

Appendix A

NPS Responses and MEPA Scope and Comment Letters

Response to Comments on the Environmental Notification Form

The following are abbreviated responses to the comments raised by MEPA and other stakeholders (July 2005) in response to the Environmental Notification Form filed by the National Park Service. The reader is directed to specific locations in the DEIR and appendices where each comment is addressed, as indicated by the location identified in the matrices below.

MEPA Comments

Project Description and Alternatives Analysis

The DEIR should provide a detailed project description with a summary/history of the project. It should include existing and proposed site plans. The DEIR should identify and describe any project phasing. It should describe each state agency action required for the project. The DEIR should demonstrate how the project is consistent with the applicable performance standards. It should contain sufficient information to allow the permitting agencies to understand the environmental consequences of their official actions related to the project.

In addition to the Preferred Alternative, the No-Build Alternative (Alternative A), the DEIR should discuss the alternatives from the ENF.

NPS Response

NPS has provided a detailed project description in the DEIR which includes a summary/history of the project, existing and proposed site plans, project phasing and compliance needs associated with the project. The matrix below identifies the DEIR locations of each of the items identified in the comment.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Project Background	Section 1.5, page 1-6
Project Description	Section 2.0, page 2-1
Site Plans	Appendix L – Construction Plans
State agencies	Section 5.2.1, page 5-5
Alternatives Analysis	Section 2.0, page 2-1 Section 2.8, page 2-16 Section 4.4, page 4-5

Waterways Licensing/Permitting

The DEIR should identify if the existing pier, bulkhead, and bridge are licensed under the Chapter 91 Waterways Program. It should state whether any new Chapter 91 License would be required for existing or proposed structures. The DEIR should describe the Chapter 91 Permit that will be required for the dredging portion of the project in the Saugus River.

NPS Response

The NPS is committed to complying with all applicable state and federal regulations and has applied for a Chapter 91 license as part of the proposed project.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Chapter 91 permit application	Appendix M – Chapter 91 Permit Application

Wetlands and Drainage

The Wetland Section of the DEIR should [conform to state policy] by first examining options that avoid impacts to wetland resource areas, their associated buffer zones, riverfront protection areas and 100-year flood plain areas.

The DEIR should evaluate potential drainage impact on water resources from the dewatering of the dredged material.

NPS Response

The NPS has conducted a natural resources functional assessment that outlines each resource area detailing the percent coverage on the site as well as the associated values. The natural resources functional assessment is located in Appendix K of the EIR. The NPS has also completed a Drainage and Stormwater Management Assessment to evaluate the drainage characteristics of the proposed project area.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Wetland resource areas and delineation	Appendix I- Wetland Delineation Appendix F- Natural Resource Functional Assessment Section 3.4.3, page 3-9
Proposed activities analysis	Section 2.0, page 2-1 Section 4.4, page 4-5
Construction and mitigation activities	Section 2.5.6, page 2-9 Section 2.5.7, page 2-10 Section 2.6, page 2-10 Appendix L – Construction Plans Appendix D – SWPPP
Impact Analysis	Section 4.4, page 4-5
Drainage Analysis	Appendix H – Drainage and Stormwater Management Report
NPDES General Permit	Section 5.2, page 5-1 Appendix D- SWPPP

Hazardous Wastes:

The DEIR should present a summary of the results of any hazardous waste studies and remediation for the dredged material to be removed from the site by the proponent.

NPS Response

The NPS has performed extensive sediment characterization of the turning basin as detailed in the Marsh Characterization Report. The monitoring plan for Saugus Iron Works details the water quality sampling within NPS property and specifies sampling locations for long-term monitoring of the site to ensure water quality. During the project activities, best management practices outlined in the Stormwater Pollution Prevention Plan will be implemented.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Hazardous Wastes	Section 3.2, page 3-2 Appendix C, Marsh Characterization Report Appendix D, Stormwater Pollution Prevention Plan

Rare Species

The DEIR should provide a summary of the project site's habitat assessment. It should identify if the project will impact the state-listed American waterwort, which has been identified in the stream channel of the Saugus River.

NPS Response

NPS has conducted an Aquatic Habitat Assessment as well as a Natural Resource Functional Assessment. It has also collaborated with the MA NHESP in an attempt to identify American waterwort. The determination is pending until a definitive species identification can be made by NHESP staff.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Habitat Assessment	Appendix J – Aquatic Habitat Assessment Appendix F - Natural Resource Functional Assessment
Rare species	Section 4.4.5, page 4-14 Section 2.6.5, page 2-12
Stream bed documentation	Appendix J - Aquatic Habitat Assessment Appendix G – Weir Assessment
Monitoring Plan	Appendix E – Monitoring Plan

Historical Archeological Issues and Construction Issues

The proponent should consult with the Massachusetts Historical Commission (MHC) the Massachusetts Board of Underwater Archaeological Resources and the local Historic Preservation Commission as it proceeds with the project planning.

The DEIR should include a construction management plan.

NPS Response

The NPS has collaborated with the MHC, the Massachusetts Board of Underwater Archeologists and other stakeholders throughout the design process. Correspondance between the agencies is located in Appendix B.

The DEIR includes a construction management plan outlining potential construction period impacts and construction management strategy. Additional information on construction management can be located in the Construction Plans as well as the Stormwater Pollution Prevention Plan.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
State historical agencies and historical resource discussion	Section 5.2.1, page 5-5
	Section 3.3, page 3-6
	Appendix B – Agency Letters
Construction Period Impacts and management plan	Section 2.5.6, page 2-9
	Appendix D – Stormwater Pollution Prevention Plan
	Appendix L – Construction Plans

Mitigation

The DEIR should include a separate chapter on mitigation measures. The proponent should consider participating in proposals... to remove the existing weir structure located downstream of the project site within the Saugus River.

The chapter on mitigation should include a proposed Section 61 Finding for all state permits.

NPS Response

The NPS is committed to mitigating as much of the potential project related impacts as outlined in Section 2.6 of the DEIR. Proposed Section 61 findings are included as part of the Mitigation section of the document. The NPS has also completed an assessment of the weir at Hamilton Street and has collaborated extensively with stakeholders regarding its removal.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Mitigation and Proposed Section 61 Findings	Section 2.6, page 2-10
Removal of the weir	Section 2.6, page 2-10
	Appendix G – Weir Assessment

Items Raised by Saugus River Watershed Council (SRWC)

The following items were raised by SRWC in response to the ENF submittal by the NPS.

Hazardous Materials

Comprehensive sediment and water quality monitoring plan must be conducted during excavation work. The EIR should include contingency plans for containing hazardous materials. Ongoing monitoring should continue throughout the excavation work to adequately characterize sediments. Containment barriers such as silt curtains should be utilized. The EIR should include detailed plans for characterizing sediments and monitoring water quality during the project period.

NPS Response

The NPS has performed extensive sediment characterization of the project area in support of the proposed action, as detailed in the Marsh Characterization Report (Appendix K). The monitoring plan for Saugus Iron Works details the proposed water quality sampling within NPS property and specifies sampling locations for long-term monitoring of the site to ensure water quality is maintained. During the project activities, best management practices outlined in the Stormwater Pollution Prevention Plan will be implemented. In order to minimize erosion and best control sediment, temporary diversion structures shall be installed prior to the start of fill and/or sediment removal operations. Surface disturbance would be minimized as much as possible. Areas which must be disturbed would utilize temporary silt fencing and other measures to prevent sediment release until the disturbed areas have been restored and stabilized.

Protection of Fisheries

Efforts to address the following issues with smelt spawning habitat should be outlined in the EIR. Work to restore the Saugus Iron Works Turning Basin and Dock must be carefully coordinated so that it does not interfere with fish spawning and migration period. Special efforts should be made to protect gravel-bottom smelt spawning habitat. In addition, improvements to create new or expand existing smelt spawning habitat should be considered.

NPS Response

The NPS is committed to protection of fisheries resources at Saugus Iron Works. Staff from both state and federal agencies as well as the NPS and Saugus Iron Works and CH2M HILL have collaborated and created a design specifically engineered to protect smelt spawning habitat and ensure its protection throughout the project and beyond. The proposed gravel/cobble berm was included as part of the proposed action to specifically protect smelt spawning habitat by maintaining the integrity of the river channel and provide shading of the spawning habitat.

Wetlands Restoration

The project proponent should include a long-term wetlands monitoring and maintenance plan in the EIR. The plan should include a timeline for long-term monitoring and outline measures to be implemented to ensure that the wetlands become well established and that invasive species do not take over again in the future.

