	B	-	-	
<b>Social</b>	Impacts on minority or low income populations	NE	NE	NE	B	NE
	Impacts on local sense of community and well being	B	B	B	B	B
	Impacts on aesthetics	MA,B	B	MA	B	MA,B
	Impacts on public health or safety	B	B	B	B	B
	Impacts on recreational activity	B	B	MA,B	NE	MA,B
	Impacts to Native American Trust Resources	NE	NE	NE	NE	NE
	Impacts on non-Tribal cultural sites	B	B	NE	B	NE
	Impacts on education	B	B	B	B	B
	Impacts on local partnerships and collaborative efforts	B	B	B	B	B
	Impacts on availability and quality of drinking water	NE	NE	NE	NE	NE
	Impact on subsistence activity	NE	NE	NE	NE	NE
Nuisance impacts	NE	MA	B	NE	B	
<b>Economic</b>	Short-term commercial economic impact of restoration action	B	B	NE	B	B
	Impacts on property values	NE	B	NE	NE	B
	Impacts on recreational expenditures and related business	NE	B	B	B	B
	Impacts on existing resource-based industries	MA,B	NE	NE	MA	B
	Impacts on commercial water users	NE	NE	NE	NE	NE
	Impacts on river-based commercial navigation	NE	NE	NE	NE	NE
	Impact on wastewater dischargers	NE	NE	NE	NE	NE

Intensity Levels: “B” – Beneficial Impact; “NE” – No Effect; “MA” – Minimal Adverse Impact; “SA” – Significant Adverse Impact; “-” – No Response

\*203-Bartholomew’s Cobble, 204-Invasive Species Control, 207-Bat Gates, 212-Sackett Brook, 215-Habitat Continuity

#### **4.4 SUMMARY OF CUMULATIVE ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS OF PREFERRED ALTERNATIVES**

The MA SubCouncil selected a variety of Preferred Restoration Alternatives to restore resources and/or services lost as a result of GE's release of PCBs and hazardous materials into the Housatonic River. To assess the cumulative impacts of these Alternatives, this section focuses on how restoration actions would combine with other factors, both positive and negative, to influence the environmental quality of the Housatonic River watershed. In the regulations implementing NEPA, the Council on Environmental Quality defines cumulative impacts as the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" 40 CFR § 1508.7.

The cumulative environmental consequences are anticipated to be largely beneficial since the MA SubCouncil proposes to implement projects that would achieve recovery of injured natural resources. Aquatic restoration, land conservation, improved control of point and non-point pollution sources, and other efforts included in the Preferred Alternatives would help counteract other pre-existing factors negatively affecting water quality and wildlife habitat.

The Preferred Restoration Alternatives selected as part of this draft RP/SEA will complement and enhance pre-existing restoration initiatives on-going in the Housatonic River watershed. The discovery of PCB contamination as a result of GE activities has greatly heightened environmental awareness in the watershed. A variety of research and conservation efforts are complete or underway in the region and, if adequately funded through other sources, could continue to proceed independently of the Restoration Program that is addressed in this draft RP/SEA. Although it is difficult to identify such efforts exhaustively, the EOEEA's 5-Year Watershed Action Plan (EOEA 2003) highlighted the following initiative, among others, that has taken place as a result of heightened environmental awareness:

- The Housatonic River RP was developed based upon a collaborative process that included all conservation interests in the watershed (both public and private). Restoration under the Preferred Alternatives will complement these and other conservation and regulatory efforts to increase cumulative benefits for the watershed.

In addition, restoration efforts other than those described in this draft RP/SEA will continue to occur in the context of existing state and federal regulatory and conservation programs. Examples are described below. These efforts and the selected Preferred Alternatives will provide additive environmental benefits to the Housatonic River watershed.

- Wetland filling is regulated through permit programs operated by the ACOE (Sections 10 and 404). In accordance with "no net loss of wetlands" policies, activities causing impacts may require mitigation that includes restoration

activities.

- A variety of federal programs provide for the conservation of natural resources; for instance, the Department of Agriculture's Natural Resource Conservation Service (NRCS) Wetland Reserve Program pays farmers to retire marginally productive cropland for the benefit of wildlife habitat. Other federal habitat conservation programs include the NRCS Conservation Reserve Program, the NRCS Wildlife Habitat Incentive Program, and the USFWS Partners for Fish and Wildlife Program.
- Massachusetts implements wetland restoration and conservation programs with funds obtained from Section 104(b)(3) Wetlands Program Development Grants.
- USEPA administers grants under Section 319 of the CWA to fund state non-point source control efforts. The grants cover technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess success of specific projects.
- Massachusetts implements various programs with funds obtained from Section 106 CWA Water Pollution Control Program Grants.
- Numerous non-profit organizations (e.g., HVA and the Mass Audubon ) purchase and manage land in the Housatonic watershed for recreation and open space conservation.

The Preferred Alternatives will also help to minimize negative environmental and socioeconomic forces discussed in Section 2.0 (Affected Environment). Most notably, restoration will likely enhance residents' and visitors' enjoyment of the natural environment, through general aesthetic improvement and creation of recreational opportunities. Commercial activity associated with increased recreation will help to partially offset job losses in traditional sectors such as manufacturing and farming. Affected industries will likely include hotels, restaurants, guide services, and retail. Additionally, the public's understanding of health risks associated with environmental damage can be enhanced by public knowledge of and participation in restoration efforts. The MA SubCouncil will consider and strive to minimize negative cumulative impacts from projects implemented under the Restoration Program.

## 5.0 NON-SELECTED PROJECT APPLICATIONS

Seven Restoration Project Applications were not proposed for funding. These Project Applications were not selected based on the results of the Evaluation Criteria scoring as applied to each Project Application, the range of potential benefits associated with these projects relative to the proposed Preferred Alternatives, and funding constraints imposed by the Round 2 funding availability of \$1.0 million.

### 5.1 AQUATIC BIOLOGICAL RESOURCES AND HABITAT

#### 5.1.1 Project Application 208: Upper Hathaway Brook Dam Removal Project

Applicant(s): The City of Pittsfield, Massachusetts

Location: Dalton, Massachusetts

Requested NRD funding: \$500,000

##### 5.1.1.1 Summary of Proposed Action

The Applicant (City of Pittsfield) proposed to restore stream connectivity and aquatic biological resource habitat within Hathaway Brook by removing Upper Hathaway Dam located in Dalton, Massachusetts. The goals of the project were to restore connectivity of Hathaway Brook and allow migration of brook trout and other aquatic organisms from the Housatonic River to the upper reaches of the brook; restore natural flow patterns; reestablish natural sediment and nutrient transport; improve water quality; and enhance habitat value and long-term sustainable benefits for aquatic organisms.

