

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

DEVAL L. PATRICK
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Commissioner

November 2, 2012

Dennis E. Harrington, Planning Director
Department of Planning and Community Development
1305 Hancock Street
Quincy, MA 02169

RE: WETLANDS/Quincy
DEP File #59-1261
MOA Approval

Dear Mr. Harrington:

The Massachusetts Department of Environmental Protection (MassDEP) has reviewed the Memorandum of Agreement (MOA) signed by the City of Quincy, the MA Department of Conservation and Recreation, the Division of Marine Fisheries, and Street-Works Development, LLC, on September 25, 2012. This agreement has been submitted in accordance with Special Conditions #37 and #38 of the Final Order of Conditions (FOC) issued on May 30, 2012. The parties are to be commended on their hard work and diligence in preparing and executing this Memorandum of Agreement.

The MOA scope of work specifies that the City shall construct modifications at both Crown Colony Meadow and the Centre Street Junction Structure as identified in the Site Inspection Report. In addition, the scope of work includes a maintenance provision for an ongoing sediment-management plan in the open-channel segment of Town Brook downstream of the Centre Street Junction Structure that will further assist in the elimination of dry-weather flow losses. Further, the scope provides for an interim structural flow augmentation measure if structural design modifications will not be completed in advance of the 2013 smelt spawning season.

Accordingly, MassDEP concurs that the scope of work set forth in the MOA meets the intent of Special Condition #38 of the FOC for the recapture of baseflows to Town Brook. However, if monitoring and design indicate that modifications at both Crown Colony Meadow and the Centre Street Junction Structure are not feasible, additional measures may be required in order to comply with FOC Special Condition #38. Notwithstanding this approval, all other terms and conditions of the FOC shall remain in full force and effect.

Please contact Heidi M. Davis of this office at (978) 694-3255 with any questions regarding this letter.

Very truly yours,

Eric Worrall,
Deputy Regional Director for
Bureau of Resource Protection

Cc: Michael Altieri, Assistant General Counsel, Department of Conservation and Recreation, 251 Causeway Street, Suite 900, Boston MA 02114-2104

Chief Engineer, Department of Conservation and Recreation, 251 Causeway Street, Suite 900, Boston MA 02114-2104

Bradford C. Chase, MA Division of Marine Fisheries, 1213 Purchase Street, 3rd Floor, New Bedford MA 02740

Stephen J. Chrusciel, Director, Construction Services, Street-Works Development, LLC, 30 Glenn Street, Suite 400, White Plains, NY 10603

Peter Tamm, Goulston & Storrs, 400 Atlantic Avenue, Boston MA 02110-3333

Karlis Skulte, Stephenson Design Group, LLC, 51 Sleeper Street, Suite 600, Boston MA 02210

MEMORANDUM OF AGREEMENT

by the

CITY OF QUINCY, the MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION, the DIVISION OF MARINE FISHERIES and STREET-WORKS DEVELOPMENT LLC;

for the

RECAPTURE OF BASE STREAM FLOWS WITHIN TOWN BROOK

I. Parties

This Memorandum of Agreement ("MOA") is made as of this 26th day of September 2012 (the "Effective Date") by the City of Quincy ("City") and joined by the Massachusetts Department of Conservation and Recreation ("DCR"), the Division of Marine Fisheries ("DMF") and Street-Works Development LLC ("Street-Works"), each for the limited purposes set forth herein. For purposes of this MOA, the City, DCR, DMF and Street-Works shall be known, collectively, as the "Parties". This MOA is entered into by the Parties with a common goal to recapture substantially all diverted base flows and restore them to Town Brook, to the extent such activities do not compromise flood control and are consistent with existing agreements among the U.S Army Corps of Engineers ("USACE"), DCR and the City, in accordance with the requirements of a Final Order of Conditions (the "FOC") issued on May 30, 2012 by the Massachusetts Department of Environmental Protection ("DEP") (DEP File No. 59-1261) allowing the City to undertake certain improvements to Town Brook in Quincy, Massachusetts (the "Town Brook Enhancement Project").