The NPS is committed to ensuring long-term success of the restoration associated with this project and has developed a monitoring plan to implement upon completion of the proposed project. In addition, the NPS has studied the existing conditions of the wetlands to best understand its extent, resources and functions.

Water Quality

The EIR should include a plan for downstream monitoring.

NPS Response

The NPS would be following Best Management Practices for water quality maintenance and monitoring as described in the Stormwater Pollution Prevention Plan and any monitoring requirements specified in the 401 Water Quality Certification.

Public Access

We recommend a more formal area where canoes can be pulled out of the river or launched be incorporated into the design. During implementation of the project, we encourage the proponent to provide as much public access as possible. Interpretive signage and look-out points can be used strategically to educate the public about the restoration efforts taking place on the site. Public notification should be provided via local newspapers and cable television.

NPS Response

The NPS is committed to providing an enriching visitor experience at Saugus Iron Works. Recreational opportunities would be enhanced by restoring the dock and removing Phragmites currently creating impasses in the river. Visitors wishing to temporarily dock a canoe or kayak at the site must do so during Saugus Iron Works operating hours from 9AM to 5PM. Saugus Iron Works would provide interpretive signage to provide restoration information to visitors and would continue to communicate with the public using selected media channels.

Traffic

The EIR should include plans for construction related traffic to minimize impact to neighbors. The EIR should provide detail about entrance and egress points and travel routes for construction vehicles.

NPS Response

The NPS has analyzed the potential impacts to traffic and is committed to maintaining the least adverse impacts to neighbors as possible. Additional detail on traffic related impacts can be found in the Environmental Consequences section of the EA/DEIR.

Scope Item	DEIR Location
Hazardous Materials	Section 3.2, page 3-2 Appendix C, Marsh Characterization Report Appendix E, Monitoring Plan
Protection of Fisheries	Appendix J - Aquatic Habitat Assessment Section 2.6.6, page 2-12
Wetlands Restoration	Section 2.5.3 Wetland Restoration, page 2-6 Appendix F- Natural Resource Functional Assessment Appendix E – Monitoring Plan
Water Quality	Section 2.5.3, page 2-6 Appendix E – Monitoring Plan Appendix D – SWPPP
Historical Significance	Section 3.4.5, page 3-11 Section 3.3, page 3-6
Public Access, greater access for canoes, interpretive signage and updates on project progress	Section 2.6.7, page 2-13 Section 4.4.7, page 4-17
Traffic	Section 4.4.12, page 4-26
Public Outreach	Section 1.5.3, page 1-10

Coastal Zone Management (CZM) Comments

The EIR should more thoroughly document the existing wetlands function of the existing BVW area to inform the design of the restoration project.

NPS Response

The NPS has conducted a natural resources functional assessment that outlines each resource area detailing the percent coverage on the site as well as the associated values. The functional assessment is located in Appendix K of the EA/EIR. The specific comments listed in bullet-form in the comment letter from CZM are listed below with their specific reference locations in the DEIR.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Detailed wetland replication plan	Section 2.5.3 Wetland Restoration, page 2-6
Details for wetland restoration process, proposed species, planting schedule and monitoring Invasive species monitoring and contingency plan	Appendix F- Natural Resource Functional Assessment Appendix L – Construction Plans Appendix E– Monitoring Plan
Document wetland functions including habitat, retention of flood waters, pollution prevention and comparison of area of each resource area to be lost and created	Appendix F- Natural Resource Functional Assessment Appendix H- Drainage Assessment
Plan showing delineation of each existing wetlands resource area	Appendix I- Wetland Delineation
Proposed mitigation for those functions that may be lost	Section 2.6 Mitigation, page 2-10 Appendix F- Natural Resource Functional Assessment
Narrative for construction phases and construction mitigation	Appendix L – Construction Plans Section 2.5.6, page 2-9
Measures for fisheries protection	Appendix J - Aquatic Habitat Assessment Section 2.6, page 2-10
Analysis of potential impact to Rumney Marsh	Section 4.4.4, page 4-11

Items Raised by Department of Environmental Protection (DEP)

Wetlands and 401 Water Quality Certification

Generally, the EIR will need to demonstrate that the project can either conform to the standards for a limited project, including the requirements for a 1:1 mitigation, and/or present information to demonstrate the project would meet the tests for a variance from the wetlands regulations.

The project requires a 401 Water Quality Certificate as well as an alternatives analysis.

NPS Response

The NPS is committed to complying with all applicable state and federal regulations and has applied for the 401 Water Quality Certificate from DEP. Since the onset of the project, the NPS has collaborated extensively with representatives from the DEP to ensure clear communication and understanding throughout the design process. The NPS would likely apply for a variance under the Massachusetts Wetlands Protection Act and the 401 Water Quality Certification regulations because the proposed action would not meet the performance standards requiring 1:1 mitigation of bordering vegetated wetland. The proposed action would likely meet the criteria for a variance from these regulations because of the overriding public interest in the site and its significance as a national historic site. An alternatives analysis is provided in Section 2.0 of the EA/DEIR.

DEIR COMMENT LOCATION

Scope Item	DEIR Location
Alternatives Analysis	Section 2.0, Description of the Proposed Action and Alternatives, page 2-1
	Section 4.4, Impact Analysis, page 4-5
Wetlands	Section 2.5.3 Wetland Restoration, page 2-6
	Appendix F- Natural Resource Functional Assessment
	Appendix E – Monitoring Plan
401 Water Quality Certification	Section 5.2.1, page 5-5



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

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July 29, 2005

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CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS ON THE ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Restoration of the Saugus Iron Works
Turning Basin & Dock
PROJECT MUNICIPALITY : 244 Central Street - Saugus
PROJECT WATERSHED : Saugus River
EOEA NUMBER : 13563
PROJECT PROPONENT : National Park Service
DATE NOTICED IN MONITOR : June 22, 2005

Pursuant to the Massachusetts Environmental Policy Act (G. L., c. 30, ss. 61-62H) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of a Draft and Final Environmental Impact Report (DEIR and FEIR).

According to the Environmental Notification Form (ENF), the proposed project consists of restoration/excavation (78,418 square foot (sf) area) of the Saugus River turning basin and the reconstruction of the dock (432 sf) and bulkhead (110 linear feet) at the Saugus Iron Works. The project will remove approximately 155,945 sf of existing bordering vegetated wetlands dominated by *Phragmites australis* and other non-native species. It will include the disposal of approximately 9,620 cubic yards of sediment from the riverbed to a landfill after dewatering has occurred on-site. The site is approximately 8.51 acres.

This project is subject to a mandatory EIR pursuant to Section 11.03(3)(a)(1)(a) of the MEPA regulations. It alters one or more acres of Bordering Vegetated Wetlands (BVW). The project will require a Chapter 91 License and Permit, a Section 401 Water Quality Certificate from the Department of Environmental Protection (DEP). It might require a Variance from the Wetlands Protection Act from DEP if the project does not meet the limited project provisions with the Saugus Conservation Commission. The project must comply with the National Pollutant Discharge

Elimination System (NPDES) General Permit for stormwater discharges from a construction site. It will need a Section 404 Programmatic General Permit (Category II) from the U.S. Army Corps of Engineers. An Order of Conditions will be required from the Saugus Conservation Commission for work within a resource area. Because the proponent is not seeking financial assistance from the Commonwealth for the project, MEPA jurisdiction is limited to those aspects of the project within the subject matter of required state permits (wetlands, waterways, and stormwater) that may have significant environmental impacts.

The proponent has estimated that the disposal of excavated material will generate approximately 30 to 40 truck trips per day for four to six weeks.

Single EIR/Waiver Request:

In accordance with Section 11.05(7) of the MEPA regulations, the proponent submitted an ENF with a request that I allow the proponent to fulfill its EIR obligations under MEPA with a Single EIR, rather than require the usual two-step Draft and Final EIR process. The ENF received an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. I have reviewed the proponent's request for a Single EIR in accordance with Section 11.06(8) of the MEPA regulations, and I find that the ENF was not an "Expanded" ENF. I find that the ENF did not meet the enhanced standards required in the MEPA regulations. The ENF describes and analyzes only some aspects of the project and not all feasible alternatives; it provides some of the detailed baseline information in relation to which potential environmental impacts and mitigation measures can be assessed; and it does not demonstrate that the planning and design of the project has used all feasible means to avoid potential environmental impacts. Therefore, I am denying the proponent's request to prepare a Single EIR. The proponent must prepare a Draft and a Final EIR in fulfillment of the requirements of Section 11.03 of the MEPA regulations. Should the Draft EIR resolve the substantive issues outlined below, I will consider the procedural options available to me at 301 CMR 11.08(8)(b)(2), as they relate to the Scope for the Final EIR.