The City of Pittsfield proposed to remove the upper dam wall, remove a portion of the impounded sediment; perform re-grading, and reestablish stream bed characteristics. The project was to occur in conjunction with the Lower Hathaway Dam removal project which is required by MADEP as a compensatory mitigation project for the repair of Ashley Lake Dam.

##### 5.1.1.2 Project Evaluation

###### Environmental and Socioeconomic Impacts

Adverse environmental or socioeconomic impacts associated with the construction phase of the dam removal (e.g., surface water quality and aesthetics) were anticipated to be minimal and short-term. Additional details on environmental and socioeconomic impacts can be found in Part D of the Project Application.

###### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

As proposed, the Upper Hathaway Dam Removal project would restore stream continuity and benefit injured natural resources and services. However, the apparent cost-benefit ratio of this project is low based on 1) the project cost as supplied by the applicant, and 2) the relatively small upstream watershed.

### Letters of Support

One Letter of support from the MADER was received with the Project Application.

### Review Team

The Consensus Review Team score for this Project Application was second-lowest within its category. The basis for the assigned score was influenced by factors including limited detail provided in the budget and minimally described contingency actions should desired conditions not be achieved. Reviewers also noted that the cost-benefit ratio of this project appeared relatively low based on the project cost presented by the applicant and the relatively small upstream watershed.

Considering the above, the details of the proposal, and the limited NRD funding available, the MA SubCouncil recommends that NRD funds not be allocated for this project.

## **5.1.2 Project Application 210: Secum Brook: Habitat and Geomorphic Assessment and Habitat Implementation**

Applicant(s): Inter-Fluve, Inc.

Location: Lanesborough and New Ashford, Massachusetts

Requested NRD funding: \$64,300

### *5.1.2.1 Summary of Proposed Action*

The applicant (Inter-Fluve, Inc.) in partnership with Trout Unlimited proposed to describe factors contributing to the degradation of aquatic habitat or the impairment of fish passage on Secum Brook within the Towns of Lanesborough and New Ashford, MA. Phase 1 of the project was to perform geomorphic and habitat assessment and survey road crossings of Secum Brook to develop descriptions of potential restoration projects within the brook. Phase 2 of the project would have resulted in the installation of large woody debris habitat structures and replacement of undersized and perched culverts at road crossings. The applicant intended to develop a scope of work and budget for Phase 2 work (implementation) as a deliverable for Phase 1.

### *5.1.2.2 Project Evaluation*

#### Environmental and Socioeconomic Impacts

No adverse environmental or socioeconomic impacts were anticipated to result from the proposed planning activities. However, the construction of restoration actions, assuming appropriate design/engineering and best management practices, could produce minimal adverse environmental and socioeconomic impacts primarily associated with short-term affects during construction. Additional details on environmental and socioeconomic impacts can be found in Part D of the Project Application.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Although the exact restoration projects to be implemented through the Project Application are yet to be determined, the envisioned types of projects would provide benefits to aquatic resources. However, the potential magnitude of the benefits cannot be quantified at this time.

### Letters of Support

One letter of support from the MADER was received with the Project Application.

### Review Team

The Consensus Review Team score for this Project Application was below average within its category. The basis for the assigned score was influenced by factors including cost and uncertainty of project implementation and associated potential benefits. Reviewers experienced difficulty in evaluating this proposal based on interpretation as only a habitat assessment proposal (Phase 1 only) or an assessment and implementation proposal (Phase 1 and Phase 2 combined). The final consensus score was based on evaluating Phase 1 and Phase 2 components combined, acknowledging that the proposal may have scored higher had the applicant written the proposal to include more detail relating to Phase 2.

Considering the above, the details of the proposal, and the limited NRD funding available, the MA SubCouncil recommends that NRD funds not be allocated for this project.

### **5.1.3 Project Application 213: Springside Pond Restoration Project**

Applicant(s): The City of Pittsfield

Location: Pittsfield, Massachusetts

Requested NRD funding: \$605,000

#### *5.1.3.1 Summary of Proposed Action*

The applicant (City of Pittsfield) proposed a pond restoration at the Springside Park in Pittsfield, MA. The goal of the Springside Pond Restoration Project was to restore a 0.5-acre degraded urban pond to a natural functioning open water resource and provide improved recreational opportunity. Water levels in Springside Pond are not maintainable due to leakage at the man-made dam and spillway. A portion of the pond bottom has a concrete cap layer and much of the pond has been filled in with sediment. The Project proposed to dry-dredge sediment from the pond, repair the pond dam and retaining wall, implement best management practices to control erosion within the watershed and sedimentation of the pond, install benches around the pond, construct an open-air pavilion, and stock fish within the pond.

#### *5.1.3.2 Project Evaluation*

##### Environmental and Socioeconomic Impacts

Significant adverse environmental impacts were anticipated to wetlands quality and services from the permanent loss of bordering vegetated wetlands and to surface water quality impacts in the form of increased turbidity during construction. Other adverse environmental and socioeconomic impacts associated with the construction phase of the project (e.g., air quality and aesthetics) were anticipated to be minimal and short-term. Additional details on environmental and socioeconomic impacts can be found in Part D of the Project Application.

### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

The proposed activities appeared to be related more to park rehabilitation than habitat restoration and the applicant did not provide a clear connection to injured resources. Additionally, the proposal did not adequately describe the preferred restoration alternative out of the possible approaches, provide sufficient detail in the budget narrative, or demonstrate that the natural recovery period would be advanced to any great extent.

### Letters of Support

Letters of support from the Pittsfield Board of Park Commissioners, the Pittsfield Conservation Commission, State Senator Benjamin B. Downing, the Berkshire Regional Planning Commission, the Morningside Initiative Steering Committee, and members of the Herbert Arboretum, Inc. Board of Directors, were received with the Project Application.

### Review Team

The Consensus Review Team score for this Project Application was the lowest within its category. The basis for the assigned score was influenced by factors including a perceived low magnitude of ecological benefits and low relationship of expected costs to expected benefits. There was a consensus among reviewers that the proposed project appeared to be more related to park rehabilitation than habitat restoration and the applicant should consider seeking other funding sources.

Considering the above, the details of the proposal, and the limited NRD funding available, the MA SubCouncil recommends that NRD funds not be allocated for this project.