II. Post-FOC Issuance Flow Augmentation Study

Following the issuance of the FOC for the Town Brook Enhancement Project, consultation between the Parties has led DCR and the City to undertake further study to identify specific conditions within Town Brook in the vicinity of the Centre Street Junction Structure that may be contributing to the diversion of base flows into the Burgin Parkway stormwater system. This further evaluation was initiated based on the agreement of the Parties to further evaluate alternatives to those suggested in the report entitled "Preliminary Design of Flow Restoration in Town Brook, Quincy, MA" prepared by Gomez and Sullivan Engineers, P.C. in March 2011 for DMF (the "Preliminary Design Report"), in order to avoid structural modifications that: (i) may adversely affect the flood control purposes for which the complex series of structures designed by the USACE, with participation from the Metropolitan District Commission (the predecessor to the DCR), were constructed in the 1990s to address historic flooding problems in the downtown Quincy area (the "Flood Control Project"); (ii) result in burdensome, ongoing maintenance or operational obligations; and/or (iii) present significant reoccurring or future capital costs to maintain or replace costly pumps or other equipment. The goal of this further study was to identify and evaluate possible alternative design

modifications and other potential measures that could augment base flows to Town Brook without compromising flood protection or implicating maintenance and operational concerns with respect to the Flood Control Project. Accordingly, the City's consulting engineer, in conjunction with DCR and DEP, undertook site inspections in July 2012 to research and identify those locations where base flows are diverted from Town Brook. These findings are summarized in a report from Stephenson Design Group dated as of August 7, 2012 (the 'Site Inspection Report'), which is incorporated herein by reference and attached as **Exhibit A**.

The Site Inspection Report identifies two locations where base flows were found to be diverted from Town Brook and that, with the implementation of design modifications, can be expected to result in the recapture of these "lost" flows. Based upon initial investigation, potential modifications in these locations appear possible to recapture base flows to Town Brook, without the need for significant structural modifications to the structures comprising the Flood Control Project that might otherwise present flooding, maintenance, or operational concerns. The two locations identified in the Site Inspection Report are:

1. The constructed wetland ("Crown Colony Meadow"), constructed as part of the Crown Colony Office Park in the late 1980's/early 1990's; and
2. The Centre Street Junction Structure, constructed as part of the Centre Street Culvert in 1984, as most recently modified in 1999.

At both of these locations, the Site Inspection Report indicates that low flows were observed to be present within culverts discharging to the Burgin Parkway stormwater system (flow which is therefore bypassing Town Brook). This finding is consistent with the findings of DMF as noted in the March 7, 2007 Smelt Conservation Team Meeting Summary provided in the Preliminary Design Report, where it is noted that the gains in dry weather flows in Town Brook will depend on recapturing the chronic flow losses from the Crown Colony development.

Also, the Site Inspection Report notes that a significant buildup of sediment was found to be present in the Centre Street Junction Structure that is resulting in a backwater effect within the structure, backing up the flow and unnecessarily diverting flow to the Burgin Parkway stormwater system, rather than continuing in Town Brook. In addition to the sediment accumulation within the Centre Street Junction Structure, the open channel reaches of Town Brook immediately downstream of the Centre Street Junction Structure are overgrown and appear to contain additional sediment accumulation that is likely contributing to the backwater effect resulting in unnecessary flow diversions within the Centre Street Junction Box. This finding is consistent with the findings of DMF noted in the Smelt Conservation Team Meeting Summary, which indicates that, at that time, the sediment removal and maintenance efforts of the City's Department of Public Works ("DPW") in the open channel reaches of Town Brook downstream of the Centre Street Junction Box resulted in a significant reduction in dry weather flow diversions at the Centre Street Junction Box.

The Site Inspection Report notes that flow rates attributable to these diverted flows have not been quantified, however, it is also noted that the presence of flows within these various reaches of the stormwater system bypassing Town Brook is strongly indicative that, with

modification, these diverted flows can be recaptured within Town Brook, thereby augmenting base flows within the existing and newly established fish run downstream.