SCOPE

As modified by this scope, the DEIR should conform to Section 11.07 of the MEPA regulations for outline and content. The DEIR should resolve the remaining issues outlined below. It should address the comments listed at the end of this Certificate to the extent that they are within this scope, and it should include a copy of this Certificate and all comment letters.

Project Description:

The DEIR should provide a detailed project description with a summary/history of the project. It should include existing and proposed site plans. The DEIR should identify and describe any project phasing. It should describe each state agency action required for the project. The DEIR should demonstrate how the project is consistent with the applicable performance standards. It should contain sufficient information to allow the permitting agencies to understand the environmental consequences of their official actions related to the project.

Alternatives Analysis:

In addition to the Preferred Alternative, the No-Build Alternative (Alternative A), the DEIR should discuss the alternatives from the ENF. The proponent has evaluated alternatives with the ability to avoid or minimize wetland related impacts, all centered on the excavation of the boat turning area within the Saugus River that bisects the property from north to south. Three alternatives were identified in the ENF:

- Alternative B - Preferred Alternative - the restoration of the turning basin and waterfront structures to their condition prior to the 1957 dam breach and the restoration of the portion of the Saugus River south of the historic turning basin area.
- Alternative C - identical to the Preferred Alternative, but it does not include the restoration of the Saugus River south of the historic turning basin.
- Alternative D - identical to the Preferred Alternative, except that only 40-percent of the southern area of the tidal basin would be excavated and restored to approximate 1954 contours.

The DEIR should summarize the alternatives already developed for the project site by the proponent. The analysis should clearly present the alternative configurations at the site and identify the advantages and disadvantages of the Preferred Alternative. The DEIR should provide a comparative analysis that clearly shows the differences between the environmental impacts associated with each of the alternatives.

Waterways Licensing/Permitting:

The DEIR should identify if the existing pier, bulkhead, and bridge are licensed under the Chapter 91 Waterways Program. It should state whether any new Chapter 91 License would be required for existing or proposed structures. The DEIR should describe the

Chapter 91 Permit that will be required for the dredging portion of the project in the Saugus River.

The DEIR should provide the information necessary for a complete filing under the Chapter 91 Licensing Program. This should include an alternative analysis; public purpose determination; provisions for open space, setbacks, and view facilities; description of flooding conditions, if any, and facilities to encourage waterfront use; and a maintenance plan. The DEIR should address historical licensing information.

Wetlands:

The Commonwealth has endorsed a "No Net Loss Policy" that requires that all feasible means to avoid and reduce the extent of wetland alteration be considered and implemented. The Wetland Section of the DEIR should conform to this approach by first examining options that avoid impacts to wetland resource areas, their associated buffer zones, riverfront protection areas and 100-year flood plain areas. Where it has been demonstrated that impacts are unavoidable, the DEIR should illustrate that the impacts have been minimized, and that the project will be accomplished in a manner that is consistent with the Performance Standards of the Wetlands Regulations (310 CMR 10.00).

The DEIR should address the significance of the wetland resources on site, including public and private water supply; riverfront areas; flood control; storm damage prevention; fisheries; shellfish; and wildlife habitat. It should identify the location of nearby public water supplies and wells.

All resource area boundaries, riverfront areas, applicable buffer zones, and 100-year flood elevations should be clearly delineated on a plan. Bordering vegetated wetlands that have been delineated in the field should be surveyed, mapped, and located on the plans. Each wetland resource area and riverfront area should be characterized according to 310 CMR 10.00. The text should explain whether the local conservation commission has accepted the resource area boundaries, and any disputed boundary should be identified.

Proposed activities, including construction mitigation, erosion and sedimentation control, phased construction, and drainage discharges or overland flow into wetland areas, should be evaluated. The locations of detention/infiltration basins and their distances from wetland resource areas, and the expected water quality of the effluent from said basins should be identified. This analysis should address current and expected post-construction water quality of the predicted final receiving water bodies. Sufficient mitigation measures should be incorporated to ensure that no downstream impacts would occur.

The drainage analysis should ensure that on- and off-site wetlands are not impacted by changes in stormwater runoff patterns. How will the project proponent maintain the amount of shading along the streambed and water temperatures after removing invasive plant species?

For any amount of required wetlands replication, a detailed wetlands replication plan should be provided in the DEIR that, at a minimum, includes: replication location(s) delineated on plans, elevations, typical cross sections, test pits or soil boring logs, groundwater elevations, the hydrology of areas to be altered and replicated, list of wetlands plant species of areas to be altered and the proposed wetland replication species, planned construction sequence, and a discussion of the required performance standards and monitoring.

Drainage:

The DEIR should evaluate potential drainage impacts on water resources from the dewatering of the dredged material. It should present drainage calculations and plans for the management of runoff from the dredged material. The DEIR should include a detailed description of the proposed drainage system design for the dewatering area, including a discussion of the alternatives considered along with their impacts. It should identify the quantity and quality of flows. The DEIR should identify the increased water storage volume that will result from the dredging/excavation of the boat basin.

The DEIR should address the performance standards of DEP's Stormwater Management Policy. It should demonstrate that the dewatering area is consistent with this policy. The proponent should use the DEP Stormwater Management Handbook when addressing this issue.

The DEIR should discuss consistency of the project with the provisions of the National Pollutant Discharge Elimination System (NPDES) General Permit from the U.S. Environmental Protection Agency for stormwater discharges from construction sites. The DEIR should include discussion of best management practices employed to meet the NPDES requirements, and should include a draft Pollution Prevention Plan.

Hazardous Wastes:

The DEIR should present a summary of the results of any hazardous waste studies and remediation for the dredged material to be removed from the site by the proponent.

Rare Species:

The DEIR should provide a summary of the project site's habitat assessment. It should identify if the project will impact the state-listed American waterwort, which has been identified in the stream channel of the Saugus River. The proponent has stated that it will maintain streambed levels, and it will monitor streambed levels. The DEIR should document the streambed and its proposed monitoring program. What kind of impacts occur if streambed levels cannot be maintained? The DEIR should describe any habitat enhancements.

Historical/Archaeological Issues:

The proponent should consult with the Massachusetts Historical Commission (MHC), the Massachusetts Board of Underwater Archaeological Resources, and the local Historic Preservation Commission as it proceeds with the project planning.

Construction Issues:

The DEIR should include a construction management plan that describes the project, phasing, erosion and sedimentation controls, monitoring, and contingencies.

Mitigation:

The DEIR should include a separate chapter on mitigation measures. The proponent should consider participating in proposals by the Town of Saugus to remove the existing weir structure that is located downstream of the project site within the Saugus River. This weir structure reduces the natural tidal flow from reaching the project site.

The DEIR should outline the proponent's wetland replication areas as part of its mitigation package.

This chapter on mitigation should include a proposed Section 61 Finding for all state permits. The proposed Section 61 Finding should contain a clear commitment to mitigation, an estimate of the individual costs of the proposed mitigation and the identification of the parties responsible for implementing the mitigation. A schedule for the implementation of mitigation should also be included.

Response to Comments:

The DEIR should respond to the comments received to the extent that the comments are within the subject matter of this scope. Each comment letter should be reprinted in the DEIR. I defer to the proponent as it develops the format for this

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section, but the Response to Comments section should provide clear answers to the questions raised.

Circulation:

The DEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should also be sent to the list of "comments received" below and to Saugus officials. A copy of the DEIR should be made available for public review at the Saugus Public Library.

July 29, 2005

DATE


Stephen R. Pritchard

Cc: Nancy Baker, DEP/NERO

Comments received:

NPS, 7/5/05

CH2M, 7/6/05

CH2M, 7/11/05

NPS, 7/12/05

MA Board of Underwater Archaeological Resources, 7/19/05

MCZM, 7/22/05

DEP/NERO, 7/22/05

Saugus River Watershed Council, 7/22/05

e13563

SRP/WTG/wtg



Saugus River Watershed Council

22 July 2005

Secretary Stephen Pritchard
Executive Office of Environmental Affairs
Attention: MEPA Office
Analyst Bill Gage, EOEA #: 13563
100 Cambridge Street, Suite 900
Boston, MA 02114



Re: Restore Saugus Iron Works Turning Basin and Dock

Dear Secretary Pritchard:

The Saugus River Watershed Council (SRWC) is a non-profit organization founded in 1991 to protect and restore the natural resources of the Saugus River watershed. We have reviewed the Environmental Notification Form submitted by the Saugus Iron Works National Historic Site to Restore the Saugus Iron Works Turning Basin and Dock. We respectfully submit the following comments for your consideration.