## **5.2 WILDLIFE RESOURCES AND HABITAT**

### **5.2.1 Project Application 201: Sheffield Covered Bridge Park**

Applicant(s): Town of Sheffield, Massachusetts

Location: Sheffield, Massachusetts

Requested NRD funding: \$7,800

#### *5.2.1.1 Summary of Proposed Action*

The applicant (Town of Sheffield) proposed invasive species control and native species restoration on Town-owned property scheduled for development as a park for recreation, community events, educational sessions, and small boat access to the Housatonic River. The goal of the Sheffield Covered Bridge Park project was to remove approximately 2,400 square feet Japanese knotweed (*Polygonum cuspidatum*) within the project area and restore the area with native plants.

#### *5.2.1.2 Project Evaluation*

##### Environmental and Socioeconomic Impacts

No adverse environmental or socioeconomic impacts were anticipated to result from the

proposed activities.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Removal of invasive species and native plant restoration would likely provide benefits to injured natural resources and services. During a MA SubCouncil visit to the proposed restoration site in August of 2009, it was observed that substantial progress had been made towards controlling Japanese knotweed at the site and the need for future project funding was not clear.

#### Letters of Support

No letters of support were received with the Project Application.

#### Review Team

The Consensus Review Team score for this Project Application was relatively low. The basis for the assigned score was influenced by factors including concern related to apparent discrepancies between the proposed methods of herbicide treatment of Japanese knotweed and those approved by the Conservation Commission (i.e., foliar spraying versus stem injection). Additionally, the cost of the native plantings appeared relatively high as compared to other restoration projects.

### **5.2.2 Project Application 206: Pittsfield State Forest Skyline Restoration Project**

Applicant(s): Massachusetts Department of Conservation and Recreation (DCR)

Location: Pittsfield, Lanesborough, and Hancock, Massachusetts

Requested NRD funding: \$298,000

#### *5.2.2.1 Summary of Proposed Action*

The Applicant (DCR) proposed to perform restoration at six different locations along Skyline Trail in the Pittsfield State Forest. Current conditions within the proposed restoration areas include mud holes, blocked drainages, eroded trail segments, channelized trails, degraded wetland and stream crossings, braided trails, and degraded trail side terrestrial habitat due to off-road vehicle misuse. Sediments from the degraded areas presently enter headwater streams, increase turbidity, and generally degrade instream habitat conditions.

The Applicant proposed activities including two stream crossings, one wetland restoration, a trail re-route, and three erosion/mud hole restorations. Proposed restorations were intended to restore conditions along approximately 5,200 feet of the Skyline Trail. The Applicant proposed to partner with trail user groups including the Western Mass ATV Association, the New England Mountain Biking Association, and the Snowmobile Association of Massachusetts to improve stewardship of the trails and natural resources of Pittsfield State Forest.

#### *5.2.2.2 Project Evaluation*

##### Environmental and Socioeconomic Impacts

Adverse environmental or socioeconomic impacts associated with the construction phase of the proposed activities (e.g., surface water quality and recreational activity) were

anticipated to be minimal and short-term. Additional details on environmental and socioeconomic impacts can be found in Part D of the Project Application.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Improved stream crossings, wetland restoration, and repair to storm water drainage systems would likely provide benefit to injured natural resources and services. However, the magnitude of such benefits is currently unknown and long-term maintenance of proposed restoration measures is not assured.

#### Letters of Support

Letters of support were not received with the Project Application.

#### Review Team

The Consensus Review Team score for this Project Application was below average within its category. The basis for the assigned score was influenced by factors including a lack of detail provided in the proposal related to existing resources affected and proposed restoration methods. In addition, there was concern among reviewers that current enforcement of Off Highway Vehicle (OHV) usage may not be adequate and there was little assurance that restoration efforts would not be undone in the future by OHV use.

Considering the above, the details of the proposal, and the limited NRD funding available, the MA SubCouncil recommends that NRD funds not be allocated for this project.

### **5.2.3 Project Application 209: Proposal for Riparian Corridor Enhancement along the Housatonic River**

Applicant(s): ESS Group, Inc.

Location: Housatonic Watershed in Massachusetts

Requested NRD funding: \$274,710

#### *5.2.3.1 Summary of Proposed Action*

The Project Applicant (ESS Group, Inc.), in partnership with the HVA, proposed to restore and rehabilitate seven vegetated riparian buffers along the Housatonic River between Pittsfield and Sheffield, MA. Elements of the Project Application included: 1) stabilization and rehabilitation of eroded streambanks with conventional and biological engineering techniques; 2) removal of non-native invasive plant species and site preparation; 3) restoration of vegetated buffers with native plants; and 4) long-term monitoring of restoration work. Proposed restoration sites included Wahconah Park – Pittsfield, Lee Athletic Field – Lee, Housatonic River Walk – Great Barrington, Railroad Street Youth Project – Great Barrington, Appalachian Trail Crossing at Kellogg Road – Sheffield, Maple Avenue – Sheffield, and Rannapo Road – Sheffield in Massachusetts.

#### *5.2.3.2 Project Evaluation*

#### Environmental and Socioeconomic Impacts

No adverse environmental or socioeconomic impacts were anticipated to result from the

proposed restoration activities. However, implementation of streambank stabilization, assuming appropriate design/engineering and best management practices, could produce minimal adverse environmental and socioeconomic impacts primarily associated with short-term affects during construction. Additional details on environmental and socioeconomic impacts can be found in Part D of the Project Application.

#### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

The proposed restoration activities would likely provide benefit to injured natural resources and services; however, the magnitude of ecological benefit cannot be quantified at this time because severity of bank erosion, cause of riverbank erosion, and coverage of invasive species at the sites were not documented. Additionally, it appears as though many of the proposed sites have some degree of protection from vegetated buffer strips but other areas not proposed for restoration have no riparian buffer at all.

#### Letters of Support

Letters of support from the City of Pittsfield, the Town of Great Barrington, the Great Barrington River Walk, and the Appalachian Trail Conservancy were received with the Project Application.

#### Review Team

The Consensus Review Team score for this Project Application was the lowest within its category. The basis for the assigned score was influenced by factors including a lack of detail in the budget and relatively high design costs in relation to project implementation. Reviewers also commented that additional detail regarding the site specific methods of restoration including, bio-stabilization techniques, invasive species control measures, and species and densities of restoration plantings would have improved the Project Application score.

Considering the above, the details of the proposal, and the limited NRD funding available, the MA SubCouncil recommends that NRD funds not be allocated for this project.

