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April 22, 2011

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

PROJECT NAME : Town Brook Enhancement Project  
PROJECT MUNICIPALITY : Quincy  
PROJECT WATERSHED : Boston Harbor  
EEA NUMBER : 14725  
PROJECT PROPONENT : City of Quincy  
DATE NOTICED IN MONITOR : March 23, 2011

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (M.G.L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

The proposed project described in the Environmental Notification Form (ENF) consists of the realignment of Town Brook to an alternate location in Quincy. Extensive historic alteration of Town Brook has resulted in the conveyance of the majority of the Brook in alternating enclosed and open channel sections of culvert through the City. The Town Brook Enhancement Project is being proposed by the City of Quincy as one of three Core Public Improvement projects that the City is undertaking to upgrade the aged infrastructure within Quincy Center in order to facilitate redevelopment under the Quincy Center Urban Revitalization Plan (URDP). While the project will facilitate redevelopment of the downtown and the Quincy Center Redevelopment Project, the City of Quincy maintains that the relocation of Town Brook is necessary and will improve existing culvert conditions and provide additional environmental benefit.

The project cost is estimated at \$11 million and the construction is projected to take approximately seven months to complete. The project will provide an important opportunity to address long-standing concerns about the deteriorating culvert, its location beneath private property, deficient hydraulic flows, presence of illicit discharges, limited smelt habitat, and the lack of public and environmental benefit. Numerous comments I have received on the project evidence strong support for improvements to Town Brook.

I have also received many thoughtful comments that oppose the proposed project based on the City of Quincy's preferred alternative which proposes the placement of the new culvert along the Concourse Roadway Improvement Project, a four-lane roadway currently under construction. These commenters suggest that an alternate alignment for Town Brook through the interior of the redevelopment site could provide open space to attract visitors and residents and create additional open sections of culvert for public benefit and improved smelt habitat. Some commenters have asked that additional MEPA review occur before the project is allowed to conclude its state permitting process in order to fully evaluate alternatives described in the ENF.

Although I have carefully considered the comments received on this topic, I am confident they can be addressed in detail during the MassDEP permitting review. The purpose of MEPA is to provide meaningful opportunities for public review of the potential environmental impacts of projects for which Agency Action is required, and to assist each Agency in ensuring that the project will employ all feasible means to avoid and minimize, or mitigate Damage to the Environment to the maximum extent practicable. MEPA is not an approval process, nor is it a siting or zoning process. The City has filed an ENF as required pursuant to 301 CMR 11.00, which assesses the potential environmental impacts of the proposed project and proposes mitigation measures. Although some details of the culvert design and mitigation have yet to be worked out, I am persuaded that the ENF has sufficiently addressed these issues, and that the permitting agencies have sufficient authority to ensure that the project's impacts are appropriately minimized and mitigated.

Although I am declining to require the preparation of an EIR because the project does not meet mandatory EIR thresholds and because the permitting agencies have indicated that any outstanding issues can be addressed during project permitting, the City of Quincy should continue to work closely with the state permitting agencies and stakeholders to scrutinize the project in order to ensure that the impacts of the project are avoided, minimized and mitigated to the maximum extent feasible. In addition, I ask that the City carefully review the comments I have received on the ENF and continue to evaluate all feasible alternatives and improvements regarding the realignment of Town Brook. The City of Quincy has committed to fund the diversion of flow from flood control conveyances to the realigned Brook and I expect this commitment to be fulfilled to ensure the appropriate flow in Town Brook to sustain smelt habitat.

### Project Description

The proposed culvert realignment will remove perennial flow from approximately 1,700 linear feet (lf) of existing culverted sections of Town Brook through Quincy Center, which are aged and sections of which are structurally compromised. The existing 1,700-lf culvert will continue to convey collected surface runoff from the Quincy Center Area (50-acre watershed) and will eventually be decommissioned over time as stormwater improvements associated with the redevelopment of Quincy Center are implemented. As part of the proposed project, identified existing illicit sanitary sewer connections will be removed.

