April 29, 1999

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

PROJECT NAME	:Emerald Necklace Environmental Improvements Master Plan and Phase I Muddy River Flood Control, Water Quality, and Habitat Enhancement
PROJECT MUNICIPALITIES	:Boston and Brookline
PROJECT WATERSHED	:Charles River
EOEA NUMBER	:11865
PROJECT PROPONENT	:Boston Parks and Recreation Department and Brookline Department of Public Works
DATE NOTICED IN MONITOR	:February 10, 1999

Pursuant to the Massachusetts Environmental Policy Act MEPA) (M.G.L. c. 30, ss. 61-61-62H inc Sections 11.05 and 11.36 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project requires the preparation of an Environmental Impact Report (EIR).

Frederick Law Olmsted Sr. created the Boston Park System, known as the Emerald Necklace, to provide a “ground to which people may easily go after their day’s work is done, and where they may stroll for an hour seeing, hearing and feeling nothing of the bustle and jar of the streets.” His seven-mile long park system, designed and constructed between 1878 and 1895, is the first and historically the most significant urban park system in the country, if not the world. Olmsted’s genius was to combine the environmental improvement of the Muddy River, then a foul sewer, with a park system linking residential neighborhoods in Boston and Brookline. This system of linear parks provides a

profound artistic experience and a democratic meeting place for all citizens.

Olmsted's legacy remains a challenge and an inspiration to us today. His creation has been roughly handled over the years. Erosion has clogged the waterway, causing persistent and damaging floods in adjacent areas. The sediments at the bottom of the river are heavily contaminated. The damming of the Charles River has converted the Muddy River from a tidal estuary to a fresh water river, allowing invasive vegetation such as Phragmites reeds to flourish. Following many years of neglect which damaged the contours, plantings, roadways, and bridges that Olmsted's artistic vision, the work of advocacy groups and municipalities has begun the restoration of the Emerald Necklace.

The purpose of this project is to ensure the continued restoration of Olmsted's Emerald Necklace its entirety. As described in the Environmental Notification Form, the project involves a range of physical improvments and management practices that will produce flood control, water quality improvements, habitat enhancement, landscape restoration, pedestrian and automobile circulation improvements, and building and bridge restoration along the Muddy River and throughout the Emerald Necklace parks in Boston and Brookline.

The project meets or exceeds the following mandatory EIR review thresholds: direct alteration of 50 or more acres of land (301 CMR l1.03 (l); alteration of one or more acres of bordering vegetated wetlands (11.03(3)(a)(1)(a)) or alteration of ten or more acres of any other wetlands (11.03(3)(a)(1)(b), provided that a permit is required; and alteration requiring a variance in accordance with the Wetlands Protection Act (ll.03 (3)(a)(2)). The project requires a Chapter 91 License Water Quality Certificate, and a Special Waste Determination the Department ot Environmental Protection. It may also require a variance under the Wetlands Protection Act. The project requires Orders of Conditions from the Boston and Brookline Conservation Commissions (and a Superseding Order of Conditions

from DEP if either Order is appealed) Because the project will receive financial assistance from a state agency, MEPA jurisdiction extends to all significant environmental impacts potentially resulting from the project.

This Certificate describes the subjects that must be analyzed and discussed in the EIR for this project. By a separate Certificate, also issued today, I established a Special Review Procedure for this project. This Certificate does not require the EIR to analyze the impacts of certain projects identified in the Master Plan attached to the ENF (for example, dredging in ponds above the Muddy River), as the proponent does not intend to move ahead with this work in the near-term, and background conditions may change significantly before that work is ready to proceed. The proponent should describe the content and schedule for that work in an annual update (see the Certificate Establishing the Special Review Procedure) prior to commencement of the work. Although I am sensitive to concerns about an appearance of segmentation of the project, the pieces of work hereby excluded from the EIR are discrete projects that may proceed independently of the main body of work, or not at all. Further, I expect that the procedures developed during the review, permitting, and implementation of the EIR project will inform and likely simplify the review of those later projects.