III. Purpose and Scope of the MOA

A. Purpose

The purpose of this MOA is to document the agreement of the Parties (i) on a course of action for the City to finalize, permit, fund and implement a scope of work intended to recapture certain previously diverted base flows in Town Brook in accordance with Special Conditions #37 and #38 of the FOC, (ii) to establish objective monitoring criteria and (iii) to identify specific responsibilities of the Parties in order to fund and carry out this work.

B. Scope

Unless otherwise specified herein, this MOA applies only to improvements intended to recapture base flows within Town Brook in a limited course of the channel upstream of the so-called Tunnel Intake Area. Except as expressly provided for herein, this MOA does not otherwise change, amend, supersede, or alter the existing, or as amended from time to time, statutory or regulatory authority of any party or the terms and conditions of the FOC.

IV. Terms of the MOA

NOW, THEREFORE, for the reasons set forth above, the City, as joined by DCR, DEP, DMF and Street-Works for the limited purposes set forth herein, agree as follows:

A. Scope of Work:

1. Design Modifications: The City, subject to coordination and approval by DCR and USACE, as applicable, shall undertake the monitoring of low flows, any necessary survey work to document existing conditions, initial design, and if such monitoring and design indicate it to be feasible, the City shall, in accordance with Special Condition #38 of the FOC, undertake the final design, obtain any necessary property rights/ permits and construct modifications at both Crown Colony Meadow and the Centre Street Junction Structure as identified in the Site Inspection Report, in order to recapture substantially all of the base flows that are currently diverted away from Town Brook at these locations, provided any such modifications can be demonstrated to have no material adverse impact on flood control. Additionally, the City shall evaluate, in connection with the advancement of the separate New Quincy Center redevelopment project, the potential to divert flows tributary to Town Brook originating from the MBTA lift station at Granite Street, including its potential contribution to augment base flows in the newly constructed spawning habitat section of Town Brook and the feasibility of such diversion. All monitoring, study and work shall be undertaken in accordance with the initial schedule in **Exhibit B** attached

hereto and made a part hereof. Material deviations resulting in delay in implementing the actions set forth in the schedule shall only be permitted by written approval of DEP.

2. **Maintenance:** In order to minimize the hydrologic effects of the buildup of sediment at key locations within Town Brook identified in the Site Inspection Report that have been shown to impair low flows by causing backwatering and a diversion of base flows from Town Brook, the City shall undertake an annual clean-out/removal of any deposited sediments in these locations prior to February 15th, each year, unless such deadline may be adjusted with the consent of DEP to take into account the severity of winter conditions and otherwise in accordance with the terms of the Operations and Maintenance Manual for the Town Brook Local Protection Project. Promptly following the performance of such annual maintenance, the City shall provide DCR, DEP and DMF written notice confirming this maintenance has been performed. An initial clean-out at locations agreed upon by DCR shall be undertaken by the City in the Fall of 2012 and then on an annual basis commencing prior to February 15, 2013, in accordance with the terms of this paragraph. Should the City fail to provide such written confirmation by February 20th each year, DEP may (but shall have no obligation) after providing reasonable notice to the City, contract with a private maintenance service provider to have this maintenance performed, with the City liable for such reasonable costs.
3. **Monitoring:** Upon completion of both (i) design modifications in accordance with the Scope of Work and (ii) the initial round of annual maintenance responsibilities under this MOA to remove the buildup of sediment at the locations set forth above, the City, in coordination with DCR, shall undertake an expanded scope of post-construction monitoring as set forth in the FOC, to include monitoring of flows at these locations for the spawning season immediately following the implementation of the design modifications. Should (a) the results of this monitoring confirm that by the completion of these design modifications and maintenance, all previously documented diverted base flows at these locations have been substantially recaptured within Town Brook, and (b) after the review of the third and final monitoring report as set forth in Special Condition 52 of the FOC, either (i) DMF does not request modification to the diversion weir as set forth in Special Condition 36 of the FOC, (ii) DMF requests this modification but DCR responds in writing that no such modification within the structure shall be permitted, or (iii) such modifications to the diversion weir are requested, approved and constructed in accordance with the terms of the FOC, then the City's obligations with respect to implementing structural modifications within Town Brook for flow augmentation shall be fully satisfied.