### **5.2.4 Project Application 214: Columbia Mill Dam Removal**

Applicant(s): Housatonic Valley Association (HVA)

Location: Lee, Massachusetts

Requested NRD funding: \$250,000

#### *5.2.4.1 Summary of Proposed Action*

The Project Applicant (HVA), in partnership with the MADER, American Rivers, and Schweitzer-Mauduit International, Inc., proposed to remove the Columbia Mill Dam in Lee, Massachusetts to facilitate fish passage, enhance navigability, improve water quality, protect public safety, and provide continuity of habitat for a range of aquatic species. This dam is on the mainstem of the Housatonic River and within the GE/PCB Housatonic River, Rest of River (ROR) Resource Conservation and Recovery Act (RCRA) remedial area, as defined by USEPA Region 1. USEPA Region 1 investigations have documented elevated levels of PCBs in the impoundment sediments upstream of the

Columbia Mill dam. Currently, USEPA has not determined ROR remedial actions for disposition of those elevated PBC-laden sediments. NRD funding was requested for project management, preliminary and final design, sediment sampling, permitting, and a portion of the sediment removal. The partner Schweitzer-Mauduit agreed to contribute \$400,000 to assist with the dam removal. The total project cost, including sediment disposal, was estimated at \$1,798,000.

#### 5.2.4.2 *Project Evaluation*

##### Environmental and Socioeconomic Impacts

Adverse environmental and socioeconomic impacts associated with the dam removal were anticipated to be short-term. Dam removal may increase potential for release of pollutants to ambient air from dust associated with the dam removal construction activities. There may also be significant short-term and long-term adverse impacts to surface water and sediment quality associated with suspension and migration of PCB-contaminated sediment.

##### Nexus to Natural Resource/Service Injury and Restoration Benefits Gained

Dam removal would restore natural geomorphic processes, re-establish a natural sediment transport regime, and improve general biological functions of the Housatonic River. However, a decision regarding the ROR cleanup has not been reached at this time. Although the MA SubCouncil considers the Columbia Mill Dam Removal a project that could provide noteworthy restoration to the Upper Housatonic River, the proposed project site is located within an area that is potentially subject to future remedial action and as such would necessitate significant coordination with the USEPA Region 1 and MADEP, and require assurances of consistency with the regulatory decisions regarding the ROR.

##### Letters of Support

Letters of support from Schweitzer-Mauduit International, Inc., American Rivers, and the MADER were received with the Project Application.

##### Review Team

The Consensus Review Team score for this Project Application was the highest of all proposals received. Reviewers acknowledged that this project, if funded, would present a substantial challenge to the Applicant and require considerable collaboration with the USEPA Region 1 and other entities. Reviewers were also concerned that because over \$1 million of additional funding would be necessary to complete the dam removal, completion of the project is uncertain at this time.

Considering the above, the details of the proposal, and the limited NRD funding available, the MA SubCouncil recommends that NRD funds not be allocated for this project.

### **5.3 SUMMARY OF ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS OF NON-SELECTED PROJECT APPLICATIONS**

Table 5 presents a summary of impacts for the non-selected Project Applications as determined by the MA SubCouncil.

**Table 5: Project Impacts – Non-Selected Project Applications**

Impact Category	Impact	Proposal Number						
		201	206	208	209	210	213	214
Environmental	Air quality	NE	NE	MA	NE	NE	MA	MA
	Instream flow	NE	B	MA,B	B	B	MA,B	SA,B
	Surface water quality	NE	MA,B	MA,B	B	B	SA,B	SA,B
	Sediment quality	NE	MA,B	B	B	NE	B	SA,B
	Soil quality	B	B	MA,B	NE	NE	MA,B	SA,B
	Groundwater quality	NE	NE	NE	B	NE	MA,B	B
	Wetlands quality and services	B	B	NE	B	B	SA,B	B
	Diversity and abundance of aquatic species	B	B	B	B	B	MA,B	B
	Diversity and abundance of terrestrial wildlife species	B	NE	B	B	NE	MA,B	B
	Diversity of plant communities	B	B	B	B	B	MA	B
	Other: amphibian habitat	-	B	-	-	-	-	-
Social	Impacts on minority or low income populations	B	NE	NE	NE	NE	NE	NE
	Impacts on local sense of community and well being	B	NE	NE	B	B	B	B
	Impacts on aesthetics	B	B	MA,B	B	B	MA,B	MA,B
	Impacts on public health or safety	B	B	B	B	B	B	B
	Impacts on recreational activity	B	MA,B	B	B	B	MA,B	MA,B
	Impacts to Native American Trust Resources	NE	NE	NE	NE	NE	NE	NE
	Impacts on non-Tribal cultural sites	NE	NE	NE	NE	NE	NE	NE
	Impacts on education	B	B	B	B	B	B	B
	Impacts on local partnerships and collaborative efforts	B	B	B	B	B	B	B
	Impacts on availability and quality of drinking water	NE	NE	NE	NE	NE	NE	NE
	Impact on subsistence activity	NE	NE	NE	NE	B	NE	NE
	Nuisance impacts	NE	B	NE	B	NE	B	B
Economic	Short-term commercial economic impact of restoration action	NE	B	B	B	B	B	B
	Impacts on property values	B	NE	NE	B	B	B	B
	Impacts on recreational expenditures and related business	B	B	B	B	B	B	B
	Impacts on existing resource-based industries	NE	NE	NE	NE	B	NE	NE
	Impacts on commercial water users	NE	NE	NE	NE	NE	NE	NE
	Impacts on river-based commercial navigation	NE	NE	NE	NE	NE	NE	NE
	Impact on wastewater dischargers	NE	NE	NE	NE	NE	NE	NE

Intensity Levels: “B” – Beneficial Impact; “NE” – No Effect; “MA” – Minimal Adverse Impact; “SA” – Significant Adverse Impact; “-” – No Response  
 \*201-Sheffield Covered Bridge, 206-Pittsfield State Forest, 208-Upper Hathaway Brook, 209-Riparian Corridor Enhancement, 210-Secum Brook, 213-Springside Pond, 214-Columbia Mill

## 6.0 COMPLIANCE WITH OTHER AUTHORITIES

As discussed in Section 1.1, the two major federal laws guiding the restoration of the GE/Housatonic River Site are CERCLA and NEPA. CERCLA provides the basic framework for natural resource damage assessment and restoration (NRDAR), while NEPA sets forth a specific process of impact analysis and public review. The major state law governing the MA SubCouncil's NRD activities is M.G.L. ch. 21E, and for evaluating environmental impacts is MEPA. However, in developing and implementing the RP/SEA for the GE/Housatonic River Site, the MA SubCouncil must comply with other applicable laws, regulations, and policies at the federal, state and local levels. Section 6.1 below lists these potentially relevant laws and policies and discusses their applicability with respect to the restoration of the GE/Housatonic River Site.

