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August 22, 2008

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

PROJECT NAME	: Flood Mitigation Facilities for Peabody Square
PROJECT MUNICIPALITY	: Peabody
PROJECT WATERSHED	: North Coast
EEA NUMBER	: 14251
PROJECT PROPONENT	: City of Peabody
DATE NOTICED IN MONITOR	: May 21, 2008

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I determine that the above project **requires** the preparation of an Environmental Impact Report (EIR).

The project described in the Environmental Notification Form (ENF) involves three distinct projects which comprise the City's flood mitigation plan for Peabody Square. Peabody Square has experienced significant flooding events since the 1950s, including three (1996, 2004 and 2006) that were declared Federal Disasters. The City has been actively studying flood mitigation alternatives for this area for several years. As currently conceived, Project 1 entails relocating and enlarging Goldthwaite Brook culverts from Oak Street to its confluence with the North River, and cleaning part of the Foster Street culvert upstream of Oak Street. Project 2 involves widening the North River, as well as the construction of new river walls, elimination of two bends in the river and replacement of the Howley Street Bridge culvert. Project 3, which would be undertaken by the United States Army Corps of Engineers (USACOE), involves work downstream in the North River in Peabody and Salem that will likely involve widening of the river, realigning a river bend and excavation of contaminated materials.

The Proponent filed a Supplemental Submittal to the ENF on July 18, 2008, which redefined the project to consist solely of Projects 1 and 2, rather than all three projects initially proposed. According to the Proponent, Project 1 and Project 2 can be implemented without

Project 3 and without adversely impacting flood conditions during significant storm events downstream in Salem. However, many of the commenters, including the Department of Environmental Protection (Mass DEP), the Division of Marine Fisheries (DMF), The Riverways Program, and the Salem Sound Coastwatch, expressed concern that the implementation of these three projects may have the potential to exacerbate flood impacts down stream and that implementation of Projects 1 and 2 alone could limit future consideration and implementation of project alternatives with fewer impacts.

Under either configuration, the project will require authorizations under the Massachusetts Wetlands Protection Act (G. L. c. 131, s. 40) and regulations (310 CMR 10.00). Mass DEP has stated that, based on the information presented to date, the project may require a Variance from the wetlands regulations. Alteration of wetlands requiring a Variance necessitates the preparation of an EIR pursuant to Section 11.03(3)(a)(2) of the MEPA regulations. Therefore, because the project may potentially require a Variance from the wetlands regulations, and in view of the serious concerns presented by commenters concerning the potential cumulative and downstream impacts of implementing Projects 1 and 2 without further review of their environmental impacts, I have determined that preparation of an EIR is required. I have included Projects 1, 2 and 3 within the scope for that EIR.

I recognize that this scope will require significant coordination by the City of Peabody with both the USACOE (the project proponent for Project 3) and the City of Salem. However, the remediation of flooding issues specific to Peabody need to be assessed in the context of both immediate and downstream impacts and benefits At the same time, it is also clear the flooding issues in the North River basin are significant and need to be addressed in a timely manner. I therefore encourage the Proponent to do normal maintenance/cleaning of culverts and drainage structures prior to submitting the EIR. In particular, the proponent should proceed with its proposed cleaning of approximately 990 linear feet (lf) of the original Foster Street culvert, which is upstream of Oak Street.

In addition, I also encourage the Proponent to consider whether a phased approach to implementing some of the initial stormwater management work originally planned as part of Project 1 would be feasible in advance of the Draft EIR. If the Proponent chooses to pursue such an approach, the Proponent should file a Notice of Project Change and a request for a Phase One Waiver pursuant to Sections 11.10 and 11.11 of the MEPA regulations respectively. To assess the feasibility of any such plans, including any necessary mitigation for their impacts, I strongly encourage the Proponent to consult with the MEPA Office and discuss the plans with Mass DEP and other permitting agencies in advance of any submission.

Project Description

The project consists of the modification of the two primary drainage conduits in Peabody, which are the culverts carrying Goldthwaite Brook and Proctor Brook and the open channel of the North River. The overall goal of this project is to reduce flooding for up to the 50-year, 24-hour storm event and the May 2006 flood.