The proposed project is located within and immediately adjacent to the Saugus River. Implementation of this project will have a significant impact on the Saugus River, adjacent wetlands, wildlife and natural resources of the river. SRWC staff and board members have met with the project proponents to review site plans and provided input and suggestions during the preliminary planning phases of the project.

The Saugus River Watershed Council supports the project proponents "preferred alternative" which would restore the turning basin located within the Saugus River and restore waterfront structures to their condition prior to the 1957 dam breach. We also support the proposed restoration of the "southern area" of the site located in the Saugus River downstream of the turning basin. Because of its scope and significant alteration of wetlands, preparation of an Environmental Impact Report is required for this project. Filing a single EIR could be sufficient if all necessary environmental issues are fully addressed (including those outlined below).

Hazardous Materials

Portions of the project area are currently regulated under Chapter 21E due to hazardous materials on the site. The slag pile on the site, which was created as a byproduct of iron production, contains arsenic. Although sediment sampling indicates that the contaminants in the slag pile are generally "contained", we

believe that comprehensive sediment and water quality monitoring must be conducted during excavation work to ensure that arsenic levels are not reintroduced to the environment from the slag pile. The EIR should include contingency plans for containing hazardous materials in the event that they are exposed during excavation or other project work.

In addition, ongoing monitoring should continue throughout the excavation work to adequately characterize sediments removed from the project site. Containment barriers such as silt curtains should be utilized to help reduce downstream turbidity levels and keep potentially contaminated sediments from migrating downstream.

The EIR should include detailed plans for characterizing sediments, ensuring that hazardous materials are fully contained, and monitoring water quality during the project period.

Protection of Fisheries

This spring, the Saugus River Watershed Council worked in partnership with the Massachusetts Division of Marine Fisheries and the Saugus Iron Works to conduct a fish monitoring project along the Saugus River. The underlying goal of the project was to begin identifying the presence and size of Rainbow Smelt and American Eel populations in the Saugus River. The fyke net and eel trap used for monitoring were both located on portions of the Saugus River within the property of the Saugus Iron Works National Historic Site. Results from the first year of the project indicate that there is a small smelt fishery in the Saugus River. The study also indicated that species diversity was greater than expected -- other species identified included river herring, yellow perch, American Eel, mummichog, white sucker, and white perch. During field work, smelt spawning habitat was identified along the bottom of the Saugus River within the proposed project area.

Efforts to address the following issues associated with smelt spawning habitat should be outlined in the Environmental Impact Report for the project. Work to restore the Saugus Iron Works Turning Basin and Dock must be carefully coordinated so that it does not interfere with fish spawning and migration periods (for smelt and other anadromous species such as river herring) in the Saugus River. In addition, special efforts should be made to protect gravel-bottom smelt spawning habitat from becoming silted over during the excavation portions of the project. Potential smelt spawning areas should be thoroughly mapped prior to excavation work. Following project implementation, the condition of smelt spawning areas should be assessed to ensure that no negative changes have occurred. In addition, improvements to create new or expand existing smelt spawning habitat should be considered as potential mitigation measures for the project.

Wetlands Restoration

The proposed project would alter 3.58 acres of wetlands and remove and dispose of approximately 9,620 cubic yards of sediment. The Saugus River Watershed Council supports the project goals of restoring the turning basin to its historic size by lowering the river bottom in certain areas through excavation, and

transforming wetlands by removing invasive species, and constructing fringing marshes along the Saugus River.

The wetlands restoration proposed in this project can be considered a model because of its size and type. All of the wetlands areas proposed for restoration are located in brackish portions of the Saugus River. If successful, transforming the wetland areas from their current state (primarily invasive species) to more valuable native species, will significantly improve the area's ability to provide habitat for a broader diversity of birds and other wildlife. In order to ensure the long-term success of this project, we recommend that the project proponent include a long-term wetlands monitoring and maintenance plan in the EIR. The plan should include a timeline for long-term monitoring and outline measures to be implemented to ensure that the wetlands become well established and that invasive species do not take over again in the future.

Water Quality

A USGS sampling gage is located in the main stem of the Saugus River immediately upstream of the Saugus Iron Works. The gage provides a wide range of real-time water quality information including temperature, flow, and conductivity. In addition, the Saugus River Watershed Council conducts monthly water quality sampling nearby to evaluate bacteria, pH, turbidity, temperature and dissolved oxygen.

The EIR should include a plan for downstream water quality monitoring to be conducted as part of the turning basin and dock restoration project. This monitoring should focus on turbidity and potential contaminants that could be released into the water column during the excavation portions of the project. Results from the water quality sampling should be linked to potential actions in the Contingency Plan in case a problem is identified.

Historical Significance

The Saugus Iron Works is a National Historic Landmark which is open to the public. Implementation of the proposed project will significantly enhance the historic quality and accuracy of the site. Upon project completion, the estimated 16,000 visitors to the site each year will be better educated about the historic relationship between the Saugus River and the Saugus Iron Works. Under existing conditions, members of the public cannot access the dock and have no view of the Saugus River turning basin because it has been silted in since the historic dam breach upstream.

Public Access

Implementation of this project will result in expanded public access to both the historical and natural resources of the Saugus River. The navigable (via canoe or kayak) portion of the main stem of the Saugus River ends at the Saugus Iron Works site, i.e. the conditions of the river upstream of the Iron Works are too rocky, vegetated, or shallow for adequate river boating. Given the site's importance to public access to the Saugus River, we recommend that a more formal area where canoes can be pulled out of the river or launched be incorporated into the overall project design. This would enable boaters to more

easily access the educational features of the site as well as public restrooms. The best location for canoe access is most likely between the Saugus Iron Works Bridge and the portions of the site referred to as the "Southern area".

During implementation of the project, we encourage the project proponent to provide as much public access as possible. Interpretive signage and look-out points can be used strategically to educate the public about the restoration efforts taking place on the site.

Public notification should be provided via local newspapers and cable television stations to provide information about the timing of any work activities that could have an impact on the Saugus River and abutting neighborhoods.

Traffic

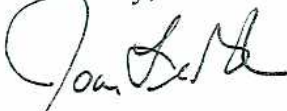
Although the completed project will not generate any significant new traffic at the site, the EIR should include plans for construction related traffic to minimize impact to neighbors. The Saugus Iron Works site is located within a primarily residential area. The EIR should provide detail about entrance and egress points and travel routes for construction vehicles, particularly related to transport of potentially contaminated sediments from the site.

Public Outreach

The Saugus River Watershed Council would like to express our appreciation for the significant level of outreach conducted by the Saugus Iron Works prior to environmental permitting. Staff from the Iron Works have met with the local Conservation Commission, held public open houses regarding the project, and attended public meetings hosted by several community organizations including the Saugus River Watershed Council.

Please contact me at 781-233-5046 if you have any questions about the Saugus River Watershed Council or our comments regarding this project. Thank you in advance for your consideration.

Sincerely,



Joan LeBlanc
Executive Director

cc: Brad Chase, Division of Marine Fisheries
Kathryn Glenn, CZM
Frank McKinnon, Saugus Conservation Commission
Daniel Noon, Saugus Iron Works

Gage, Bill (ENV)

From: Jodie_Petersen@nps.gov
Sent: Tuesday, July 05, 2005 1:22 PM
To: Gage, Bill (ENV)
Cc: Jim_Shea@nps.gov; Daniel_Noon@nps.gov; Carl_Salmons-Perez@nps.gov; Janet_Regan@nps.gov; Curtis_White@nps.gov; Tim_Thornhill@nps.gov; David_Uschold@nps.gov; jburgess@ch2m.com; Charles_Roman@nps.gov
Subject: EOE #13563 - Restoration of the Saugus Iron Works Turning Basin and Dock, Saugus, MA - July 11, 2005 at 10:00 am EST
Importance: High

William:

We are looking forward to the consultation session with you and the other agency stakeholders. The meeting is set for July 11, 2005 and we will all meet at Saugus Iron Works National Historic Site for a site visit and then go to the Saugus Public Library for our meeting. We will be meeting at the library to accommodate all reviewers.

Please forward this information onto all parties listed in your email:

Lynch, Ben (DEP); Baker, Nancy (DEP); Strycky, Alexander (ENV); Backman, Andy (DCR); Raphael, Connie (MHD); Simon, Brona @ SEC; Regosin, Jonathan (FWE); Lucien, Lionel (MHD); Malkoski, Vincent (FWE); mpillsbury@mapc.org; Burgess, John/BOS; alan.anachecka-nasemann@usace.army.mil; reiner.ed@epa.gov; Eric.Hutchins@noaa.gov; Christopher.Boelke@noaa.gov; mconnoll@mwra.state.ma.us; abrennan@mbta.com

Project Information:

#13563 - Restoration of the Saugus Iron Works Turning Basin and Dock

- Saugus

July 11, 2005, Monday @10:00 am
Saugus Iron Works
244 Central Street
Saugus

Please feel free to contact me if you have any questions.