In addition to laws and regulations, the MA SubCouncil must consider relevant environmental or economic programs or plans in developing and implementing the RP/SEA. The most important of these is the site cleanup, but other efforts are ongoing or planned in or near the affected environment. By coordinating restoration with all relevant programs and plans, the MA SubCouncil can ensure that the restoration does not duplicate other efforts, but enhances the overall effort to improve the environment of the Housatonic River.

The following list of laws, policies, and directives may not be exhaustive for each Preferred Alternative. By sponsoring the Preferred Alternatives, the MA SubCouncil has a responsibility to ensure that activities using NRD funds comply with all relevant laws, policies, and directives. As described in Paragraph 3.6 of the RPSP, however, Project Applicants receiving NRD funding will be responsible for obtaining all relevant permits and formally complying with any and all laws, policies, ordinances, or other local, Commonwealth, and federal requirements applicable to the expenditure of the NRD funding. While the Round 2 NRD funding will be disbursed by the Commonwealth of Massachusetts, thereby automatically mandating compliance with certain Commonwealth requirements, Project Applicants receiving NRD funding may also be responsible for compliance with certain federal requirements applicable to the expenditure of the NRD funding.

### 6.1 LAWS

#### 6.1.1 Federal Laws

##### **Clean Water Act (CWA) (a.k.a., Federal Water Pollution Control Act), 33 USC §1251 et seq.**

The CWA is the principle law governing pollution control and water quality of the Nation's waterways. Section 404 of the law authorizes a permit program for the disposal of dredged or fill material in the Nation's waters, administered by the ACOE. In general, restoration projects which move significant amounts of material into or out of waters or wetlands—for example, dam removal—require 404 permits. It is probable that some of

the Housatonic River restoration projects in Massachusetts will require such permits. In such cases, the project proponent—for example, a municipality or local natural resources trust—must obtain the appropriate permits before implementing the regulated activities. In granting permits to applicants for dredge and fill, applicants may be required to undertake mitigation measures such as habitat restoration to compensate for losses resulting from the project.

Under Section 401 of the CWA, restoration projects that entail discharge or fill to wetlands or waters within federal jurisdiction must obtain certification of compliance with state water quality standards. The MADEP implements the 401 Water Quality Certification Program through 314 CMR 9.00. In general, restoration projects with minor wetlands impacts (i.e., a project covered by an ACOE Programmatic General Permit) are not required to obtain 401 Certification, while projects with potentially large or cumulative impacts to critical areas require certification.

**Endangered Species Act (ESA), 16 USC §1531 et seq.**

The ESA establishes a policy that all federal departments and agencies seek to conserve endangered and threatened species and their habitats, and encourages such agencies to utilize their authorities to further these purposes. Under the Act, the Departments of Commerce and/or Interior publish lists of endangered and threatened species. Section 7 of the Act requires that federal agencies and departments consult with the Departments of Commerce and/or Interior to minimize the effects of federal actions on endangered and threatened species.

The bog turtle (*Clemmys muhlenbergii*) is listed under the ESA as threatened species and exists in the Massachusetts section of the Housatonic River watershed.

The MA SubCouncil has preliminarily determined that the Preferred Alternatives would not have any adverse effects upon threatened or endangered species, as determined from information presented in the Project Applications. The Applicants may be required to consult with the USFWS's Endangered Species Program before implementing restoration projects.

**Fish and Wildlife Coordination Act (FWCA), 16 USC §661 et seq.**

The FWCA requires that federal agencies consult with the USFWS, the National Marine Fisheries Service, and state wildlife agencies for activities that affect, control, or modify waters of any stream or bodies of water, in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. The federal agencies required to consult include permitting agencies such as the ACOE. This consultation is generally incorporated into the process of complying with Section 404 (see CWA, above), NEPA or other federal permit, license, or review requirements.

**Rivers and Harbors Act, 33 USC §401 et seq.**

The Rivers and Harbors Act regulates development and use of the Nation's navigable waterways. Section 10 of the Act prohibits unauthorized obstruction or alteration of navigable waters and invests the ACOE with authority to regulate discharges of fill and

other materials into such waters. Restoration actions that require Section 404 permits (see CWA, above) are likely to also require permits under Section 10 of the Rivers and Harbors Act, but a single permit generally serves for both; therefore, the MA SubCouncil can ensure compliance with the Rivers and Harbors Act through the same mechanisms.

**American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996)**

Under this statute, information on American Indian, Eskimo, Aleut, and Native Hawaiian religious and heritage issues must receive good-faith consideration during restoration planning and decision making. The MA SubCouncil has determined that there are no federally-recognized Native American Tribal Nations in the Massachusetts portion of the Housatonic River watershed.

**Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001-3013)**

This law protects Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony on federally owned or controlled lands, Indian tribal lands, and Native Hawaiian land. The Preferred Alternatives will not occur on lands that are owned or will be owned by the federal government or federally-recognized Indian tribes.

**Antiquities Act (16 U.S.C. 431-433) and Archaeological Resources Protection Act (ARPA), as amended (16 U.S.C. 470aa-470 mm)**

The Antiquities Act was enacted in 1906 to protect historic and prehistoric ruins, monuments, and objects of antiquity on federally owned or controlled lands. The ARPA protects resources that are determined to be of archaeological interest, at least 100 years old, and located on lands owned by the federal or tribal governments. The Preferred Alternatives do not involve land that is or will be owned by the federal or tribal governments.

**National Historic Preservation Act of 1966 (16 U.S.C. 470)**

Section 106 of this statute requires that federal agencies consider the effects of their actions on sites listed or eligible for listing on the National Register of Historic Places. If federal actions will impact such sites, the federal agency must consult with the state and local Historic Preservation Officers. Identification of such sites has not yet been performed for the Preferred Alternatives. The MA SubCouncil will ensure that potentially affected historic sites are identified and appropriately treated and may request the Applicant to consult with state and local Historic Preservation Officers.

**Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. 668-668d)**

This law prohibits the killing, capturing, collecting, molestation, or disturbance of bald and golden eagles, their nests, and critical habitat. The Preferred Alternatives are not anticipated to adversely affect bald and golden eagles, their nests, or critical habitat. For the Preferred Alternatives that may affect these natural resources, consultation under the ESA will be necessary and will ensure that adverse impacts are avoided.

**Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-712 et seq.)**

Under this law, it is unlawful to kill, import, export, possess, buy, or sell any bird listed

under the MBTA or its feathers, body parts, nests, and eggs. The Preferred Alternatives are not anticipated to cause these illegal activities.