Project 1 includes the relocation and enlargement of Goldthwaite Brook culverts for approximately 1,950 linear feet (lf) from Oak Street to its confluence with the North River. The Proponent proposes twin 4-feet high by 10-feet wide culverts. The Proponent has modified

Project 1 to maintain flow in the daylighted section of Goldthwaite Brook parallel to Foster Street.

Project 2 includes the widening of approximately 1,600 lf of the North River to an approximately 38- to 41-foot wide corridor depending on the type of wall chosen for the south side of the river from the confluence of Goldthwaite Brook with the North River to the Howley Street Bridge. The existing North River corridor is approximately eleven to twenty-two-feet wide. The Proponent would eliminate two 90-degree bends in the North River between Strongwater Brook and Howley Street. Project 2 also includes the replacement of the Caller Street Bridge. It will include the dredging about 4,250 cubic yards of material from the North River channel as part of the widening process. Material that exists within the 38-foot wide path of the proposed river widening area will be removed, including the existing south wall. The soil between the existing south wall and the proposed new south wall where the river is widened and soil from portions of the north wall where the river bends will be removed by the Proponent and the walls replaced. The Howley Street Bridge is anticipated to be replaced as a separate project by the Massachusetts Highway Department.

For Project 3, the USACOE would extend the width of the North River to approximately 38-feet from about 400-feet within the Peabody City Line for approximately 2,700 linear feet into Salem to about 600 linear feet downstream of Grove Street. Project 3 may include sheet piling along the 3,100 linear feet of the north side of the North River (the widened side for this portion of the project). Project 3 would realign a 90 degree river bend at a railroad crossing. It includes the excavation to the about the same depth as Project 2 (about one foot), and the disposal of an unknown quantity of potentially contaminated dredged materials from the river widening. Project 3 would replace the Grove Street Bridge, the railroad crossing west of Grove Street, and a pedestrian footbridge downstream of Howley Street in Salem. The USACOE has been funded to initiate a Feasibility Study to improve the conveyance for this section of the North River. The Proponent anticipates that the Flood Mitigation Facilities Project would be completed in a sequential order; Project 1, 2, and 3.

The project is subject to MEPA review pursuant to Sections 11.03(3)(b)(1)(b), 11.03(3)(b)(1)(e), and 11.03(3)(b)(1)(f) because the project alters 500 or more linear feet of bank along a fish run or inland bank; provides a new structure in a regulatory floodway; and alters 0.5 or more acres of any other wetlands. When Project 3 is added to the project, the entire project is subject to Sections 11.03(3)(a)(1)(b) and 11.03(3)(a)(2) because it may alter ten or more acres of wetlands and may require a Variance in accordance with the Wetlands Protection Act from MassDEP. Alternatively, Orders of Conditions will be required from the Peabody Conservation Commission and the Salem Conservation Commission as a "limited" project or a Superseding Order of Conditions will be required from MassDEP. The project will require a Chapter 91 Waterways License for the dredging of the North River from MassDEP. The project will also require a Water Quality Certificate from MassDEP. It may also require a Notice of Intent to Perform Utility-Related Abatement Measures (URAM) with MassDEP. The project may need to comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharges from a construction site. A Programmatic General Permits (PGP) may be needed from the U.S. Army Corps of Engineers. Because state funding is being utilized for portions of this project, MEPA jurisdiction extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations (in this case: wetlands, stormwater, fisheries habitat, hazardous waste abatement, and waterways).

SCOPE

The EIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this scope. It should include a copy of this Certificate and all comment letters.

Project Description, History of Past Flooding, & Regulatory Environment

The EIR should include a detailed description of the project and a history past flooding in the North River watershed. It should briefly list each state agency action required for the project. The EIR should clearly identify the project boundaries where work will be undertaken. It should include better maps displaying the project area and the various project components.

The project will require the purchase of properties, easements, and the reconstruction of bridges by MassHighway and the Proponent.The EIR should identify the parties responsible for the various work items that are beyond the authority of the City of Peabody, such as USACOE, the City of Salem and MassHighway, and/or other parties. It should provide an inventory of culverts/bridges/dams/canals in the watershed study area and their condition. This inventory should also be displayed in a figure. The EIR should identify the costs of the various project components and the responsible parties for funding. It should identify funding timeframes and any undetermined funding shortfalls.

The project should demonstrate how it is consistent with the applicable performance standards. It should contain sufficient information to allow the permitting agencies to understand the environmental consequences related to the project.