The realignment will be made by connecting a new culvert to the existing culvert alignment at a point upstream of Quincy Center and conveying the existing flow, from west to east, along the south side of the Concourse Roadway Improvement project (Previously reviewed under MEPA), which is currently under construction. Town Brook flow will be diverted through approximately 1,200 lf of 11-foot wide by 6-foot high closed and open channel/daylit sections of

culvert to the proposed connection point downstream of Quincy Center where it will rejoin the existing Town Brook alignment.

Recent flood control improvements were constructed along Town Brook to reduce flooding concerns within areas historically prone to flooding, including the Center Street Junction Box project, the Deep Rock Relief Tunnel project, and the Burgin Parkway Culvert. The project proposes to provide a number of enhancements to Town Brook: enhanced hydraulic conveyance and flood control of Town Brook; additional open channel/daylit sections with adjacent public open space; and enhanced and expanded smelt habitat and spawning areas. The project will minimize construction costs by coordinating with ongoing construction activities on land already controlled by the City.

Anticipated environmental impacts associated with the project include 1.5 acres of land alteration, and alteration of 3,640 lf of Bank (including Fish Run), 17,840 sf of Land Under Water (LUW) and 19,995 sf of Riverfront Area.

The City submitted a Request for an Advisory Opinion from the MEPA Office on February 24, 2011 indicating that it is engaged in three distinct components of its comprehensive plans to revive and redevelop the downtown Quincy area – the Town Brook Enhancement Project (project described herein), the Adams Green Transportation Improvement Project, and the New Quincy Center Redevelopment Project. The City maintained that, although the projects are related in that they are geographically coterminous, and efforts to advance each component are proceeding concurrently, they are in fact separate undertakings with distinct purposes and should be viewed as independent of one another for the purpose of determining whether they are subject to MEPA jurisdiction. The Advisory Opinion issued on March 4, 2011 concurred that these projects do not comprise a common plan, but rather, three separate independent undertakings and that the City could proceed separately for purposes of MEPA review. The City of Quincy URDP was adopted in 2007 and sets forth the City's vision and strategy for the redevelopment of Quincy Center. It is expected that the New Quincy Center Redevelopment Project will undergo MEPA review in a separate review process.

#### Jurisdiction and Permitting

The project is undergoing MEPA review pursuant to 301 CMR 11.03(3)(b)(1)(b) and (3)(b)(1)(f) because it requires State Agency Action and will result in the alteration of 500 or more linear feet of bank along a fish run or inland bank and the alteration of one-half or more acres of other wetlands (Land Under Water and Riverfront Area). The project will require: an Order of Conditions from the Quincy Conservation Commission (and, on appeal only, a Superseding Order of Conditions from the Massachusetts Department of Environmental Protection (MassDEP)); a Section 401 Water Quality Certificate (401 WQC) from MassDEP; a Section 404 Programmatic General Permit (PGP) from the United States Army Corps of Engineers (ACOE); review by the Massachusetts Historical Commission (MHC); and a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the United States Environmental Protection Agency (US EPA).

The City is pursuing funding from the Commonwealth. Therefore, MEPA jurisdiction for this project is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment, as defined in the MEPA regulations.

## REVIEW OF THE ENF

### Alternatives Analysis

The City evaluated seven potential alignments (A through G) in addition to the No-Build alternative and an alternative to rebuild the culvert along its current alignment. In order to evaluate each of the alternative alignments, the City developed ten evaluation criteria: flood control; underground conflicts; property constraints/control; open channel/public amenity; smelt habitat; consistency with URDP; construction schedule/phasing; cost; environmental enhancements; and code compliance. In order to determine the preferred alternative, the City evaluated the nine alternatives using the ten metrics and ranked from 1 through 9 based on how the alternatives met the metrics (9 – best, 1 – worst). Through this evaluation, Alternative C was determined to be the preferred alternative.

I appreciate the thoughtful comments and questions posed on this topic, and I acknowledge the need to consider alternatives further. The City will be required to provide a more detailed evaluation of the alternatives as part of the 401 WQC, as discussed below, to demonstrate that there are no practicable alternatives with less impact than the preferred alternative. As the City asserts that the preferred alternative route is significantly viable because of its location within City-controlled land, the City should specifically evaluate alternative routes in context of any other parcels in the redevelopment area which are City-controlled.