**Federal Advisory Committee Act (FACA) of 1972 (86 Stat. 770, 5 U.S.C. Appendix 2)**

The FACA applies to a formal group of private citizens brought together at the request of a federal agency to provide consensus advice or recommendations to the federal agency. Such a “FACA Committee” is required to be chartered with Congress. The USFWS is the federal Trustee agency on the MA SubCouncil and did not request consensus advice from any group of private citizens.

**6.1.2 State Laws**

**Massachusetts Endangered Species Act (MESA), MGL Ch. 131A**

MESA works in much the same way as the federal ESA (Section 6.1.1, above) to list and protect rare species and their habitats. Like the federal ESA, MESA defines specific species as "endangered" or "threatened" and considers a third category as well: "species of special concern." MESA protects more species than the ESA; listed species include federally-protected species as well as others of specific concern to Massachusetts. MESA is administered by the Massachusetts NHESP, which identifies rare species habitats and other high-priority natural areas. Compliance of the proposed restoration with MESA overlaps ESA compliance. Before implementing restoration projects, the Applicants will consult with NHESP to ensure that no aspects of the proposed activities would have a negative effect on species designated as endangered, threatened, or of special concern by the Commonwealth of Massachusetts.

**Massachusetts Environmental Policy Act (MEPA), MGL Ch. 30 §61 et seq.**

MEPA is the state equivalent of NEPA (Section 6.1.1, above). MEPA sets forth a process of environmental review and requires Commonwealth agencies to consider and minimize adverse environmental impacts of State actions on the environment. Like NEPA, MEPA requires public notification and comment before decisions are finalized. The document used to assess impacts is the Environmental Impact Report (EIR), which must be approved by the MEPA office within the EOEEA before major State actions can proceed. The law applies to projects directly undertaken by State agencies as well as private projects seeking permits, funds, or lands from the State, but does not apply to private projects requiring local approval only. MEPA review is expressly required for projects that dredge, fill or alter more than one acre of wetlands.

Both NEPA and MEPA encourage consolidation of the two processes where possible to avoid duplication of effort. Therefore, this RP/SEA is also an EIR, conforming to the notice, comment, timing, content, and other relevant provisions of MEPA. Likewise, future restoration actions that require additional NEPA documentation will, where appropriate, incorporate MEPA process into restoration decision-making. Since MEPA is somewhat more inclusive than NEPA, some restoration actions which do not require NEPA review may require review under MEPA; in such cases, separate MEPA review will be undertaken by the MA SubCouncil.

**Public Waterfront Act ('Chapter 91'), MGL Ch. 91**

Chapter 91 is designed to protect public rights in Massachusetts waterways, not unlike the federal Rivers and Harbors Act, above, which it predates. It ensures that public rights to fish, fowl, and navigation are not unreasonably restricted and that unsafe or hazardous structures are repaired or removed. Chapter 91 also protects the waterfront property owner's ability to approach his land from the water, and helps protect wetland resource areas by requiring compliance with the MWPA. It is administered by MADEP's Division of Wetlands and Waterways through a program of permits and licenses. Chapter 91 authorization is required for alterations of tidelands, great ponds, and some rivers and streams, as well as for dredging and construction of piers, wharves, floats, retaining walls, revetments, pilings, bridges, dams and some waterfront buildings. The Act requires public, municipal and agency notification before a project is authorized, and provides for public hearings, review by affected parties, and the imposition of conditions before authorization is granted. Certain Chapter 91 projects also require MEPA review (see above). In order to maintain RP compliance with Chapter 91, the recipients of grant funding from the MA SubCouncil will seek the approval of the Division of Wetlands and Waterways before implementing restoration actions that fall within the law's scope and will ensure that the law's notification provisions are met where required.

**Rivers Protection Act, St. 1996, C. 258**

The Rivers Protection Act, passed in 1996, modifies the MWPA (see below) to strengthen and expand existing protection of watercourses and the lands adjacent to them. The Act establishes a "riverfront area" that extends 200 ft (25 ft in certain urban areas) from the mean annual high water line on each side of perennially flowing rivers and streams. Details regarding Riverfront Area may be found in 310 CMR 10.58. The Act requires projects in the riverfront area to meet two performance standards: no practicable alternatives, and no significant adverse effect. The local conservation commission or the state Department of Environmental Protection reviews projects to ensure that the riverfront area is protected for the eight interests in the MWPA. Compliance with the Rivers Protection Act will be maintained through compliance with the MWPA (see below).

**Wetlands Protection Act, MGL Ch. 131 §40**

The MWPA restricts the removal, filling, dredging or alteration of fresh and salt water wetlands and coastal areas. Permit authority for the administration of the law is delegated to local conservation commissions with oversight and involvement of the MADEP. The Act requires landowners who plan work in a wetland to notify these entities as well as abutters and other nearby landowners, and provides for public hearings and the imposition of conditions before permission is granted. More direct State involvement is required where wetlands greater than 5000 square feet are affected. In order to maintain RP compliance with the MWPA, recipients of grant funding from the MA SubCouncil will seek the approval of the local conservation commission and/or other appropriate authorities before implementing restoration actions that fall within the law's scope, and will ensure that nearby landowners and other affected parties are notified, as appropriate, of planned restoration actions.

### **Other Potentially Applicable State Laws**

Massachusetts 401 Water Quality Certification Program, 314 CMR 9.00 (discussed under CWA, above).

#### **6.1.3 Local Laws**

As appropriate, restoration actions will consider and comply with local zoning ordinances, comprehensive plans, shoreline plans, growth management plans, construction grading or fill permits, noise permits, wetlands bylaws and permits, and other relevant laws, regulations, bylaws, and ordinances.

## **6.2 POLICIES AND DIRECTIVES**

### **6.2.1 Federal Policies and Directives**

The following describes federal policies and Presidential Executive Orders that are relevant to the Preferred Alternatives.

#### **U.S. Fish and Wildlife Service Mitigation Policy (Fish and Wildlife Service Manual, 501 FW 2)**

It is the policy of the USFWS to seek to mitigate losses of fish, wildlife, and their habitats, and uses thereof, from land and water developments. This policy seeks to ensure “no net loss” of fish and wildlife habitat. The MA SubCouncil does not anticipate that the Preferred Alternatives will cause adverse impacts to wetlands, but if impacts may occur, this policy may apply.