The EIR should identify and explain any project phasing. It should explain the time frame for each phase of the project. The EIR should discuss how this project is compatible with Executive Order 385 – Planning for Growth, by discussing its consistency with local zoning, and the Metropolitan Area Planning Council's (MAPC) Metro Plan.

Alternatives Analysis

The Proponent has considered the primary problem to be the North River's inability to convey the increased stormwater during significant storm events and that the project was designed only to address this problem. The result is a project whose goal is to install larger drainage culverts for Goldthwaite Brook and to widen the river and remove constrictions to facilitate river flow downstream. The Proponent has evaluated the following overall alternatives to alleviate the flooding in Peabody Square: Alternative 1 – Tidal Gate and Pump Station at Beverly Harbor, Alternative 2 – Modification of the North River Drainage System (Preferred Alternative), Alternative 3 – Upstream Storage, and Alternative 4 – Dredging the North River. The 401 Water Quality Certification regulations require a demonstration that all practicable alternatives to dredging and widening the riverbed for flood control purposes have been considered, as do the standards for obtaining a potential Variance under the Wetlands Protection Act. A wide range of flood control alternatives are available, and include upstream storage, increasing the capacity of the river's floodplain, adding detention and infiltration systems to reduce flows, slowing the creation of new impervious surfaces to maintain infiltration capacity, and reducing stormwater through the use of Low Impact Development(LID)/Best Management

Practices (BMPs) for stormwater. The EIR should reevaluate and update the following alternatives:

- No-Build Alternative;
- ENF Preferred Alternative;
- A LID/BMPs Alternative that focuses on stormwater reduction, infiltration, a rigorous maintenance program for the stormwater management system, and upstream storage;
- A Modification Alternative that combines structural improvements to the North River Drainage System, upstream storage, and the dredging of the North River; and
- A Comprehensive Alternative that provides restoration and flood protection to the North River (Starting downstream and working upstream) and includes LID/BMPs stormwater management.

The EIR should identify the impacts of each of the alternatives on wetland resource areas, potential flooding downstream, and stormwater/drainage. It should provide a comparative analysis that clearly shows the differences between the environmental impacts associated with each of the alternatives. The alternatives analysis should be based on a more complete hydraulic analysis. The Proponent should also commit to the maintenance of fisheries habitat and the water quality of the North River. The alternatives analysis should include an evaluation of all stormwater improvement possibilities and should target watersheds that contribute high stormwater volumes to Peabody Square and other areas of the watershed. Stormwater improvement possibilities should include active management such as drawdowns or dredging in upstream impoundments, coupled with LID/BMP improvements such as retro-fitting the North Shore Mall area and other developments with updated stormwater management technology, reducing impervious surfaces and restoring wetlands. This analysis should include the City of Peabody's Strongwater Brook Conceptual Design Plan.

Waterways Licensing/Permitting

The EIR should specify whether the existing culverts are licensed under the Chapter 91 Waterways Program. It should state whether any new Chapter 91 Licenses would be required for existing or proposed structures. The EIR should provide the information required for the Chapter 91 Permit that would be required for the dredging portion of the project in the North River and its tributaries and watershed.

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

The Proponent has identified that approximately 4,250 cubic yards of dredged material will be removed from the North River (Project 2). The EIR should identify the additional sampling and testing of this dredged material that the Proponent will conduct. It should identify potential disposal options.

Wetlands

The EIR should contain an alternatives analysis to ensure that impacts to wetland resource areas are avoided, and where unavoidable impacts occur that the impacts are minimized and mitigated. It should quantify the amount of temporary and permanent impacts to resource areas. A plan should accompany this discussion. The EIR should illustrate that 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).

According to the Proponent, Projects 1 and 2 would affect approximately 1,975 linear feet (temporary) and 30 linear feet (permanent) of Bank; 28,650 sf (temporary) and 1200 sf (permanent) of Land Under Water (LUW); 97,845 sf (temporary) of Bordering Land Subject to Flooding (BLSF); and 135,150 sf (temporary) of Riverfront Area. The Proponent has estimated that Project 3 would affect the following coastal wetlands: approximately 63,000 sf of Land Under the Ocean (LUO) also a Fish Run (temporary); 3,150 linear feet of Coastal Bank (temporary); and 78,750 sf of Land Subject to Coastal Storm Flowage (LSCSF) (temporary). The MEPA Office has estimated that the total impacts from this project are about 9.34 acres and this number does not include the square footages for Bank and Coastal Bank. Due to the proposed hydraulic changes, the Proponent may need to remap BLSF for Goldthwaite Brook. The EIR should update these wetland resource area impact estimates.