Respectfully,
Jodie

Jodie Petersen
Project Manager
National Park Service - Denver Service Center
12795 West Alameda Parkway
Lakewood, CO 80228

Phone: 303-969-2393
Fax: 303-969-2238



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

251 Causeway Street, Suite 900

Boston, Massachusetts 02114-2119

BOARD OF
UNDERWATER
ARCHAEOLOGICAL
RESOURCES

July 19, 2005

Tel. (617) 626-1000

Fax (617) 626-1181

<http://www.magnet.state.ma.us/envir>

RECEIVED

JUL 20 2005

MEPA

Stephen Pritchard, Secretary
Executive Office of Environmental Affairs
Attention: William Gage, MEPA Unit
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Restoration of Saugus Iron Works Turning Basin and Dock, EOEA #13563

Dear Secretary Pritchard:

The staff of the Massachusetts Board of Underwater Archaeological Resources (BUAR) has completed its review of the proposed restoration of the turning basin and dock at the Saugus Iron Works National Historical Site as described in the project's Environmental Notification Form.

Although somewhat limited, documentation provided by the project proponent indicates that the proposed project area has been significantly disturbed over the past fifty plus years. In particular, disturbance occurred during site development/historic restoration and by an upstream dam breach (1957) and the resultant deposition of sediment and establishment of invasive vegetation. Based on this level of disturbance, the fact that proposed dredging is not expected to impact the pre-1957 stratigraphic level and the proponent's plan to provide archaeological monitoring of dredging activity, the BUAR sees no need to permit this project.

However, in consideration of the significance of the proposed project area, both in terms of its early 17th century historical use and its potential for containing prehistoric sites (as a riparian setting), the BUAR asks that it be consulted should archaeological resources be encountered during the course of work and/or changes are made to the proposed project's scope of work.

The BUAR appreciates the opportunity to provide these comments. Should you have any questions regarding this letter, please do hesitate to contact me by telephone at (617) 626-1141 or by email at Victor.Mastone@state.ma.us.

Sincerely,

Victor T. Mastone
Director

Cc: Brona Simon, MHC
Katherine Glenn, MCZM





BG

MEMORANDUM

LATE COMMENT RECEIVED
JUL 27 2005
MEPA

TO: Stephen Pritchard, Secretary, EOE
ATTN: William Gage, MEPA Unit
FROM: Susan Snow-Cotter, Director, CZM
DATE: July 22, 2005
RE: EOE 13562 - Restoration of Saugus Iron Works Turning Basin and Dock

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Environmental Notification Form (ENF), noticed in the Environmental Monitor dated June 22, 2005. Because the project includes the alteration of 3.58 acres of bordering vegetated wetlands, the proponents are categorically required to submit an Environmental Impact Report (EIR). The comments below describe issues that CZM requests be addressed within that document.

Project Description

The project proponent, the National Park Service, proposes to restore the Saugus River turning basin and waterfront structures (dock and bulkhead), and provide open watersheet to a portion of the Saugus River, at the Saugus Iron Works National Historic Site. The goal of the project is to enhance the historical accuracy of the site by recreating its 17th century appearance. The ENF states that to achieve this, 155,945 square feet of existing bordering vegetated wetland (BVW) dominated by *Phragmites australis* and other non-native species will be removed. The entire Northern Area and a portion of the Southern Area of BVW will be converted to tidal flat; the remainder of the BVW will be restored as fringing marsh using native, non-invasive species. According to the ENF, the *Phragmites* marsh became established after a dam breach upstream of the site in 1957 released a large quantity of sediment into this portion of the river.

Comments

While primarily a historical restoration project, CZM recognizes the potential for this project to enhance the ecological functions of this portion of the Saugus River by removing a *Phragmites*-dominated marsh and replacing it with native habitat types. The EIR should more thoroughly document the existing wetlands function of the existing BVW area to inform the design of the restoration project. This is particularly important because the project proposes to replace the *Phragmites* BVW with other wetland types, including fringing marsh and tidal flats, making it more difficult to evaluate the benefits of the restoration plan.



Specifically, CZM requests that the proponent provide the following information in the DEIR:

- A plan showing the delineation of each existing Wetlands Resource Area as defined in the Wetlands Protection Act regulations (310 CMR 10.00);
- A plan showing the extent and type of each proposed Wetlands Resource Area
- A comparison of the area of each Resource Area to be lost and created;
- An analysis of the functions of each of the Resource Areas before and after the restoration project, including habitat, retention of flood waters, and pollution prevention;
- Proposed mitigation for those functions that may be lost as a result of changing the Resource Area type;
- A narrative detailing each construction phase of the project and proposed construction mitigation measures;
- Greater detail concerning the proposed restoration process, including proposed species, planting schedule, and monitoring plan;
- An invasive species monitoring and contingency plan for the restored areas;
- Measures to be undertaken to protect or enhance fisheries habitat, including rainbow smelt spawning habitat;
- Analysis of potential impacts to the Rumney Marsh ACEC downstream of the site due to changes in habitat, flood control, and pollution prevention functions at the project site.

The information above will allow CZM and others to make more specific recommendations to the proponent with respect to the design and maintenance of the restored wetlands areas. In addition, this information is likely to be necessary during the permitting of this project under the Wetlands Protection Act, whether through the limited project provisions of 310 CMR 10.53(4) or through the variance process if necessary.

The proposed project may be subject to CZM federal consistency review, and therefore must be found to be consistent with CZM's enforceable program policies. For further information on this process, please contact Alex Strycky, Project Review Coordinator, at 617-626-1219 or visit the CZM web site at www.state.ma.us/czm/fcr.htm.

SSC/kg

cc: Kathryn Glenn,
CZM North Shore Regional Coordinator
Richard Tomczyk, Acting Section Chief
Northeast Regional Office, MA DEP
Ben Lynch, Acting Section Chief
Waterways Program, MA DEP
Crystal Gardner, Chief,
Regulatory Branch, NED, US Army Corps of Engineers
Saugus Conservation Commission
Daniel Noon, National Park Service
174 Derby St, Salem, MA 01970-5136



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

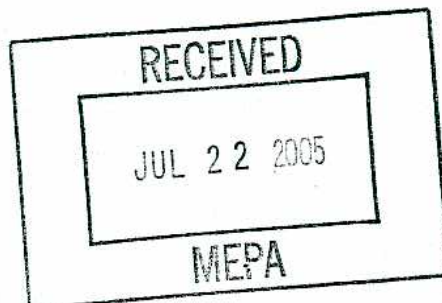
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

MITT ROMNEY
Governor

KERRY HEALEY
Lieutenant Governor

STEPHEN R. PRITCHARD
Secretary

ROBERT W. GOLLEDGE, Jr.
Commissioner



July 22, 2005

Stephen R. Pritchard, Secretary
Executive Office of
Environmental Affairs
100 Cambridge Street
Boston MA, 02114

RE: Saugus
Restore Saugus Iron Works
Turning Basin and Dock
244 Central Street
EOEA # 13563

Attn: MEPA Unit

Dear Secretary Pritchard:

The Department of Environmental Protection has reviewed the Expanded Environmental Notification Form (EENF) submitted by the National Park Service to restore the Saugus River turning basin and waterfront dock and timber bulkhead to the conditions observed prior to the dam breach in 1957 in Saugus (EOEA# 13563). The turning basin restoration north of the Saugus River will result in conversion of about 1.12 acres of bordering vegetated wetland into mudflat/open water. There also are plans for removal of about 2.46 acres of wetlands in an area south of the Saugus River. The project is categorically required to prepare an Environmental Impact Report (EIR). The Department provides the following comments for consideration in the EIR.

Wetlands

The EENF has estimated that the project would impact approximately 78,418 square feet of bordering vegetated wetlands, and 76,607 square feet of bank, land subject to coastal storm flowage, bordering land subject to flooding, and riverfront area. Generally, the EIR will need to demonstrate that the project can either conform to the standards for a limited project, including the requirements for at least 1:1 mitigation, and/or present information to demonstrate the project would meet the tests for a variance from the wetlands regulations.

For each of the alternatives under consideration, 1) identify, quantify, and show on area plans each of the wetland resource areas that would be impacted by the project; 2) evaluate the functions provided by those resource areas; and 3) discuss how the project could be designed to meet the performance standards of the wetlands regulations. The EIR also should explain how the project will restore wetland functions, including water quality improvement, flood storage and flooding protection, and wildlife habitat. The proposed contours and final slopes proposed on the site should be shown on plans at a reasonable scale.