SCOPE

General

As modified by this scope, the EIR should conform to the general guidance for outline and content contained in section 11.07 of the MEPA regulations. The EIR should also reprint the comment letters received on this project and address the issues raised in them, to the extent that the comments are within the subject matter jurisdiction of MEPA. The proponent should circulate the EIR to any state agencies from which it will seek permits or approvals, and to those parties listed at the end of this Certificate as having submitted written comments. In

addition, the proponent should make a reasonable number of copies available on a first come, first served basis.

Alternatives

As further detailed below, the EIR should expand on the alternatives analysis included in the ENF. The purpose of the alternatives analysis is to consider what effect parameters of a project will have on the environment, keeping in mind that the objective of the MEPA review process is to avoid or minimize damage to the environment to the greatest extent feasible. The EIR should analyze the no-action alternative to establish baseline conditions.

Project Permitting

The EIR should include a brief discussion of each state permit or agency action required for the proposed project. The EIR should discuss how the project will meet the requirements and performance standards of each state permit.

Flood Control

The EIR should identify specifically which proposed actions are intended to prevent or minimize flooding. It should describe the potential impacts of flood control activities and impacts that have been considered that would avoid or minimize damage from flood control activities. It should quantify additional flood water storage capacity to be gained by each area of proposed dredging intended to add to flood storage capacity. It should identify the locations of additional storage capacity areas. Where the project proposes clearing or expanding culverts, the EIR should specify the activities to be undertaken and the benefits projected to be gained. The EIR should include the sequence in which flood control projects will he implemented and should describe the criteria used to assign priority to flood control projects.

Stormwater/Water Quality Improvements

The EIR should describe in detail measures that will be undertaken to improve water quality. It should identify specific measures to be implemented and their locations. It should indicate the sequence in which they will be implemented and should relate that sequence to the schedule for dredging to ensure that sedimentation prevention measures are in place prior to sediment removal. It should describe potential impacts that may result from implementation of any stormwater or water quality improvements. Tie EIR should include a comprehensive maintenance management plan to be implemented by Boston and Brookline throughout the watershed of the Muddy River to ensure continuing effectiveness of any stormwater or water quality improvement measures and prevent new siltation, and it should specifically identify funding sources for ongoing, long-term implementation of the maintenance plan.

Wetlands Impacts/Variance Requirement

The EIR should identify all wetland resource areas, including riverfront area, and buffer zones and delineate them on a reasonably scaled plan. The EIR should identify the significance of the resources, including value to flood control, storm damage prevention, pollution prevention, and fisheries and wildlife habitat,

The EIR should quantify in appropriate units the project's estimated impact on each resource area. It should describe the nature of all likely impacts that cannot be avoided, including whether they are temporary or permanent impacts and including impacts from proposed bridge restoration work. It should provide the information requested in DEP's comment letter regarding the project purpose(s) to be served by each instance of wetland alteration.

Dredging

The ENF proposes a substantial volume of dredging which may have significant impacts on the natural environment historic resources. The EIR should describe the *impacts* of the proposed dredging and indicate each area proposed to he dredged. It should describe the purpose(s) of each **area** of dredginq and alternatives for each area or groups of similar proposed dredging sites In particular, the E*IR* should compare the benefits of bank-to-bank, channel, and spot dredging in terms of the goals of the proposed project. Wherever dredging emerges as the preferred alternative, the EIR should analyze a range of dredging techniques, describe the circumstances under which each would be the preferred alternative, and indicate the criteria it is using to select dredging techniques for the project's various dredging areas.

The ENF indicates that overdredging will occur in some areas. The EIR should clarify the purpose of any proposed overdredging and describe how the project will avoid damage to the clay liner during overdredging.

Dredged Material Management and Disposal

The EIR should describe in detail tow the proponent will manage dredged material. The ENF suggests that dredged material could he stored and dewatered on the Sears parking lot site. The EIR should analyze various locations in terms of suitability, impacts on traffic, residents, and resources.

It should describe the proponent's plans for identifying and managing contaminated sediments, including proposed on-site treatment- and techniques for segregating coo sediments.

The EIR should identify landfills that may be able and willing to accept dredged material from the project. As

recommended by DEP, the EIR should include appropriate out-of-***state*** landfills.