B. Interim Flow Augmentation Measures:

As reflected in the schedule set forth in **Exhibit B**, due to design, permitting and public bidding considerations, the structural design modifications being evaluated are not anticipated to be completed in advance of the Spring 2013 smelt spawning season identified as March 1 – May 31, (the "2013 Season"). Accordingly, if necessary, the City shall develop, for approval by DCR, DEP, DMF and, as applicable, the USACE, an interim flow augmentation protocol (the "Interim Protocol") in order to temporarily raise base flows within Town Brook during the Spring 2013 period of smelt spawning. The

Interim Protocol shall detail temporary measures that may include (a) releases from the Quincy Reservoir Dam, in coordination with the Town of Braintree and other necessary parties, that may require temporary modification to the so-called "low flow protocol" as set forth in the Operation and Maintenance Manual of the Town Brook Local Protection Project; (b) installation of temporary pumps at key locations to recapture otherwise diverted base flows and pump these flows into Town Brook; (c) pre/post survey of conditions in connection with the sediment removal activities prescribed by section IV.A.2., above; and/or (d) other measures that may be reasonably anticipated to augment the base flows to the newly-constructed smelt habitat in Town Brook during the 2013 Season. The Interim Protocol shall detail the means, methods and procedures required to implement these measures, which shall be submitted to DEP, DCR and DMF for approval no later than January 1, 2013. Upon prompt review by DEP and DMF, any comments on the proposed Interim Protocol shall be incorporated in order to finalize the Interim Protocol. The City agrees that the measures agreed to in the Interim Protocol shall be able to be operational on March 1, 2013, unless a later date has been authorized by DMF. The agreed-upon Interim Measures shall be operational through June 1, 2013, unless DMF agrees to a shorter period, based upon performance of these measures. The Interim Protocol shall not be required to be implemented should the structural design modifications and maintenance contemplated hereunder be completed prior to March 1, 2013.

C. Funding:

Funding for the construction of the improvements set forth herein shall be provided by the sources and applicable Parties, as may be necessary, in the order of priority as set forth in **Exhibit C** attached hereto and made a part hereof. The final Scope of Work shall ensure the approved improvements may be constructed based upon the level of funding available under this MOA.

D. Cooperation:

The Parties agree to cooperate with each other reasonably, actively and in good faith to effectuate the provisions of this MOA. For these purposes, the Parties hereby initially appoint the following as their Authorized Representatives:

- City:
Dennis Harrington, Planning Director
Quincy City Hall
1305 Hancock Street
Quincy, MA 02169

- DCR:
Chief Engineer
Department of Conservation and Recreation
251 Causeway Street, Suite 900
Boston, MA 02114-2104

with a copy to:

Michael Altieri, Assistant General Counsel
Department of Conservation and Recreation
251 Causeway Street, Suite 900
Boston, MA 02114-2104

- DMF:

Bradford C. Chase, Aquatic Biologist III
Diadromous Fish Biology and Mgt. Project
Massachusetts Division of Marine Fisheries
1213 Purchase Street, 3rd Floor
New Bedford, MA 02740

- Street-Works:

Stephen J. Chrusciel, Director, Construction Services
Street-Works Development LLC
30 Glenn Street, Suite 400
White Plains, NY 10603

E. Time of the Essence:

Time is of the essence in this MOA. It is the intent of the Parties that all reasonable efforts be made to ensure that the provisions of this MOA are implemented in a timely and cooperative manner. Except as expressly set forth in this MOA, the FOC and all of the terms, conditions and provisions thereof, shall remain unaltered and unmodified and in full force and effect.

F. Notices:

All notices or other communications required or permitted to be given under this MOA shall be in writing signed by a duly authorized representative of the Parties, and shall be deemed delivered if: (i) mailed, postage prepaid, by regular U.S. Mail, to the persons and addresses above, or (ii) delivered by hand or by recognized overnight delivery service (with evidence of receipt) to the principal office of the intended party, as indicated above, unless such address is otherwise designated by written notice to the other Party, with copy of any such communication to:

- DEP:

Heidi Davis, Environmental Analyst
MassDEP Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

G. Amendments:

This MOA, or any part thereof, may be amended from time to time in a writing duly authorized and executed by the Parties.