The Proponent has proposed a Preferred Alternative, which could have significant impacts to wetlands and unknown flooding risks downstream. The Proponent should strive to reduce the areas of its proposed impacts to wetlands. The EIR should address the significance of the wetland resources and buffer zones 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, coastal 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 watersheds of Goldthwaite Brook, Proctor Brook, and Strongwater Brook flow to the North River. The text should explain whether the local conservation commissions have accepted the resource area boundaries, and any disputed boundary should be identified. The EIR should provide an accurate measurement of the wetland resource areas and buffer zones that will be affected by the project.

For any amount of wetlands alteration, replication will be required. A detailed wetlands replication plan should be provided in the EIR 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 in the areas to be altered and the proposed wetland replication species, planned construction sequence, and a discussion of the required performance standards and monitoring.

Marine Fisheries Resources

The North River supports migratory and spawning habitat for the diadromous species rainbow smelt that is designated as a "species of concern" and American eel that is a "candidate

species" and white perch. The banks of, or land under an anadromous/catadromous fish run is presumed significant to the protection of marine fisheries. Riffle/pool complexes, smelt spawning habitat, are also considered Special Aquatic Sites under the Clean Water Act. The North River supports greater than 4,000 meters of potential rainbow smelt spawning habitat. Upstream of Grove Street in Salem, Marine Fisheries maintains a fyke net station as part of its smelt population monitoring project. Marine Fisheries surveys have documented the presence of smelt eggs from Howley to Grove Street. Upstream of Howley Street, the North River is also potential spawning habitat. The EIR should outline how it has worked with DMF in the design of the channel dimensions, substrate specification and the location of riparian enhancement.

The river widening will remove riparian vegetation that currently provides shade that is important to spawning habitat because it maintains lower water temperatures. Riparian vegetation is also important to maintaining and improving water quality. The Proponent should consider a restoration area greater than the 700 linear feet being proposed. The EIR should identify how the Proponent would stabilize and plant all areas of river bank and channel sides that are disturbed by the project.

The Proponent should coordinate the preparation of the EIR with Marine Fisheries, the Riverways Program, and MassDEP to avoid impacts to fisheries habitat.

Flooding

The ENF described five major floods (1996, 1998, 2001, 2004, and May 2006) in Peabody, including three storms (1996, 2004 and May 2006) that were declared Federal Disasters. The EIR should summarize this information and provide any additional updates.

The Flood Mitigation Facilities for Peabody Square should be updated to include the information from the major rainstorms. The EIR should provide an analysis of the changes in flood elevations and hydraulics that would result from the proposed channel dredging for the Proponent's alternatives. It should develop and analyze hydraulic modeling data. The Proponent should consider utilizing the revised TP-40 rainfall projections updated by Cornell University in its hydraulic modeling, as recommended by the Riverways Program. Because the river widening may reduce base flows to a level that precludes the passage of fish or spawning, the existing hydraulic analysis presented in the ENF is inadequate. The hydraulic analysis should include data from the spawning season and during a relatively wet year, and the Proponent should be using a 2-year or 10-year design storm for flow monitoring. The Division of Marine Fisheries (DMF) has requested that the EIR present peak flow rates and velocity downstream of Howley Street modeled to a 2-year storm. It further recommended the use of USGS stream gage data from a near-by location, instream flow measurements, the development of a headwater and tailwater rating curve, and benchmarking to a nearby stream system with similar hydrologic conditions. MassDEP has requested that the EIR include the 100-year flood elevations for the watershed as well as the 50-year flood elevations. The EIR should assess the storage capacity of the North River Canal basin in Salem to determine if there is adequate storage capacity at high tide, when the tide gates are closed and the basin does not drain.