### Open Space/Sustainable Design

As part of the proposed realignment of Town Brook along the Concourse Roadway Improvement Project right-of-way, the City is proposing to provide approximately 5,500 sf of open space in an urban setting. Two pocket parks will be created adjacent to daylighted sections of the proposed culvert at the project limits (Revere Road). The design goals include: treatment of the interface of the public space and open channel section of culvert; incorporation of a smelt resting pool between the open space and the Brook; incorporation of a rain garden as a Low Impact Development (LID) stormwater feature to collect and treat stormwater runoff from the open space area and discharge it into the smelt resting pool; and the provision of shade trees as temperature mitigation to support smelt habitat.

In light of the City's expressed commitment to incorporating input from the general public, I strongly encourage the City to review the many comments that provide guidance and suggestions on alternate and additional locations for open space along the proposed route and within the redevelopment area. I strongly encourage the City to adopt all feasible sustainable design measures in designing and constructing this project.

### Fisheries Resources

The Town Brook River system is a diadromous fish run supporting rainbow smelt (*Osmerus mordax*) and American eel (*Anguilla rostrata*). The project proposes to enhance rainbow smelt habitat and spawning areas in the daylighted area immediately downstream of the project limits, south of Revere Road, which is an existing spawning area. The ENF indicates that this habitat and spawning area will be expanded and enhanced by incorporating design criteria provided by the

Massachusetts Division of Marine Fisheries (DMF) and the National Marine Fisheries Service (NMFS). Although the ENF does not include any of the requisite design criteria, the City is required to continue consultations with DMF and NMFS and, through the course of these consultations, address the following questions and concerns as outlined in the detailed comments by DMF:

- installation of an exclusive device (substrate step, trash rack or combination) at the mouth of the Revere Street culvert to prevent smelt from entering the old culvert channel;
- mitigation of the alteration of a total of 185 feet of existing smelt spawning riffle habitat at a greater than 2:1 ratio (370 feet);
- mitigation of Town Brook alteration with an improvement in smelt habitat length, width and quality and an increase in the area of daylighted Brook;
- further consideration of alternative alignments to accommodate a larger daylighted section;
- evaluation of potential hydrologic changes in Town Brook that may occur under the proposed project (with and without flow reclamation improvements currently under construction at the Center Street Junction and the Deep Rock Tunnel) – supported with flow analysis for a range of stormwater and base flow projections;
- increase slopes of open sections to yield adequate velocities to induce smelt spawning and support smelt egg incubation and survival;
- replace proposed concrete bed low flow channel design with natural brook substrate; and
- documentation of revisions to the proposed specifications on smelt spawning habitat and DMF approval of the final specifications including slope, water velocity/depth and substrate.

The ENF indicates that all work is proposed to be conducted during low flow conditions and that no construction activities will occur during the active fish run season from March 1 through June 15. The City should also investigate the presence of spawning habitat upstream of Revere Road and potential upstream habitat creation.

Maintaining base flow in Town Brook has been identified as critical in order to sustain the existing smelt habitat. The project will be coordinated and designed for base flow conditions in accordance with discussions with and guidance from DMF. The ENF suggests investigating the implementation of low flow augmentation from Old Quincy Reservoir if necessary and the City should evaluate this option in consultation.

As indicated in comments from MassDEP and DMF, the proposed culvert should be designed to demonstrate enhanced hydraulic conveyance. MassDEP notes that the diminished base flow in Town Brook observed since the installation of the Deep Rock Tunnel and reconstruction of Quincy Reservoir and the Center Street Junction box has contributed to the deterioration of rainbow smelt habitat and spawning areas. MassDEP further indicates concern regarding the hydraulic calculations which demonstrate flow velocities in the proposed culvert from the existing 2.53 feet per second (ft/s) to 1.57 ft/s, 1.97 ft/s, and 2.36 ft/s for increasing flow volumes. As part of the permitting process, the City is required to ensure that the proposed culvert will be designed to ensure sufficient base flow. MassDEP will consider the final culvert design in context with guidance and recommendations provided by DMF in determining if the City has taken all appropriate and practicable steps to minimize potential adverse impacts in the

review of the 401 WQC. The 401 WQC will include appropriate permit requirements to ensure protection of waters subject to federal jurisdiction.