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD Service - 1-800-298-2207.

DEP on the World Wide Web: <http://www.mass.gov/dep>

Printed on Recycled Paper

401 Water Quality Certification

The project requires a 401 Water Quality Certificate from the Department, pursuant to 314 CMR 9.06(1), for alteration of more than 5,000 square feet (sf) of bordering vegetated wetland. An alternatives analysis is required as part of the 401 water quality certification process, and information in the ENF on alternatives will be considered by DEP in permitting. Practicable alternatives that are applicable to 401 permitting are those that can be done after taking into consideration costs, existing technology, and logistics in light of overall project purposes. Consistent with the MEPA requirements, minimization and mitigation of unavoidable impacts are required for the selected alternative under the 401 Water Quality Certification.

The preferred alternative proposes no net loss of wetlands. However, bordering vegetated wetland (bvww) would be excavated to create mudflat, so there would not be at least a 1:1 replication of bvww. If the project cannot be designed in conformance with the mitigation requirements in the 314 CMR 9.06(2), the EIR should address the criteria established for a variance from the 401 WQC regulations in 314 9.08 to show that: 1) All reasonable measures have been proposed to avoid, minimize, and mitigate adverse effects on the environment; and that 2) the variance is justified by an overriding public interest or necessary to avoid a certification that so restricts the use of property that it constitutes an unconstitutional taking without compensation.

The Department of Environmental Protection appreciates the opportunity to comment on this proposed project. If you have any general questions regarding these comments, please contact Nancy Baker, MEPA Review Coordinator at (617) 654-6524.

Sincerely,



John D. Viola
Deputy Regional Commissioner

cc: Brana Simon, Massachusetts Historical Commission
John Felix, Mike Stroman, Lisa Rhodes, Yvonne Unger, DEP-Boston
Rich Tomczyk, Phil DiPietro, DEP-NERO
Kathryn Glenn, MCZM
Stephanie Cunningham, Brad Chase, DMFS

Appendix B

Agency Review Letters



United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087



October 7, 2004

Reference:	<u>Project</u>	<u>Location</u>
	Turning basin, dock restoration	Saugus, MA

Cristina Aspuru
CH2M HILL
25 New Chardon St., Suite 300
Boston, MA 02114-4770

Dear Ms. Aspuru:

This responds to your recent correspondence requesting information on the presence of federally-listed and/or proposed endangered or threatened species in relation to the proposed activity(ies) referenced above.

Based on information currently available to us, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes our review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your coordination. Please contact us at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Michael J. Amaral
Endangered Species Specialist
New England Field Office

RECEIVED
SEP 21 2004



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

SEP 15 2004

Cristina Aspuru
CH2M HILL
25 New Chardon Street
Suite 300
Boston, MA 02114-4774

Dear Ms. Aspuru,

This is in response to your letter dated September 3, 2004 requesting information on the presence of any federally threatened or endangered species in the vicinity of the Saugus Iron Works National Historic Site in Saugus, Massachusetts. CH2M HILL is conducting a restoration of the Saugus River turning basin and dock at the Historic Site.

No threatened or endangered species under the jurisdiction of the National Marine Fisheries Service (NOAA Fisheries) are known to exist in the Saugus area. Therefore, no consultation pursuant to Section 7 of the Endangered Species Act of 1973, as amended, is required. Should project plans change or new information become available that changes the basis for this determination, then consultation should be initiated. If you have any questions about these comments, please contact Julie Crocker at (978)281-9328 ext. 6530.

Sincerely,

Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

File Code: Sec 7 (ACOE) NSP - Mass.





The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

March 2, 2004

Stephen Kesselman
Superintendent
National Park Service
Saugus Iron Works National Historic Site
244 Central Street
Saugus, MA 01906

RE: Turning Basin and Wetland Restoration, Saugus Iron Works, Saugus, MA; MHC #8246

Dear Mr. Kesselman:

Staff of the Massachusetts Historical Commission have reviewed information regarding the proposed project referenced above, submitted to MHC by the Saugus Iron Works National Historic Site and received at this office February 10, 2004.

MHC understands that the proposed project involves the removal of sediments and vegetation in the turning basin in order to remediate the effects of recent sediment deposition in the turning basin. This will restore the turning basin and its surrounding wetlands to its approximate condition upon the restoration of the Saugus Ironworks in the mid 1950s.

Upon review of the proposed restoration project, MHC finds that the turning basin and wetland restoration will have "no adverse effect" (36 CFR 800.5b) on the significant historic and archaeological characteristics of the Saugus Iron Works National Historic Site.

These comments are offered in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800) and Massachusetts General Laws, Chapter 9, Sections 26-27C (950 CMR 71). If you have any questions concerning this review, please feel free to contact Eric Johnson or Ann Lattinville at this office.

Sincerely,

A handwritten signature in cursive script that reads "Brona Simon".

Brona Simon
State Archaeologist
Deputy State Historic Preservation Officer
Massachusetts Historical Commission

xc: Carl Salmons-Perez, NPS, Saugus Iron Works
Saugus Historical Commission



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

February 2, 2006

Patricia S. Trap

Superintendent

NPS Saugus Ironworks NHS

244 Central St

Saugus, MA 01906

RE: Saugus Ironworks National Historic Site, Turning Basin Dredging, Wetlands Restoration, Stonewall Repairs, Replacement of Bulkhead and Dock, and Related Construction, Saugus, MA. MHC #RC.8246. COE #NAE-2004-533 and NAE-2004-3175. EOE #13563. DEP #W05-1468.

Dear Ms. Trap:

Staff of the Massachusetts Historical Commission have reviewed a Notice of License Application from the Massachusetts Department of Environmental Protection for the project referenced above, received on January 20, 2006, and MHC's files. The information submitted includes 60% construction document drawings (September 2005) for the turning basin and dock aspects, and plans dated November 2005 for the stonewall repair. Saugus Ironworks National Historic Site is listed in the State and National Registers of Historic Places, and is a National Historic Landmark.

The National Park Service has consulted with the MHC since the initial stages of the planning process for this important rehabilitation project. Review of MHC's files indicates that the project has undergone environmental review by several local, state, and federal agencies. The NPS has taken steps to identify and protect known significant historic and archaeological features from inadvertent, project-related impacts, and is continuing to consult with the MHC and other agencies to avoid, minimize, and mitigate any project-related effects on the significant historical and archaeological qualities and characteristics of the property.

The project consists of the dredging and disposal of contaminated sediments and invasive plant species; demolition and in-kind reconstruction of the deteriorated dock and bulkhead structures; restoration of the wetland with suitable plant species; and related construction. The related construction includes rehabilitation of a fieldstone retaining wall/stone bulkhead on the eastern bank of the Saugus River, using a sheetpile (involving a sheetpile and a geotextile-lined trench with a PVC drainage pipe and crushed stone fill); construction of a gravel and cobble berm within the northern area turning basin (between the basin and the Saugus River); and continued planning for the possible future removal of a rock weir under Hamilton Street Bridge. The project will involve temporary impacts, including the placement of safety fencing, the creation of staging and work areas, and the construction of vehicle access points and ways. These temporary impact areas have been located and designed to minimize impacts to the historical property.

MHC previously determined on March 2, 2004, that the dredging and wetlands restoration aspects of the project would have "no adverse effect" (36 CFR 800.5(b); 950 CMR 71.07(2)(b)(2)) on the significant historic and archaeological characteristics of the property. The Massachusetts Board of Underwater

220 Morrissey Boulevard, Boston, Massachusetts 02125

(617) 727-8470 • Fax: (617) 727-5128

www.sec.state.ma.us/mhc

Archaeological Resources (8/8/2005) provided advisory comments to the US Army Corps of Engineers that the project appeared unlikely to affect any underwater archaeological resources, and the BUAR requested further consultation should any unexpected archaeological resources be encountered during implementation of the project, or if the project should change.

Regarding the fieldstone retaining wall restoration aspect of the project, the present design was revised from a previous proposal that involved a much greater impact area. Consequently, the present design has a reduced potential to affect significant archaeological resources. The US Army Corps of Engineers on June 29, 2004, believed that the present design merited a finding of "no adverse effect." However, MHC (5/17/2004) requested that NPS archaeologists evaluate the archaeological sensitivity of the impact area for the present design of the retaining wall, and provide the information for MHC review and comment. NPS concurred with MHC's recommendations, and the MHC understands that the archaeological evaluation for this aspect of the project has been completed, and is to be reported in a comprehensive "Section 106" finding for the undertaking to be submitted by the NPS to the MHC for review and concurrence. The comprehensive finding is anticipated to take into account the most current plans, including the temporary impact areas.