#### **Executive Order 11988 – Floodplain Management**

This 1977 Executive Order directs federal agencies to avoid, to the extent possible, the long-term and short-term adverse effects associated with the occupancy and modification of floodplains and to avoid direct or indirect support of development in floodplains wherever there is a practicable alternative. The Preferred Alternatives are consistent with this directive in that no development is being endorsed in floodplains other than low-impact recreational amenities that cannot be constructed elsewhere and still achieve the recreational goals of the project. For example, canoe ramps, by nature, must be constructed at the water’s edge. Best management practices and environmentally-responsible engineering/design will minimize any short-term impacts. In addition, some of the Preferred Alternatives will conserve, protect, and enhance the wildlife habitat values in floodplain areas of the Housatonic River through the establishment of conservation restrictions that will prevent future development and the implementation of habitat restoration activities.

#### **Executive Order 11990 – Protection of Wetlands**

Issued by President Jimmy Carter in 1977, Executive Order 11990 instructs each federal agency to avoid, to the extent possible, the long-term and short-term adverse effects associated with the destruction or modification of wetlands. It is not anticipated that any of the Preferred Alternatives will adversely affect wetlands. However, projects that will affect wetlands will need appropriate regulatory permits before construction can begin. Along with these regulatory processes, the MA SubCouncil will work with the

Applicants to ensure that wetland impacts are avoided and/or minimized.

**Executive Order 12898 – Environmental Justice**

This Order directs federal agencies to assess whether their actions have disproportionately adverse human health or environmental effects on minority or low-income populations. None of the Round 2 Preferred Alternatives are proposed for implementation within Environmental Justice Communities.

**Executive Order 13186 – Migratory Bird Protection**

This Order directs federal agencies to avoid or minimize, to the extent possible, adverse impacts on migratory birds while conducting agency actions. None of the Preferred Alternatives are expected to cause adverse impacts to migratory birds, other than temporary disturbances during some construction activities. Rather, the Preferred Alternatives under the Wildlife Resources and Habitat restoration priority category will protect and enhance migratory bird habitat.

**6.2.2 State and Local Policies**

As appropriate, restoration actions will consider and comply with other relevant policies at the state and local levels, e.g. the MADEP Stormwater Discharge Policy.

**7.0 LIST OF PREPARERS**

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**8.0 LIST OF AGENCIES, ORGANIZATIONS, AND PARTIES CONSULTED FOR INFORMATION**

Mark Barash, Office of the Solicitor, US Department of the Interior

Robin Heubel, NRDAR Coordinator, Northeast Regional Office, US Fish and Wildlife Service

**9.0 PUBLIC COMMENTS RECEIVED WITH PROJECT APPLICATIONS**

## **10.0 PUBLIC COMMENTS ON DRAFT RP/SEA**

### **10.1 PUBLIC COMMENTS**

(section reserved)

### **10.2 TRUSTEE RESPONSE TO PUBLIC COMMENTS**

(section reserved)

## 11.0 LITERATURE CITED

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[HRR] Housatonic River Restoration, Inc. 1999. Revised 2003. The Housatonic River Restoration Plan. Online at [http://www.hvatoday.org/education/river/hrr\\_plan.html](http://www.hvatoday.org/education/river/hrr_plan.html).

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Woodlot and IEC. 2005b. Restoration Project Selection Procedure. Prepared for the Massachusetts SubCouncil of the Housatonic River Natural Resource Trustees. June 30, 2005.

Roy F. Weston, Inc. 1998. Upper Reach-Housatonic River Ecological Risk Assessment. Prepared under EPA Contract No. 68-W5-0009. Roy F. Weston, Inc., West Chester, PA.

**APPENDIX A**

**Public libraries where documents can be accessed**

**Draft Round 2 Restoration Plan and Supplemental Environmental Assessment**

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Great Barrington Mason Library  
231 Main Street  
Great Barrington, MA 01230-1604  
(413) 528-2403

Lee Public Library  
100 Main Street  
Lee, MA 01238  
(413) 243-0385

Lenox Public Library  
18 Main Street  
Lenox, MA 01240  
(413) 637-0197

Berkshire Athenaeum  
One Wendell Avenue  
Pittsfield, MA 01201-6385  
(413) 499-9488

Bushell-Sage Library  
48 Main Street  
Sheffield, MA 01257-0487  
(413) 229-7004

Stockbridge Library  
Main Street  
P.O. Box 119  
Stockbridge, MA 01262-0119  
(413) 298-5501

**APPENDIX B**

**Newspapers and radio and television stations used for public announcements**

**Newspapers** used for public outreach include:

- Berkshire Eagle, Pittsfield, MA
- Berkshire Record, Great Barrington, MA
- Pittsfield Gazette, Pittsfield, MA
- Springfield Union, Springfield, MA
- Republican, Springfield, MA
- The Advocate, Williamstown, MA
- The Advocate, Lenox, MA
- Pennysaver, Lee, MA
- Yankee Shopper, Pittsfield, MA
- Shoppers Guide, Great Barrington, MA
- North Adams Transcript, North Adams, MA
- Lakeville Journal, Lakeville, CT
- Litchfield County Times, Litchfield, CT

**Radio stations** used for public outreach include:

- WBEC 1420 AM, Pittsfield
- WAMQ 105.1 FM, Great Barrington
- WCFM 91.9 FM, Williamstown
- WNAW 1230 AM, North Adams
- WSBS 860 AM, Great Barrington
- WUPE, Pittsfield
- WBEC, Pittsfield
- WSBS, Great Barrington
- WBRK, Pittsfield
- WAMC, Albany N.Y.
- WAMQ, Great Barrington
- WCFM, Williamstown
- WNAW, North Adams
- WKZE, Litchfield, CT

**Television stations** used for public outreach include:

- Channel 22, Springfield, MA
- PCTV, Pittsfield, MA
- CTSB, Lee, MA
- WRGB, Albany
- WNYT, Albany
- News Channel 40, Springfield, MA
- WTEN, Albany

**APPENDIX C**

**Final Results of Round 2 Threshold Criteria Evaluation**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Natural Resources Damages (NRD) regulations require that restoration activities restore, rehabilitate, replace, or acquire the equivalent of the resources and services that were injured or lost. The first step in evaluating the proposed projects involved identifying projects that met the minimum requirements for consideration as restoration projects. These “Threshold Criteria” include consistency with the goals of the MA SubCouncil, federal regulations, and other applicable federal, state, and local regulations and laws. The Threshold Criteria are summarized below. Additional details regarding the Threshold Criteria Evaluation process may be found in the Final Restoration Project Selection Procedure.

Threshold Criteria

**1. Does the application contain the information necessary to proceed with an evaluation as described in this document?**

(A “NO” response may render the proposed project ineligible for further consideration.)

**2. Does the proposed project restore, rehabilitate, replace, and/or acquire the equivalent of natural resources or natural resource services that were injured by the release of PCBs or other hazardous substances?**

(A “NO” response renders the proposed project ineligible for further consideration.)