DMF is currently finalizing a report entitled "Preliminary Design of Flow Restoration in Town Brook" which investigates the employment of structural modifications at the Center Street Junction box and the Deep Rock Tunnel intake area to recapture flows diverted to the Deep Rock Tunnel. The City should provide assurances to state agencies that the final culvert design and layout will adhere to the guidance provided in the report to the maximum extent feasible. DMF received \$75,000 to be used for smelt restoration in Town Brook and will transfer the remaining funds (\$63,000) to the City to use as a match. Furthermore, the City indicated at the MEPA site visit that it is committed to exploring opportunities to recapture base flows diverted by previous flood control projects and will also commit to securing funding necessary to construct the modifications.

### Wetlands and Waterways

The project is subject to compliance with the Wetlands Protection Act (WPA) and 401 WQC regulations. As mentioned previously, the City is required to provide a more detailed evaluation of alternatives, specifically Alternative G reviewed in the ENF, as part of its application for the 401 WQC to demonstrate practicable avoidance and minimization of alteration to resource areas, and describe appropriate mitigation for remaining, unavoidable alteration.

The ENF described the project's impacts to Bank and LUW. The 1,700-lf section of existing culvert will be decommissioned over time as the Brook is diverted to the proposed alignment. The existing culvert will continue to provide flood control as a conveyance structure. Approximately 13,315 sf of Riverfront Area associated with the open channel section of Town Brook south of Revere Road will be altered within the project area, including the conversion of paved areas into permeable open space for pocket parks. Following the diversion of the existing culvert to the proposed culvert, approximately 6,680 sf of Riverfront Area associated with the Hong Kong Eatery restaurant will no longer be regulated as Riverfront Area. Proposed grading alterations at Revere Road will result in a net increase of Bordering Land Subject to Flooding.

Comments from MassDEP recommend that alternatives to the vertical concrete banks proposed in the two daylighted sections (185 lf) should be evaluated to contribute to the interests of the Wetlands Protection Act such as the use of geocell walls. I refer the City to the detailed comments from the Department of Conservation and Recreation (DCR) which describe the Bigelow Street Relief Conduit Project. The City should consult with DCR and consider the inclusion of design modifications in the proposed realignment of Town Brook to facilitate the construction of the Relief Conduit's diversion control structure.

### Stormwater Management

The existing Town Brook culvert currently functions as a stormwater conveyance and will continue to do so after the installation of the proposed culvert until the conveyance is decommissioned. Comments from MassDEP identify concerns with the interaction between the existing culvert, proposed culvert, and the Deep Rock Tunnel. During the 401 WQC and Notice of Intent (NOI) review processes, the City should specifically address how the existing and proposed culverts will function together, identify junctions between the culverts and the Deep Rock Tunnel, and describe any reconstruction or replacement work required to maintain the

existing culvert as a stormwater conveyance during the undetermined interim period prior to decommissioning.

The ENF indicates that there are numerous illicit discharges currently affecting the water quality of Town Brook. Comments from MassDEP indicate its support for the City's commitment to removing direct illicit sanitary sewer connections to the Brook within the project area and I expect the City will fulfill this commitment and expand it to include the elimination of all illicit discharges.

Although the ENF states that the project will comply with the MassDEP Stormwater Standards, it does not provide information on the project's stormwater management system and instead, indicates that no stormwater management system is in fact proposed. However, operation and maintenance guidelines have been developed to address sediment and debris accumulation within the culvert and maintenance of proposed rain gardens. More detailed information on the project's stormwater impacts, stormwater management plan, and proposed mitigation must be clarified during the NOI review process. MassDEP encourages the City to revisit the design of the rain gardens to minimize thermal impacts.