Thank you for your continued cooperation and consultation. These comments are offered to assist in compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966 as amended (36 CFR 800), and MGL c. 9, ss. 26-27C (950 CMR 71). Please contact Edward L. Bell if you have any questions or need further information.

Sincerely,
Brona Simon

Brona Simon
State Archaeologist
Deputy State Historic Preservation Officer
Acting Executive Director
Massachusetts Historical Commission

cc:
Steve Pendery, NPS
Kate Atwood, USACOE-NED
Secretary Stephen R. Pritchard, EOE MEPA Unit
Ben Lynch, DEP-NEO-Wetlands Regulations Program
Victor T. Mastone, BUAR
Cristina Aspuru, CH2M HILL
Saugus Historical Commission

RECEIVED

OCT 15 2004



MassWildlife

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

October 8, 2004

Cristina Aspuru
CH2M HILL
25 New Chardon Street, Suite 300
Boston, MA 02114-4770

Re: Saugus Iron Works National Historical Site
Saugus, MA
NHESP File: 04-16610

Dear Ms. Aspuru:

Thank you for contacting the Natural Heritage and Endangered Species Program ("NHESP") of the MA Division of Fisheries & Wildlife for information regarding state-protected rare species in the vicinity of the above referenced site. At this time we are not aware of any rare plants or animals in the vicinity of the proposed project site.

This evaluation is based on the most recent information available in the NHESP database, which is constantly being expanded and updated through ongoing research and inventory. Should your site plans change, or new rare species information become available, this evaluation may be reconsidered.

If you have any questions regarding this review, please call Joanne Theriault, Conservation Assistant, at ext. 310.

Sincerely,

Thomas W. French, Ph.D.
Assistant Director

www.masswildlife.org

Division of Fisheries and Wildlife

Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275

An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

Burgess, John/BOS

Subject: FW: No Elatine at Saugus Iron Works

----- Forwarded by Marc Albert/SAIR/NPS on 10/05/2006 09:31 AM -----

-----Original Message-----

From: Cullina, Melissa (FWE)
Sent: Wednesday, October 04, 2006 5:27 PM
To: 'Marc_Alpert@nps.gov'
Subject: Elatine at Saugus Iron Works

Dear Marc,

I wanted to get back in touch with you about the putative "Elatine america" problem. I have given it a lot of thought and consideration over the last year, and have studied my own material, that in herbaria, and my photographs as well. I've consulted other experts, and I've also spent additional time studying plants of tidal river flats this field season. I believe that the plants that Ryan Tanish originally observed in 2004, and those that I collected and photographed in 2005, are actually a species of Callitriche, not Elatine. I'm sorry it has taken so long to bring closure to this issue, but it was a difficult specimen (tiny and vegetative!) and I wanted to give it careful consideration.

We certainly very much appreciate the reporting of any suspected rare species, and are always more than happy to review such reports.

With best wishes,

Melissa Dow Cullina
Botanist
Natural Heritage & Endangered Species Program

Appendix C

Marsh Characterization Report

Final Report

Restore Saugus River Turning Basin and Dock – Marsh Characterization

Saugus Iron Works National Historic Site
Saugus, Massachusetts

NPS Contract No. 1443CX2000 00 1500
Task Order No. T2000 00 1504
Document Number: 444/D33
PMIS 60214



August 2004

Prepared by



Executive Summary

The objectives of the marsh characterization study (CH2M HILL 2004a) were to understand the nature and extent of contaminated sediments within the project area and to characterize the likely depth below ground surface (bgs) of the pre-1957 sediments.

Evaluation of Sediment Contamination

To characterize the nature and extent of contamination in the marsh, sediment samples were collected and analyzed for priority pollutant metals (PPM), polycyclic aromatic hydrocarbons (PAHs) and total organic carbon (TOC). Historical studies revealed PPM, PAH contamination in the marsh sediments. PPMs are a group of 13 metals identified by the United States Environmental Protection Agency (USEPA), including antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc. PAHs are chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, and other organic substances. Many PAHs are probable carcinogens and are therefore potentially hazardous to humans and wildlife.

A total of 17 shallow sediment cores (up to 5 ft.) and three deep sediment cores (up to 16 ft.) were collected in the wetland sediment and former tidal basin to characterize the marsh sediments (Figure 4). From the 17 shallow core locations, 47 depth/horizon intervals were sampled and analyzed for PPM, PAHs, and TOC. From the three deep core locations, 11 depth intervals were sampled and analyzed for PPM and PAHs and TOC was analyzed at every 1-ft interval.

Most of the samples contained detectable concentrations of PPMs. The most frequently detected metals were arsenic, chromium, lead, nickel, and zinc. The concentrations of most of the detected metals were generally higher in the upper, organically rich sediment layers. PAHs were detected less frequently than were metals. The detected PPM and PAH concentrations were initially compared with Massachusetts Contingency Plan (MDEP, 1999) Reportable Concentrations for Soil Category 1 (MCP RCS-1). Six of the 20 sampling locations contained concentrations of PPMs or PAHs greater than the MCP RCS-1 values (Figure 5). Five of the six locations were close to the river channel. This pattern of contamination would seem to be consistent with contaminant migration and deposition from an upstream release of PAHs.

After the Marsh Characterization Report was submitted, an in-depth review of the environmental setting and conditions in which the marsh sediments were deposited (e.g., a tidal setting and deposition relating to a dam breach) led to discussion with Massachusetts Department of Environmental Protection (DEP). Consequently, it was determined the MCP 120-day reporting criteria for exceeding RCS-1 criteria do not apply to the marsh sediments.

Evaluation of Depth of pre-1957 and post-1957 Sediments

Visual observations of the sediment characteristics were used in conjunction with TOC content of the depth intervals to discern the likely depth of the pre-1957 and post-1957 interface. In the recovered sediment cores, the uppermost layer generally consisted of vegetative and peat materials with depths ranging from approximately 0.5 to 2.5 ft. The thickest organic/peat layer was generally found in the cores located away from the river, closer to the uplands. In the northern area, very low TOC concentrations in a coarse sand layer noted in the cores with good recoveries suggest that pre-1957 sediments are likely found at a depth greater than 3.5 ft bgs in the northern wetland area. In the southern area, although the interface between the pre-1957 and post-1957 sediments also could not be definitively identified, the evidence suggested that the pre-1957 sediments are likely at a depth greater than 2 ft bgs over the majority of the southern wetland area.

Note: the full Marsh Characterization Report is available on the enclosed CD

Appendix D

Surface Water Pollution Prevention Plan

Final

Storm Water Pollution Prevention Plan

National Pollution Discharge Elimination System

National Park Service

Saugus Iron Works National Historic Site

Saugus, Massachusetts

NPS Contract No. 1443CX2000 00 1500

Task Order No. T2000 00 1511

PMIS 60214

September 2005

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APPENDIX A: AGENCY CORRESPONDANCE

APPENDIX B: 30% DESIGN DRAWINGS

APPENDIX C: NOI SUBMITTAL CONFIRMATION AND DOCUMENTATION

Introduction

In 1972, Congress passed the Federal Water Pollution Control Act (FWPCA), also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waterways. The ultimate goal was to make sure that rivers and streams were fishable, swimmable, and drinkable. In 1987, the Water Quality Act (WQA) added provisions to the CWA that allowed the U.S. Environmental Protection Agency (EPA) to govern storm water discharges from construction sites. In 1998, EPA published the final notice for General Permits for Storm Water Discharges from Construction Activities Disturbing 5 Acres or Greater (63 Federal Register 7898, February 14, 1998). These activities are administered under the National Pollution Discharge Elimination System (NPDES). In Massachusetts, NPDES permits are jointly issued by EPA New England and the [Massachusetts Department of Environmental Protection](#) (DEP). The general permit includes provisions for development of a Storm Water Pollution Prevention Plan (SWPPP) to maximize the potential benefits of pollution prevention and sediment and erosion control measures at construction sites. The following SWPPP for the Restoration of the Saugus Iron Works Turning Basin, Dock, and Stone Retaining Wall was completed as part of the Construction General Permit (CGP) package.

Site Description

Saugus Iron Works National Historic Site (NHS) in Saugus, Massachusetts, is the site of the first integrated iron works in North America, which operated from 1646 to 1668. Saugus Iron Works NHS is an 8.51-acre park located about 10 miles north of Boston in Essex County, Massachusetts (Figures 1 and 2). The site, which is administered by the National Park Service (NPS), preserves and interprets the archaeological and historic areas, structures, and objects, and reconstructs the historical setting of the Iron Works. In 1957, a breach of the Pranker's Pond dam on the Saugus River upstream of the Iron Works resulted in extensive sedimentation in the turning basin. Today, nearly 4 acres of the Saugus River within the 8.51 acre NHS are choked with invasive plant species and are impacted by industrial contaminants derived from the urbanized Saugus River watershed, as well as from waste material produced by the historic iron works (i.e., the slag pile).