Phragmites Control

In November 1994, the Boston Parks and Recreation Department filed an ENF for a Phragmites Control ***and*** Park Restoration Program for the Back Bay Fens and Riverway (EOEA #10215). That ENF proposed (1) a demonstration Project to evaluate the effectiveness of several methods of Phragmites control, (2) full implementation of a Phramgites control program using a method selected based on the results of the demonstration program, and (3)restoration of the historic landscape design. A Phase I waiver allowed implementation of the demonstration project prior to preparation of the EIR. I understand that the demonstration project has been undertaken and that the results are available. The EIR for the project has not been filed - Since the project described in that that ENF is similar to the project currently under review, for procedural purposes, I will consider the file on the earlier ENF to be closed. However, the issues raised during its review remain to be resolved.

The EIR required by this Certificate should describe the methodology and results of the demonstration project and indicate how those results will inform the alternatives analysis for Phragmites control in this project. *It* should describe the purpose and potential impacts of any proposed Phragmites control activities. It should describe alternatives considered and explain why any alternatives are no longer under consideration. It should provide information related to the projected effectiveness of the preferred alternative (which is described in the ENF currently under review as dredging). It should also describe the maintenance plan to be implemented to ensure that the Phragmites, however it is removed, does not return. It should identify funding sources for implementing the maintenance plan.

Habitat Improvement and Rare Species

Throughout the ENF there are references to activities to be undertaken to improve wildlife habitat. The EIR should identify which activities are intended for that purpose and document what improvements to wildlife habitat will result from these activities, what impacts -- whether positive or negative -- are likely to result from those activities, and what alternatives have been considered that may avoid or minimize impacts from these activities.

The Natural Heritage and Endangered Species Program (NHESP) indicates that two rare species, the "threatened" Threespine Sticklehack *(Gasterosteus* aculeatus) and the "endangered" Pied-billed *Grebe (Podilymbus podiceps)* occur in the area of Olmsted Park, and that it will need to review plans for dredging and restoring this a*rea to ensure that* that these species are not harmed. NHESP also notes that contrary to the statement in the ENF, it has no record of Spotted Turtles occurring in the project area. The EIR should describe steps that the project will take to avoid impacts to rare species. The proponent should consult with NHESP during the development of the EIR.

Historic Resources and Landscape Restoration

The project is located within the Olmsted Park System Historic District which is listed in the State and National Registers of Historic Places. The ENF proposes an ambitious, long-term plan to restore the historic designed park landscape, following completion of the flood control portion of the project. The EIR should describe the landscape restoration project in greater detail, including the proposed sequence of restoration projects and plans that demonstrate at least a conceptual level development. I anticipate that this portion of the EIR will consist of the "Emerald Necklace Master Plan" prepared by Walmsley/Pressley in 1990 as required by the Department of Environmental Management's Olmsted Historic Landscape Preservation Program for Brookline and Boston.

The EIR should identify any impacts on historic resources - whether positive or negative -- that may result from implementation of this project, as well as any alternatives that have been considered that may avoid or minimize damage to historic resources.

The Massachusetts Historical Commission (MHC) has requested information regarding the potential impact of changes in water level on river banks and vegetation and regarding the age of the underwater stop log structure proposed to be removed. The proponent should work with MHC on these questions, and on any others the MHC may have, as well as with the Brookline Preservation Commission and the Boston Landmarks Commission, to ensure that the project avoids damage to historic resources.

Circulation improvements

The ENF indicates that the project will include improvements to pedestrian, bicycle, and automobile circulation in and around the parks. The EIR should describe the proposed improvements in greater detail, including the proposed sequence of circulation improvement projects and plans that demonstrate at least a conceptual level development and include proposed stormwater management improvements in roadways and pathways. It should describe potential impacts on the environment of the proposed circulation improvements, alternatives that have been considered and the sequence in which the improvements are proposed to be undertaken.