H. Effective Date and Termination:

This MOA shall be effective as of the date first set forth above, and shall automatically terminate upon completion of the following: (i) the improvements set forth herein and (ii) the cessation of the Monitoring Program, all as evidenced by the issuance of a Certificate of Compliance under the Massachusetts Wetlands Protection Act (M.G.L. c. 131, §40) for the Town Brook Enhancement Project.

I. Binding Effect:

The provisions of this MOA shall be binding upon, and shall inure to the benefit of, the successors and assigns of the Parties.

J. Severability:

If any provision of this MOA is determined to be invalid or unenforceable, the remaining provisions shall remain in force and unaffected to the fullest extent permitted by law and regulation.

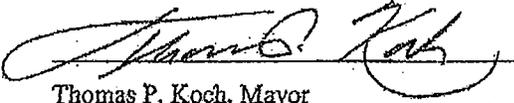
K. Counterparts:

This MOA may be executed in one or more counterparts, each which shall be deemed an original and all of which, when taken together, shall be deemed to be one agreement.

[Signatures appear on following page(s)]

Executed as a sealed instrument by the duly authorized representatives of each of the Parties to this MOA as of the day first set forth above.

CITY OF QUINCY:



Thomas P. Koch, Mayor

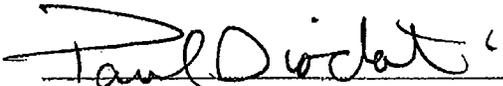
As joined by the DEPARTMENT OF CONSERVATION AND RECREATION for purposes of acknowledging that it has care and control, on behalf of the Commonwealth, of lands or interest in land, and appurtenant works, upon which the City of Quincy seeks to implement the Purposes of this MOA:

DEPARTMENT OF CONSERVATION AND RECREATION:

Edward M. Lambert, Jr., Commissioner

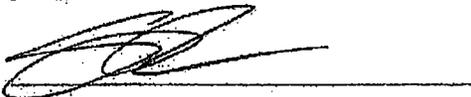
As joined by the DIVISION OF MARINE FISHERIES for purposes of acknowledging this MOA and its monitoring and approval responsibilities set forth herein:

DIVISION OF MARINE FISHERIES:



Paul J. Diodati, Director

As joined by STREET-WORKS DEVELOPMENT LLC for the sole purpose of acknowledging its pledge as set forth in Exhibit C:



Stephen J. Chrusciel, Director, Construction Services

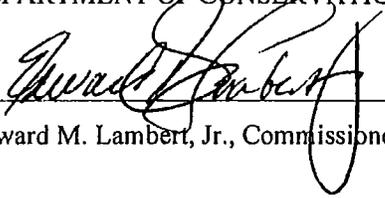
Executed as a sealed instrument by the duly authorized representatives of each of the Parties to this MOA as of the day first set forth above.

CITY OF QUINCY:

Thomas P. Koch, Mayor

As joined by the DEPARTMENT OF CONSERVATION AND RECREATION for purposes of acknowledging that it has care and control, on behalf of the Commonwealth, of lands or interest in land, and appurtenant works, upon which the City of Quincy seeks to implement the Purposes of this MOA:

DEPARTMENT OF CONSERVATION AND RECREATION:



Edward M. Lambert, Jr., Commissioner

As joined by the DIVISION OF MARINE FISHERIES for purposes of acknowledging this MOA and its monitoring and approval responsibilities set forth herein:

DIVISION OF MARINE FISHERIES:

Paul J. Diodati, Director

As joined by STREET-WORKS DEVELOPMENT LLC for the sole purpose of acknowledging its pledge as set forth in **Exhibit C**:

Stephen J. Chrusciel, Director, Construction Services

EXHIBIT A
[SITE INVESTIGATION REPORT]