The EIR should address the maintenance of the proposed channel slope, proposed post-widening river substrate and details on the location and maintenance of riparian plantings. By creating a wider North River channel, the peak rate of runoff may change such that the duration of flooding potentially would be increased downstream. The impacts from flooding in the

downstream areas of the Salem should be evaluated in the EIR. Properties experiencing flooding should be shown on current floodplain maps, and the storm events causing flooding should be identified for each property under existing and proposed conditions for the alternatives. Baseline flooding conditions should be updated with additional information on flooding events, flooding costs, project improvement capital costs, and maintenance costs.

Stormwater

The EIR should identify Low Impact Development (LID) techniques that could be implemented in Peabody and Salem. It should address the performance standards of MassDEP's Stormwater Management Regulations. The EIR should address the groundwater recharge issues and demonstrate that the project will meet the Stormwater Regulations. It should provide information on the dewatering and disposal of the dredged material to be removed.

The Proponent should upgrade any portions of its stormwater management system to meet DEP's Best Management Practices and correct past system deficiencies. A maintenance and operations program for the drainage system will be required to ensure its effectiveness. This maintenance program should outline the actual maintenance operations, sweeping schedule, responsible parties, and back-up systems. The sweeping program should include not only roadways but sidewalks and municipal parking areas within the watershed. The Proponent should commit to retrofitting any existing catch basins with hoods for oil separation before discharging runoff into the North River. I also recommend that Peabody and Salem commit to using a non-sodium based de-icer on pavement surfaces within the North River watershed.

If the project watershed is located within any Aquifer Protection Zone or Zone II for a municipal water supply, the EIR should discuss how this project will be constructed and maintained so that this water resource is not impacted by the above project. It should describe the measures that the Proponent will undertake to protect this vital resource such as monitoring groundwater levels.

Construction/Community Disruption

The EIR should present a discussion on potential construction period impacts (including but not limited to noise, vibration, dust, and traffic maintenance) and analyze feasible measures, which can avoid or eliminate these impacts. It should outline how the Proponent will coordinate their construction program with other nearby projects. The EIR should estimate the amount of dredged material to be removed from the project site. It should identify the number of truck trips required to handle the removal operation and the truck routes for dredged material removal.

Hazardous Waste

The EIR should present a summary of the results of hazardous waste studies and remediation efforts undertaken in the watershed as part of this project by the Proponent and others to comply with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000.

Historical and Archaeological Issues

The Proponent should provide large-scale existing and proposed conditions project plans and current, original photos of all buildings proposed for demolition to the Massachusetts

Historical Commission (MHC) and the Peabody and Salem Historical Commissions for review and comment. The EIR should identify the results of this review.

Mitigation

The EIR should include a separate chapter on mitigation measures. It should develop wetland and drainage measures to reduce impacts. This chapter on mitigation should include a draft Section 61 Finding for all state agencies issuing permits for the project. The draft Section 61 Findings should contain clear commitments 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

In order to ensure that the issues raised by commenters are addressed, the EIR should include responses to comments. This directive is not intended to and shall not be construed to enlarge the scope of the EIR beyond what has been expressly identified in this Certificate.

Circulation

The EIR 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 local officials in Peabody, Salem, and the USACOE. A copy of the EIR should be made available for public review at the Peabody and Salem Public Libraries. The Proponent should provide a hard copy of the EIR to each state agency from which it will seek permits or approvals.

August 22, 2008
Date

for Ian A. Bowles

Comments received:

MHC, 5/27/08
Metcalf & Eddy (M&E), 6/5/08
M&E, 6/6/08
M&E, 6/9/08
M&E, 6/11/08
M&E, 6/12/08
M&E, 6/19/08
Joel R. Whitman, 6/20/08
M&E, 6/24/08
M&E, 6/25/08
M&E, 7/18/08
Peabody Conservation Commission, 8/7/08
Russell Donovan, 8/11/08
Salem Conservation Commission, 8/11/08

Joan and Ed Sweeney, 8/11/08
Federal Street Neighborhood Association, 8/11/08
Salem Sound Coastwatch, 8/11/08
Patricia H. Donahue, 8/11/08
Stewart Lazares, 8/11/08
Division of Marine Fisheries, 8/12/08
Whitney Associates, 8/12/08
Riverways program, 8/12/08
Salem Engineering Department, 8/12/08
MassDEP/NERO, 8/12/08
Nick Nowak, 8/12/08
Elizabeth Toomey, 8/12/08
Ron Christensen, 8/14/08
Ron Christensen, 8/19/08
M&E, 8/20/08

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