Charlesgate

The proponent has requested that the Special Review Procedure include a provision allowing the Charlesgate portion of the project to proceed in advance of the rest of the project. Based on my current understanding of that proposed work, this portion of the project should provide significant public safety benefits without significant impacts on the environment. Therefore, provided (as described below) that the proponent provides sufficient information in the Draft EIR regarding this

portion of the project, I will allow work in the Charlesqate area to commence following review *the* Draft FIR and before preparation of the Final EIR is complete. To the Certificate on the Draft EIR I may make separate findings regarding the adequacy of the description of the Charlesgate portion of the project and the rest of the EIR.

The EIR should detail the proposed activities in the Charlesgate area, their likely impacts on the environment, any alternatives to that have been considered and an analysis of those alternatives, a schedule, and proposed mitigation measures for any damage to the environment that may occur. It should include a construction mitigation plan, particularly regarding potential traffic impacts. It should include site plans at an appropriate scale showing the boundaries of the proposed project area, **as** well as wetland resource areas and their buffer zones. It should include all information that the proponent will be required to provide to the Federal Emergency Management Agency (FEMA) for its review of this part of the project. I note that the proponent will have to satisfy DEP and other permitting agencies that this phase can permitted separately. The Draft EIR should contain a proposed Section 61 Finding relative to this phase.

Construction Impacts

The EIR should describe impacts likely to result from project construction and steps that will [be] taken to avoid or minimize construction impacts. It should describe in detail the measures that the proponent will take to protect historically and environmentally significant landscape features and vegetation. It should also describe potential impacts on traffic and recreational use of the parks, especially during the dredging portion of the project, and steps that will be taken to avoid or minimize these impacts wherever feasible.

Diesel powered construction equipment is a significant source of air pollution in the Commonwealth. In 1998, the

Central Artery Project, in cooperation with EPA Region I, EOEA, Northeast States for Coordinated Air Use Management (NESCAITM) and DEP, with assistance from the Manufacturers of Emission Control Association (MECA), launched the Clear Air Construction Initiative. The program retrofits heavy construction equipment used at major public works/infrastructure projects with pollution control devices targeted at reducing diesel emissions and the localized adverse health impacts and nuisance conditions they may create. The EIR should describe steps that the proponent will take to minimize the project's adverse impacts on air quality, including ensuring the use of retrofitted construction equipment.

Maintenance and Monitoring

The Commonwealth is committed to making a substantial investment in the implementation of this project. To ensure that the capital investment is protected, the EIR should describe in detail the proponent's maintenance management plan for maintaining the restored condition of the Muddy River and the Emerald Necklace parks. I expect that these plans will include a commitment to a detailed schedule, including an ongoing annual schedule, of best management practices to create and maintain high quality stormwater runoff, which will benefit both water quality and prevention of sedimentation. It should describe ongoing measures to prevent the recurrence of invasive vegetation that has been removed. It should include commitments to maintain the restored historic landscape and structures. It should include protocols for regular monitoring of environmental conditions to provide a continuous feed-back loop by which the effectiveness of management practices can be measured. Finally, it should define the proportional financial responsibilities of the City of Boston and the Town of Brookline for all short-term and long-term maintenance and monitoring measures related to the project.

Mitigation

The EIR should include a summary and appropriate commitments

for each project impact within MEPA jurisdiction described in the EIR. This section should form the basis for the Proposed Section 61 Finding which will appear in the Final EIR.

April 22, 1999 _____
Date Bob Durand

Comments received:
Barton, Joe
Boston Greenspace Alliance/Friends of the Muddy River
Boston Redevelopment Authority
Boston Water and Sewer Commission
Brookline Village Action Group
Brookline Conservation Commission
Burke, Edward J.
Charles River Watershed Association
City of Boston, The Environment Department
Cutler, Edward B,
Demakis, Paul C.
Department of Environmental Protection
Division of Fisheries and Wildlife
Federal Emergency Management Agency
Historic Massachusetts
Katz, Pauline R.
Koch, Harriet F.
MASCO
Massachusetts Historical Commission
Muddy River Action Group
Natural Heritage and Endangered Species Program
Ransil, Bernard S.
Restore Olmsted' s Waterway
Riverway Square Condominium Trust
Riverways Program

Rubin & Rudman LLP
The Emerald Necklace Conservancy

BD/LER/lr