I expect that the ENF for the redevelopment of Quincy Center will fully address the stormwater issues associated with the redevelopment project and the existing culvert. Along with several commenters, I strongly encourage the City to evaluate opportunities for incorporating sustainable design alternatives including Low Impact Development (LID) techniques in the project's site design and stormwater management plans to retain stormwater and recharge groundwater onsite. MassDEP recommends the City consider opportunities to recapture and reuse rainwater such as green roofs in addition to LID measures. I also encourage the City to consider alternatives that would reduce impervious area within the redevelopment area, such as the use of porous pavement and the inclusion of Best Management Practices (BMPs) that enhance infiltration of rainwater into the soil such as rain gardens/bioretention areas and tree box filters.

#### Historical and Archaeological Resources

The proposed culvert realignment crosses through the Quincy Center Historic District which is listed in the MHC National Register of Historic Places. The project does not propose any permanent grade alteration or impacts to historic structures within the District. The Quincy Historical Commission has issued a Certificate of Non-Applicability for the proposed project. I encourage the City to work with MHC to ensure the protection of historical resources.

#### Hazardous Materials

The City is advised that, if oil and/or hazardous material (OHM) are identified during the implementation of the project (including excavation, removal and/or disposal of contaminated soil, pumping/dewatering of contaminated groundwater, or working in contaminated media), notification pursuant to the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) may be retained to determine if notification is required and, if need be, to render appropriate opinions. Construction protocols and procedures should reflect the potential for discovery of OHM during the construction period and appropriate tests should be conducted, prior and during construction, for known or suspected contamination. The urban setting of the proposed realignment could produce subsurface contamination from former commercial or industrial uses of properties, underground

oil storage tanks, urban fill, and releases associated with vehicular traffic. If contamination is encountered during excavation, a Limited Removal Action (LRA) would need to be conducted or a Utility Release Abatement Plan (URAM) would need to be submitted to MassDEP. The City should note detailed comments from MassDEP regarding ensuring compliance with the MCP and the Occupational Safety and Health Act (OSHA).

The City has prepared a Spill Prevention Control and Countermeasures Contingency Plan addressing: the type and quantity of material handled; measures prescribed for spill preparedness and prevention; emergency response procedures; spill incident reporting procedures and arrangements with state and local emergency personnel. This Plan should be enforced and presented to workers onsite.

### Construction Period Impacts

The City must comply with MassDEP's Solid Waste and Air Pollution Control regulations during construction and demolition. The City should evaluate construction period impacts, including erosion and sedimentation, air quality and solid waste disposal, and strive to minimize construction impacts (including but not limited to land disturbance, noise, dust, odor, nuisance, vehicle emissions, construction and demolition debris, and construction-related traffic) and outline feasible measures that can be implemented to eliminate or minimize these impacts. The City will implement BMPs such as stormwater management controls, time-of-year restrictions for the protection of smelt habitat, noise/dust/air quality controls, appropriate waste disposal, and a construction vehicle traffic management plan. The City should consult MassDEP for guidance on applicable regulations and additional BMPs that can be implemented onsite to effectively manage construction and demolition waste. The City should consider plans for reuse and recycling of construction materials including asphalt, brick and concrete (ABC). The City will prepare an erosion and sedimentation control plan, as part of the Stormwater Pollution Prevention Plan (SWPPP), in accordance with the NPDES CGP.

The City will participate in MassDEP's Clean Air Construction Initiative (CACI) to mitigate the construction period impacts of diesel emissions to the maximum extent feasible. The City should work with MassDEP staff to implement construction period diesel emission mitigation, which could include the installation of after-engine emission controls such as diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs). Additionally, I note that construction equipment must now operate on ultra low sulfur diesel (ULSD) fuel.