Proposed Action

The Saugus Iron Works NHS General Management Plan (GMP) (NPS, 2002) recommends restoring the open-water condition of the turning basin to preserve the distinctive character of the historic site and thereby provide a higher quality visitor experience (Figure 3). The goal of the project is to restore the turning basin to a condition with a higher ecological value commensurate with the historically accurate setting. An open-water basin with an emergent wetland also would enhance the habitat for fish, waterfowl, and other birds.

This goal would be achieved through the following project components:

- **Removal of contamination within the wetland sediments.** The removal of contaminated wetland sediments covering 3.58 acres would help to minimize threats to human and ecosystem health and would improve natural habitats.
- **Removal of invasive exotic plant species.** Invasive plant species displace valuable native species and contribute to the narrowing of the river channel, threatening the health of wetland habitats and limiting biodiversity. This displacement also has impacted the site's viewsheds, as character-defining landscape elements are now blocked by stands of *Phragmites australis* (common reed or *Phragmites*) and other exotic invasive species. Control of invasive plant species infesting the marsh area is needed to improve biodiversity, restore habitat, and achieve a more historically accurate, natural wetland vista for visitor enjoyment and understanding.
- **Restoration of an open-water condition by regrading.** The current turning basin area would be restored to the 1954-period open-water and emergent wetland condition by excavating and regrading the marsh sediments (Figure 3). This would be achieved by careful selection of target elevations within the intertidal zone. The appropriate microtopography elevations can also serve to reduce the spread of invasive species, such as *Phragmites*.
- **Construction of emergent brackish wetlands using native vegetation.** Native vegetation would contribute to a more historically appropriate, ecologically diverse, and aesthetically pleasing landscape for visitors, and would also enhance wildlife habitat. An emergent wetland would be created along the river, bordered by non-vegetated mudflats at low tide (Figure 3).
- **Removal and in-kind replacement of the existing bulkhead and dock and restacking of the stone wall.** Replacement of these elements of the historic waterfront area would restore the cultural landscape of the site, improve visitor understanding of the historical context in which these structures were used, and allow visitors better access to the waterfront area. Originally installed by the First Iron Works Association to enunciate the open water condition of the river and slow tidal surge, the stone wall is approximately 65 ft long and up to 9.5 ft high and is in need of maintenance. To improve the wall's current condition, fallen rocks would be restacked and new rocks might be added for greater stability. The existing wood bulkhead is approximately 6.5 ft high and 110 ft long. The existing dock consists of a 36-ft by 12-ft timber plank supported by three 9-in by 7-in oak stringers (girts). Based on evaluation of the structures' existing conditions, it was determined that the entire wooden bulkhead and dock would need to be removed and replaced with new wooden members. Stones beneath the dock would be removed during construction and replaced once the cribbing has been rebuilt. The replacement structures would take into account stability analyses and would be constructed to withstand expected design loads (e.g., personnel and maintenance vehicle loads) as well as applicable code requirements for public walkways. Currently, site visitors are restricted from using the dock because of safety concerns related to its degraded condition.
- The table below gives an overview of the project details including site area, soil disturbing activities and sequence, timing runoff coefficient and name of receiving waters.

TABLE 1
Project Details
Saugus Iron Works NHS

Site Area	The site is 8.51 acres of which 3.58 acres will be disturbed by construction or excavation.
Soil Disturbing Activities and Sequence	<p>Clearing construction areas;</p> <p>Installation of an access barrier (fence), access trail, access ramps and materials dewatering/loading areas, and erosion and sediment barriers along the perimeter of the excavation where it abuts the Saugus River channel and a silt fence along the perimeter of the dewatering/loading areas;</p> <p>Reinforcement of existing bridges to support construction loads;</p> <p>Removal of the existing timber bulkhead and dock superstructure;</p> <p>Grading and excavation of the work areas from the perimeter back towards the loading area;</p> <p>Temporary stockpiling excavated materials in the dewatering/loading area for dewatering and processing sufficient to meet transportation and disposal requirements;</p> <p>Removing access trails, and ultimately the dewatering/loading area, as the excavation progresses to completion;</p> <p>Preparation for final planting and seeding</p>
Work Setting	There is no need for slope stabilization as no activities are planned on steep slopes - all construction confined to flat low lying areas along the river.
Timing	Construction activities are scheduled to begin in June 2006, specific construction, excavation and grading dates to be determined during final design.
Runoff Coefficient	The final coefficient of runoff for the site is estimated to be 0.25
Name of Receiving Waters	The entire site will drain into the Saugus River immediately adjacent to the project activities.

Endangered Species

Letters from the U.S. Fish and Wildlife Service (USFWS, October 7, 2004) and Division of Marine Fisheries (DMF, October 8, 2004) concur that no rare species are known to occur on site (see Appendix). In a June-August 2004 survey of the site, after receipt of the letters, state-listed American waterwort (*Elatine americana*) was found within the Saugus Iron Works NHS stream channel (James-Pirri and Roman, 2004). The NHESP has been notified of the discovery in a letter dated March 25, 2005. The NHESP responded in an email dated October 4, 2006 that the species found at the site was not *Elatine americana*.

Note: the full Surface Water Protection Plan is available on the enclosed CD.

Appendix E

Monitoring Plan

Final

Restore Saugus River Turning Basin and Dock – Monitoring Plan

Saugus Iron Works National Historic Site
Saugus, Massachusetts

NPS Contract No. 1443CX2000 00 1500

Task Order No. T2000 00 1511

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September 2005

Prepared by



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Tables

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Table 1 Monitoring Protocol by Project Objective

Figures

(Figures are located at the end of the document)

Figure 1 Historic Photograph Reference Points

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Appendix B Rainbow Smelt Sampling Protocol
Appendix C Avian Survey Protocol
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Introduction

The success of the resources restored as part of the *Restore Saugus River Turning Basin and Dock* project is contingent upon the monitoring and maintenance of these resources. Although monitoring is not currently funded as part of this project, a comprehensive plan is imperative for ensuring the success of the project. This document outlines the monitoring requirements that will be implemented for three years following the completion of construction in the Turning Basin and Southern Area of the Saugus Iron Works National Historic Site (NHS). The goal of this monitoring plan is not only to provide methods for evaluating the success of the project, but also to serve as a key element in the framework of adaptive management, a system of resource management where management intervention is used as a tool to strategically probe the functioning of an ecosystem.

In adaptive management, interventions and subsequent monitoring efforts are designed to test and evaluate key hypotheses about the functioning of an ecosystem and the uncertainties of management actions. Adaptive management uses management prescriptions as a tool not only to change ecosystems, but as a tool to learn about those systems.

Monitoring is a process by which management actions are evaluated through time, and monitoring protocols are specific plans that dictate what will be evaluated, when it will be evaluated, and how it will be evaluated. Monitoring of the restored project area will be an important component of the overall management plan for the Saugus Iron Works NHS. The monitoring process is designed to be dynamic in that it may evolve and be tailored to changing conditions as needed over the course of the monitoring.

Project Overview

The Saugus Iron Works NHS is the site of the first integrated iron works in North America. The site, in operation from 1646 to 1668, includes the reconstructed blast furnace, forge, rolling mill and a restored seventeenth century house. The site's resources are the best evidence and demonstration of the earliest development of iron manufacturing in colonial America. The technology employed at Saugus was dispersed throughout the colonies and was critical to the development of iron manufacturing in America.

The Saugus River is an integral landscape feature of the historic setting at Saugus Iron Works. Today, about four acres of the river are choked with invasive plants which displace valuable native species, contribute to the narrowing of the river, and threaten the health of the native wetland habitat. The park's view sheds are also damaged as character-defining landscape elements are blocked by stands of *Phragmites australis* (Common reed) and other exotic invasive species. Control of the invasive plants infesting the park's marsh area is an important aspect of restoring the turning basin and park's waterfront resources.

The goals of the turning basin restoration include: removing the sediment within the project area, restoring the open water condition, removing invasive exotic plant species, improving

water quality, removing and replacing the wharf/bulkhead, and making the river a more suitable nursery for aquatic and terrestrial organisms. By employing the monitoring program outlined in this plan, the enhanced ecological value of the native habitats will be measured and documented, which will allow the value and success of this restoration project to be evaluated.

Note: the full Monitoring Plan is available on the enclosed CD.