**3. Is the proposed project, or any portion of the proposed project, an action that is presently required under other federal, state, or local law?**

(A “YES” response renders the proposed project ineligible for further consideration.)

**4. Is the proposed project, or any portion of the proposed project, inconsistent with any federal, state, or local law, regulation, or policy?**

(A “YES” response renders the proposed project ineligible for further consideration.)

**5. Will the proposed project, in terms of its cost, be consistent with the stated goals of the MA SubCouncil to retain sufficient funds to 1) accomplish restoration over at least three rounds of proposal solicitations and 2) serve a wide geographic area that benefits the restoration priority categories?**

(A “No” response renders the proposed project ineligible for further consideration.)

**6. Will the proposed project, or any portion of the proposed project, be inconsistent with any ongoing or anticipated remedial actions (i.e., primary restoration) in the Housatonic River watershed?**

(A “YES” response renders the proposed project ineligible for further consideration.)

Additionally, as stated at public meetings prior to release of the Request for Responses (RFR) and in the RFR (EEA 09 NRD 02), the focus of Round 2 was to be on Habitat Restoration. Although proposals that included Environmental Education or Recreation components were considered fundable, these activities were required to be secondary within habitat restoration proposals. Proposals that were judged to primarily address the secondary restoration categories of Environmental Education or Recreation were eliminated from further consideration.

The MA SubCouncil evaluated all 15 proposals submitted in response to the Round 2 Habitat Restoration RFR. A total of 12 proposals passed the Threshold Criteria Evaluation and proceeded to Stage 2 Evaluation. The 3 proposals that did not meet the Threshold Criteria requirements or were not primarily focused on habitat restoration are identified below with the MA SubCouncil's justification for their final decision. These 3 proposals will not be considered for funding during Round 2 even though the proposed projects may provide restoration benefits to injured natural resources.

**Proposal No. 202 - Horsekeeping Best Management Practices for Water Quality Protection and Restoration**

The intent of this project, as detailed in the Project Application, was to reduce non-point source contaminants and restore riparian habitat through an Environmental Education and Outreach program targeted at the community of horse owners in the Housatonic River watershed. The proposal requested \$30,463 in NRD funding to utilize an existing network of horse-related organizations in the watershed to connect horse-owners with information necessary for understanding local natural resources and identifying best management practices useful in reducing non-point source pollution.

This proposal was eliminated from consideration because it did not propose to restore, rehabilitate, replace, and/or acquire natural resources or natural resource services that were injured by the release of PCBs or other hazardous substances (Threshold Criterion No. 2).

Although the MA SubCouncil considers protection of resources through outreach to be a valuable endeavor, environmental education is not a primary restoration category in Round 2. Projects focused on environmental education may potentially be considered for funding during Round 3, but the restoration categories for later NRD funding have not been defined to date.

This proposal was therefore eliminated from consideration for this funding round because it was viewed to be an Environmental Education proposal. As stated in the Applicant's project abstract:

“This project aims to reduce NPS contaminants and restore riparian habitat through an Environmental Education and Outreach (EEO) program targeted at the horse owning community of the Housatonic River Watershed.”

**Proposal No. 205 - Proposal for Aquatic Invasive Species Management in the Housatonic River**

The intent of this project, as detailed in the Project Application, was to implement an invasive species monitoring network that would focus on zebra mussels (*Dreissena polymorpha*), quagga mussels (*Dreissena bugensis*), fishhook water fleas (*Cercopagis penguii*), spiny water fleas (*Bythotrephes longimanus*), and rock snot (*Didymosphenia geminate*). The proposal requested \$144,100 in NRD funding to:

1. Coordinate with regional, state, and interstate agencies to integrate and standardize the monitoring protocols and education program;
2. Assess the invasion risk for each targeted aquatic invasive species throughout the watershed;
3. Perform baseline invasive species monitoring of 30 lake, pond, and stream sites throughout the watershed;
4. Purchase up to six invasive species field monitoring kits and three lab kits;
5. Present up to four regional workshops to enlist and train citizen and volunteer groups;
6. Develop and distribute educational materials within the watershed;
7. Develop and implement an ongoing monitoring network and program; and
8. Provide annual reporting and a final project summary report.

This proposal was eliminated from consideration because it did not clearly restore, rehabilitate, replace, and/or acquire the equivalent of natural resources or natural resource services that were injured by the release of PCBs or other hazardous substances (Threshold Criterion No. 2).

The stated emphasis of this project was to monitor for the presence of aquatic invasive species within the Housatonic River Watershed. As stated by the Applicant, "Once populations of these species are established in a water body, there is no accepted, legally permissible method to actively control or eradicate them." The proposal presented a means for establishing a regional monitoring network, but there were no assurances that action will be taken once populations of invasive species were identified. The MA SubCouncil is aware that there is a Draft Early Detection and Rapid Response to Aquatic Invasive Species in Massachusetts Generic Protocol developed by the Massachusetts Aquatic Invasive Species Working Group, however this draft protocol has not been finalized. Additionally, the State may restrict access to invaded waters on State-owned land, but there is no procedure for quarantining public or private land. There are no assurances that the State has adequate funding to implement control of invasive species once identified or that control measures will have any measurable efficacy. In summary, although new introductions of invasive species may be identified as a result of funding this project, there are no assurances that implementation of the project will result in preventing the spread of invasive species. Thus the proposal does not restore natural resources.

The MA SubCouncil believes that control of invasive species detrimental to aquatic ecosystems is critical, however until there is an established mechanism for responding to

new introductions, efforts should be directed towards informing the public on how to best avoid transferring these species between water bodies.

**Proposal No. 211 - Housatonic River Restorative EcoStation**

The intent of this project, as detailed in the Project Application, was to develop an integrated natural treatment system to be installed along the Housatonic River to restore the aquatic resources and habitat contaminated with hazardous materials, including polychlorinated biphenyls (PCBs). The proposal requested \$806,300 in NRD funding to implement an “EcoStation” on GE land within the East Street Area 2 – South location that would use a greenhouse, bacterial fermenter, and mycelial production unit; to create bioswales adjacent to the Housatonic River; and distribute products from the “EcoStation” to the bioswales.

This proposal was eliminated from consideration because the primary stated goals were PCB elimination and remediation and the proposed project was not consistent with the East Street design at the proposed “EcoStation” location. The project was viewed to be inconsistent with ongoing remedial actions (Threshold Criterion No. 6). Also, because the proposal did not appear to be coordinated with USEPA Region 1 and GE, the proposal did not have information necessary to proceed with evaluation (Threshold Criterion No. 1).