### Mitigation

The City has committed to measures to avoid and minimize or mitigate project-related impacts. These measures include the following:

- Riverfront Area enhancements – active public open space adjacent to open channel sections of the Brook on City-owned land;
- Increase the extent of open channel sections in Town Brook – 185 lf of daylight channel;
- Fish run – rainbow smelt enhancements;

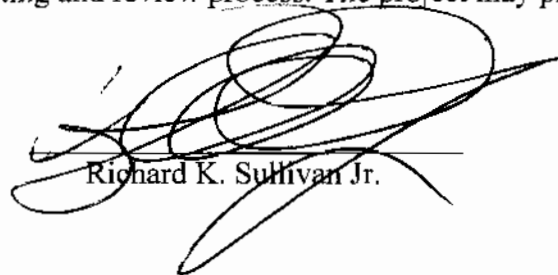
- Culvert design with low flow trapezoidal channel (coordinated with DMF Flow Restoration project to increase low base flow) to achieve a flow depth of at least 6 to 12 inches;
  - Spawning substrate (low flow channel) – 6-inch diameter rounded stone substrate for smelt eggs to adhere to;
  - Spawning riffles achieved by designing the culvert to achieve velocities between 1.6 and 3.2 ft/s during low base flow conditions;
  - Smelt resting pools off-line (or in-line option) and adjacent to riffle sections; and
  - Temperature mitigation – proposing shade trees adjacent to daylight sections.
- Flood control – larger uniform culvert section (11-foot by 6-foot wide) to convey the design storm event through the project area, replacing the limiting hydraulic section of the existing Town Brook culvert;
  - Water Quality improvements – rain gardens in open space parcels on east and west sides of Mechanic Street to treat surface runoff;
  - Removal of illicit sanitary sewer connections within the project area;
  - Removal of direct untreated stormwater surface runoff from the Quincy Center Area;
  - Town Brook Watershed Master Plan – development of plan to be coordinated with selected developer of URDP; and
  - Construction-related impacts – measures to reduce erosion and sedimentation, dust, and machinery traffic on local roadways, and compliance with the NPDES CGP.

### Conclusion

Based on review of the ENF, consultation with public agencies and my review of the comment letters, I find that no further MEPA review is required at this time. The ENF includes a description and analysis of the proposed project and its potential environmental impacts, and includes commitments to mitigation. I am satisfied that the information and analysis provided is adequate for the purposes of MEPA review and that outstanding issues can be adequately addressed during the state and local permitting and review process. The project may proceed to state permitting.

April 22, 2011

Date



Richard K. Sullivan Jr.

### Comments received:

04/14/2011	Massachusetts Department of Environmental Protection – NERO
04/12/2011	Massachusetts Division of Marine Fisheries
04/12/2011	Massachusetts Department of Conservation and Recreation
04/05/2011	Massachusetts Board of Underwater Archaeological Resources
04/12/2011	City of Quincy Mayor Thomas P. Koch
04/11/2011	City of Quincy Public Department of Health
04/08/2011	City of Quincy Planning Board (2)

04/12/2011 Quincy Chamber of Commerce  
04/12/2011 South Shore Chamber of Commerce  
04/11/2011 Sheet Metal Workers' International Association Local Union No. 17  
04/12/2011 Pat Artis  
04/12/2011 Linda Browne  
04/12/2011 Janet Clifford  
04/09/2011 Jo Costello  
04/08/2011 Robert F. Downy  
04/07/2011 Thomas Duncanson  
04/12/2011 Ross Edwards  
04/08/2011 Daniel J. Flynn, III  
04/03/2011 Arline Goodman (4) with attachments  
04/06/2011 Anneli Johnson (3)  
04/12/2011 Richard P. Joyce with attachments  
04/12/2011 Helen Krasinski  
04/12/2011 Stella Mahoney  
04/12/2011 Jack Phillips  
04/12/2011 Vivian Quint  
04/12/2011 Steven Perdios  
04/12/2011 Christine Regan  
04/12/2011 William J. Spain  
04/11/2011 Valerie Stromberg  
04/12/2011 Lisa Tavakoli  
04/11/2011 Bernard Warshauer  
04/12/2011 William E. Zamzow

Form letters opposing the project: 11

Form letters in support of the project: 13

Late comments:

04/13/2011 Local 103 International Brotherhood of Electrical Workers  
04/13/2011 Elaine McGail  
04/13/2011 Anita Kutasy

RKS/PPP/ppp